

August 19, 2022

Mr. Mel Murphy
Panoche Energy Center LLC
43833 Panoche Rd
Firebaugh, CA 93622

Re: Notice of Preliminary Decision – Title V Permit Renewal
Facility Number: C-7220
Project Number: C-1203253

Dear Mr. Murphy:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Panoche Energy Center LLC at 43883 W Panoche Rd in Firebaugh, California.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the renewed Federally Mandated Operating Permit. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Errol Villegas, Permit Services Manager, at (559) 230-5900.

Sincerely,



Brian Clements
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: Gerardo Rios, EPA (w/enclosure) via EPS

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**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT**

**Proposed Title V Permit Renewal Evaluation
Panoche Energy Center LLC
C-7220**

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TITLE V PERMIT RENEWAL EVALUATION
Electrical Power Generation with Simple Cycle Natural Gas Turbines

Engineer: Tim Bush
Date: August 17, 2022

Facility Number: C-7220
Facility Name: Panoche Energy Center LLC
Mailing Address: 43883 W Panoche Rd
Firebaugh, CA 93622

Contact Name: Mel Murphy
Phone: (817) 265-0557

Responsible Official: Mel Murphy
Title: Vice President Project Management

Project # : C-1203253
Deemed Complete: August 19, 2020

I. PROPOSAL

Panoche Energy Center LLC was last issued a renewed Title V permit on January 30, 2017. As required by District Rule 2520, the applicant is requesting a permit renewal. The existing Title V permit shall be reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the last renewed Title V permit.

The purpose of this evaluation is to provide the legal and factual basis for all updated applicable requirements and to determine if the facility will comply with these updated requirements. It also specifically identifies all additions, deletions, and/or changes made to permit conditions or equipment descriptions.

II. FACILITY LOCATION

Panoche Energy Center LLC is located at 43883 W Panoche Rd in Firebaugh.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is included as Attachment C.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant is requesting to use the following model general permit Template:

A. Template SJV-UM-0-3 Facility Wide Umbrella

The applicant has requested to utilize template No. SJV-UM-0-3, Facility Wide Umbrella. Based on the information submitted in the Template Qualification Form, the applicant qualifies for the use of this template.

V. SCOPE OF EPA AND PUBLIC REVIEW

Certain segments of the proposed Renewed Operating Permit are based on model general permit templates that have been previously subject to EPA and public review. The terms and conditions from the model general permit templates are included in the proposed permit and are not subject to further EPA and public review.

For permit applications utilizing model general permit templates, public and agency comments on the District's proposed actions are limited to the applicant's eligibility for model general permit template, applicable requirements not covered by the model general permit template, and the applicable procedural requirements for issuance of Title V Operating Permits.

The following permit conditions, including their underlying applicable requirements, originate from model general permit templates and are not subject to further EPA or public review:

- Conditions 1 through 38 of the requirements for permit unit C-7220-0-2.

However, conditions 39 and 40 were revised as indicated in Section VIII. A. and Section IX, respectively, of this evaluation, and are therefore subject to public and EPA review.

VI. FEDERALLY ENFORCEABLE REQUIREMENTS

A. Rules Updated or Evaluated

- District Rule 2201, New and Modified Stationary Source Review Rule (amended February 18, 2016 – non-SIP version ⇒ amended August 15, 2019 – non-SIP version)
- District Rule 2520, Federally Mandated Operating Permits (amended June 21, 2001 ⇒ amended August 15, 2019)
- District Rule 4601, Architectural Coatings (amended December 17, 2009 ⇒ amended April 16, 2020 – non-SIP version)
- District Rule 4702, Internal Combustion Engines (amended November 14, 2013 ⇒ amended August 19, 2021 – non-SIP version)
- 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (amended June 29, 2021)
- 40 CFR Part 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines (amended October 7, 2020)
- 40 CFR Part 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (amended March 19, 2020)
- 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (amended December 4, 2020)
- 40 CFR Part 64, Compliance Assurance Monitoring (adopted October 22, 1997)
- 40 CFR Part 68, Chemical Accident Prevention Provisions (amended December 19, 2019)
- 40 CFR Part 75, Continuous Emission Monitoring (amended April 22, 2020)
- 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners (amended June 25, 2013 ⇒ amended March 24, 2021)
- 40 CFR Part 82, Subpart F, Recycling and Emission Reduction (amended April 10, 2015 ⇒ amended April 10, 2020)

B. Rules Removed

- Fresno County Rule 110, Equipment Breakdown (SIP approved 8/22/1977 ⇒ District resolution to rescind from SIP 2/17/2022)
- Kern County Rule 111, Equipment Breakdown (SIP approved 10/24/1980 ⇒ District resolution to rescind from SIP 2/17/2022)
- Kings County Rule 111, Equipment Breakdown (SIP approved, last amended 6/18/1982 ⇒ District resolution to rescind from SIP 2/17/2022)
- Madera County Rule 113, Equipment Breakdown (SIP approved 11/18/1983 ⇒ District resolution to rescind from SIP 2/17/2022)
- Merced County Rule 109, Equipment Breakdown (SIP approved 6/18/1982 ⇒ Not applicable to facilities outside of Merced County)
- San Joaquin County Rule 110, Equipment Breakdown (SIP approved 12/5/1984 ⇒ Not applicable to facilities outside of San Joaquin County)
- Stanislaus County Rule 110, Equipment Breakdown (SIP approved 6/1/1983 ⇒ District resolution to rescind from SIP 2/17/2022)
- Tulare County Rule 111, Equipment Breakdown (SIP approved 8/22/1977 ⇒ District resolution to rescind from SIP 2/17/2022)
- 40 CFR Part 63 Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers (amended November 19, 2020)

C. Rules Added

There are no applicable rules that were added since the last Title V renewal.

D. Rules Not Updated

- District Rule 1070, Inspections (amended December 17, 1992)
- District Rule 1080, Stack Monitoring (amended December 17, 1992)
- District Rule 1081, Source Sampling (amended December 17, 1992)
- District Rule 1100, Equipment Breakdown (amended December 17, 1992)

- District Rule 1160, Emission Statements (adopted November 18, 1992)
- District Rule 2010, Permits Required (amended December 17, 1992)
- District Rule 2020, Exemptions (amended December 18, 2014)
- District Rule 2031, Transfer of Permits (amended December 17, 1992)
- District Rule 2040, Applications (amended December 17, 1992)
- District Rule 2070, Standards for Granting Applications (amended December 17, 1992)
- District Rule 2080, Conditional Approval (amended December 17, 1992)
- District Rule 2410, Prevention of Significant Deterioration, (adopted June 16, 2011)
- District Rule 4101, Visible Emissions (amended February 17, 2005)
- District Rule 4201, Particulate Matter Concentration (amended December 17, 1992)
- District Rule 4703, Stationary Gas Turbines (amended September 20, 2007)
- District Rule 7012, Hexavalent Chromium - Cooling Towers (amended December 17, 1992)
- District Rule 4801, Sulfur Compounds (amended December 17, 1992)
- District Rule 8011, Fugitive Dust General Requirements (Amended August 19, 2004)
- District Rule 8021, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Construction, Demolition, Excavation, and Extraction Activities (Amended August 19, 2004)
- District Rule 8031, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Handling and Storage of Bulk Materials (Amended August 19, 2004)
- District Rule 8041, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Carryout and Trackout (Amended August 19, 2004)

- District Rule 8051, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Open Area (Amended August 19, 2004)
- District Rule 8061, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Paved and Unpaved Roads (Amended August 19, 2004)
- District Rule 8071, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM10) from Unpaved Vehicle/Equipment Areas (Amended September 16, 2004)
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos (Amended July 20, 2004)
- 40 CFR Part 72, Subpart A, Acid Rain Program General Provisions (amended March 28, 2011)
- 40 CFR Part 73, Sulfur Dioxide Allowance System (amended April 28, 2006)
- 40 CFR Part 77, Excess Emissions (amended May 12, 2005)

VII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permits. The terms and conditions that are part of the facility's Title V permit are designated as "Federally Enforceable Through Title V Permit".

For this facility, the following are not federally enforceable and will not be discussed in further detail:

A. Rules Added/Updated

There are no applicable rules that were added or updated since the last Title V renewal.

B. Rules Not Updated

- District Rule 4102, Nuisance (as amended December 17, 1992)
- Title 17 California Code of Regulations (CCR) Section 93115, Airborne Toxic Control Measure for Stationary Compression Ignition Engines (adopted May 19, 2011)

VIII. PERMIT REQUIREMENTS

The purpose of this evaluation is to review changes to federally enforceable requirements; therefore, this compliance section will only address rules that have been amended or added since the issuance of the initial Title V permit or most recent renewal of the Title V permit.

A. Fresno County Rule 110, Kern County Rule 111, Kings County Rule 111, Madera County Rule 113, Merced County Rule 109, San Joaquin County Rule 110, Stanislaus County Rule 110, and Tulare County Rule 111 - Equipment Breakdown

In accordance with EPA's State Implementation Plan (SIP) Call, on February 17, 2022, the District rescinded Fresno County Rule 110, Kern County Rule 111, Kings County Rule 111, Madera County Rule 113, Stanislaus County Rule 110, and Tulare County Rule 111 from the San Joaquin Valley SIP. Moreover, the references to Merced County Rule 109 and San Joaquin County Rule 110 will be removed from the permit since the facility is not located within Merced County or San Joaquin County.

Therefore, conditions 1 and 2 on PTO C-7220-0-2 are no longer Federally Enforceable. Additionally, condition 39 has been modified to remove all references to county breakdown rules.

B. District Rule 2201 - New and Modified Stationary Source Review Rule (NSR)

District Rule 2201 has been amended since this facility's initial Title V permit was issued. However, the requirements of this rule are only triggered at the time the source undergoes a modification. All applicable requirements from any NSR permit actions have already been incorporated into the current Title V permit.

C. District Rule 2520 - Federally Mandated Operating Permits

No changes to this Rule have occurred since issuance of the previous TV permit; however, greenhouse gas emissions will be addressed under Rule 2520 during this renewal.

Greenhouse Gas Discussion

There are no federally applicable Greenhouse Gas (GHG) requirements for this source. It should be noted that the Mandatory Greenhouse Gas Reporting rule (40 CFR Part 98) is not included in the definition of an applicable requirement

within Title V (per 40 CFR 71.2). Therefore, there will be no further discussion of GHG in this evaluation.

D. District Rule 4601 - Architectural Coatings

District Rule 4601 was amended on April 16, 2020. However, the amended rule is not SIP-approved by EPA. The previous version of this rule (amended December 17, 2009) is SIP-approved and is still valid for this project. Therefore, there will be no further discussion.

This rule limits the emissions of VOCs from architectural coatings. The VOC content limits for coatings and colorants are listed in Table 1 and 2, respectively, of Section 5.0 of the amended rule. This rule also specifies architectural coatings storage, cleanup, and labeling requirements.

The rule was amended on April 16, 2020 but has not been SIP approved. The stringency analysis in Attachment E shows that the amended rule is as stringent as the SIP approved version of the rule that was adopted in December 17, 2009.

The following changes were included in the latest rule amendment that resulted in revising current permit requirements:

- Table of Standards 1 (through 12/31/2010) and Table of Standards 2 (after 1/1/2011) specifying the VOC content of different coatings and colorants have been replaced with Table 1 and Table 2 (effective after 1/1/2022) in Section 5.0.

To ensure compliance with Rule 4601 as amended 4/16/2020, conditions #23, 24, and 25 of the draft facility-wide permit S-7220-0-2 have been revised as follows:

- No person shall manufacture, blend, repackage, supply, market, sell, solicit or apply any architectural coating or colorant with a VOC content in excess of the applicable limits specified in Table 1 (Coatings) and Table 2 (Colorants) of District Rule 4601 (4/16/20), unless exempted under section 4.0 of District Rule 4601 (Amended 4/16/20). [District Rule 4601]
- All VOC-containing materials subject to Rule 4601 (4/16/20) shall be stored in closed containers when not in use. [District Rule 4601]
- The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (4/16/20). [District Rule 4601, 6.1 and 6.3]

E. District Rule 4702 - Internal Combustion Engines

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter (PM), and sulfur oxides (SO_x) from internal combustion engines. This rule applies to any internal combustion engine rated at 25 brake horsepower or greater. The last amended version of the rule, which is not SIP approved, requires lowering NO_x and VOC emissions for spark-ignited IC engines, clarifying definitions, and updating test methods. Also Particulate Matter Emission Control Requirements were added to the rule in Section 5.8, and as such the purpose of the rule was amended to encompass the new requirements.

The diesel-fired engine under permit unit C-7220-5-4 is a compression-ignited emergency standby engine equipped with a nonresettable elapsed time meter. Therefore, the amended sections of this rule are not applicable to this engine. Because the amendments to District Rule 4702 do not affect the requirements for this unit and no additional conditions are required, the changes will not be addressed further in this evaluation.

F. 40 CFR Part 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

C-7220-5-4 is the only stationary compression ignition IC engine at this facility, and it is subject to the requirements of this subpart.

§60.4205 – Emission Standards for Owners or Operators of Stationary Emergency IC Engines

Section 60.4205(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

As stated in §60.4205(c), the must comply with the following emission standards for stationary fire pump engines.

Table 4 to Subpart IIII Part 60 – Emission Standard for Stationary Fire Pump Engines				
Maximum Engine Power	Model Year	NMHC + NO _x	CO	PM
75 ≤ KW < 130 (100 ≤ HP < 175)	2008 and Earlier	10.5 (7.8)	5.0 (3.7)	0.8 (0.60)

Conditions 7 and 8 on the draft permit will ensure compliance with this requirement.

Section 60.4206 states that owners or operators of CI engines must meet the applicable emission standards for the entire life of said engines. The Tier 2 level emissions for the proposed engine will be listed on the permit as emission factors, ensuring that the emission standards are met over the entire life of the engine.

Section 60.4207(b) states that beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Section 40 CFR 1090.305 for ultra low-sulfur diesel (ULSD) fuel states that the maximum sulfur content of diesel fuel shall not exceed 15 ppm.

Condition 3 on the draft permit will ensure compliance with this requirement.

Section 60.4208 lists deadline dates for importing or installing stationary CI engines produced in the previous model year. None of the deadline dates affect the engine under permit unit C-7220-5-4. Therefore, this section does not apply.

Section 60.4209(a) applies to an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

Condition 4 on the draft permit will ensure compliance with this requirement.

Section 60.4210 applies only to engine manufacturers. Therefore, this section will not be discussed unless it is referenced later by another section of this subpart.

Section 60.4211(a) states that owners or operators who comply with the emission standards specified in this subpart must operate and maintain the stationary CI engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer.

Condition 5 on the draft permit will ensure compliance with this requirement.

Section 60.4211(b) applies to pre-2007 model year engines. The engine under permit C-7220-5-4 was installed in 2009; therefore, this section does not apply.

Section 60.4211(c) states that if you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in Section 60.4204(b) or Section 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in Section 60.4205(c), you must comply by purchasing an engine certified to the emission standards in Section 60.4204(b), or Section 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

The engines under permit C-7220-5-4 is a Tier 2 emissions level engine that complies with the emission standards in Section 60.4205(c) and was installed according to the manufacturer's specifications. Therefore, this section is satisfied.

Section 60.4211(d) applies to owners or operators who must comply with the emission standards specified in Section 60.4204(c) or Section 60.4205(d). The engine under permit C-7220-5-4 is not subject to the emission standards specified in Sections 60.4204(c) or 60.4205(d). Therefore, this section does not apply.

Section 60.4211(e) applies to owners or operators of modified or reconstructed stationary CI internal combustion engines. As discussed, the engine under permit C-7220-5-4 was never modified or reconstructed; therefore, this section does not apply.

Section 60.4211(f) applies to owners or operators of an emergency stationary ICE. This section states you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

Section 60.4211(f)(2) states an operator emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

Section 60.4211(f)(2) states an emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

Condition 15 on the draft permit will ensure compliance with this requirement.

Section 60.4212 applies to owners or operators of a stationary CI engine with a displacement of less than 30 liters per cylinder and required to conduct performance tests pursuant to Section 60.4211(b). Section 60.4211(b) does not apply to this engine; therefore, performance tests are not required and this section does not apply.

Section 60.4213 applies to owners or operators of CI engines with a displacement of greater than or equal to 30 liters per cylinder. The displacement is less than 30 liters per cylinder for the engine under permit C-7220-5-4, therefore, this section does not apply.

Section 60.4214(a) states owners and operators of non-emergency stationary CI engines that are greater than 3,000 hp, or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 175 hp and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section. The engine under permit C-7220-5-4 is a post-2007 model year emergency engine rated less than 3,000 hp and has a displacement less than 10 liters per cylinder. Therefore, this section does not apply.

Section 60.4214(b) states that if the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

Condition 10 on the draft permit will ensure compliance with this requirement.

Section 60.4214(c) applies to stationary CI engines equipped with a diesel particulate filter. Therefore, this section does not apply.

Sections 60.4215 and 60.4216 apply to engines operated outside the continental United States. Therefore, these sections do not apply.

Section 60.4217 applies to engines that use special fuels and cannot meet the emission limits that the engine was originally certified to. Since the engine under permit C-7220-5-4 is diesel-fired and meets the emission limits that the engine was originally certified to, this section does not apply.

G. 40 CFR Part 60, Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

40 CFR Part 60 Subpart KKKK applies to all stationary gas turbines rated at greater than or equal to 10 MMBtu/hr that commence construction, modification, or reconstruction after February 18, 2005. The proposed gas turbines involved in this project have a rating of 909.7 MMBtu/hr and was installed after February 18, 2005. Therefore, this subpart applies to these gas turbines.

Subpart KKKK established requirements for nitrogen oxide (NO_x) and sulfur dioxide (SO_x) emissions.

Section 60.4320, Paragraph (a) states that NO_x emissions shall not exceed the emission limits specified in Table 1 of this subpart. Paragraph (b) states that if you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NO_x. Table 1 states that new turbines firing natural gas with a combustion turbine heat input at peak load of greater than 850 MMBtu/hr shall meet a NO_x emissions limit of 15 ppmvd @ 15% O₂ or 54 ng/J of useful output (0.43 lb/MWh).

Condition 5 on the draft permits will ensure compliance with this requirement.

Section 60.4330, Paragraph (a) states that if your turbine is located in a continental area, you must comply with one of the following:

- (1) Operator must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90) pounds per megawatt-hour (lb/MWh) gross output; or
- (2) Operator must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input.

Condition 4 on the draft permits will ensure compliance with this requirement.

Section 60.4340 specifies the requirements for units not equipped with water or steam injection. Permit units C-7220-1-3, '-2-3, '-3-3, and '-4-3 are equipped with water injection. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 60.4345 (a) states that each NO_x diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_x diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

Section 60.4345 (b) states that as specified in §60.13(e)(2), during each full unit operating hour, both the NO_x monitor and the diluent monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point must be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of two valid data points (one in each of two quadrants) are required for each monitor to validate the NO_x emission rate for the hour.

Section 60.4345 (c) states that each fuel flowmeter shall be installed, calibrated, maintained, and operated according to the manufacturer's instructions. Alternatively, with state approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to part 75 of this chapter are acceptable for use under this subpart.

Section 60.4345 (d) states that each watt meter, steam flow meter, and each pressure or temperature measurement device shall be installed, calibrated, maintained, and operated according to manufacturer's instructions.

Section 60.4345 (e) states that the owner or operator shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment described in paragraphs (a), (c), and (d) of this section. For the CEMS and fuel flow meters, the owner or operator may, with state approval, satisfy the requirements of this paragraph by implementing the QA program and plan described in section 1 of appendix B to part 75 of this chapter.

Conditions 30 and 31 on the draft permits will ensure compliance with this requirement.

Section 60.4350 states that for purposes of identifying excess emissions:

(a) All CEMS data must be reduced to hourly averages as specified in §60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in §60.4345(b), is obtained for both NO_x and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_x emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O₂ concentration exceeds 19.0 percent O₂ (or the hourly average CO₂ concentration is less than 1.0 percent CO₂), a diluent cap value of 19.0 percent O₂ or 1.0 percent CO₂ (as applicable) may be used in the emission calculations.

(c) Correction of measured NO_x concentrations to 15 percent O₂ is not allowed.

(d) If you have installed and certified a NO_x diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under §60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NO_x emission rates, in units of the emission standards under §60.4320, using either ppm for units complying with the concentration limit or the equations 1 (simple cycle turbines) or 2 (combined cycle turbines) listed in §60.4350, paragraph (f).

Condition 36 on the draft permits will ensure compliance with this requirement.

Section 60.4355 sets forth the requirements for operators that elect to continuously monitor parameters in lieu of installing a CEMS for NO_x emissions. As discussed above, PEC is proposing to install CEMS on each of these turbines that will directly measure NO_x emissions. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 60.4360 states that an operator must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in §60.4365. The sulfur

content of the fuel must be determined using total sulfur methods described in §60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17), which measure the major sulfur compounds, may be used.

Section 60.4365 states that an operator may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for units located in continental areas and 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for units located in noncontinental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:

- (a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for noncontinental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas; or
- (b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input for continental areas or 180 ng SO₂/J (0.42 lb SO₂/MMBtu) heat input for noncontinental areas. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

Section 60.4370 states that the frequency of determining the sulfur content of the fuel must be as follows:

- (a) *Fuel oil.* For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to part 75 of this chapter (*i.e.*, flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

- (b) *Gaseous fuel.* If you elect not to demonstrate sulfur content using options in §60.4365, and the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel must be determined and recorded once per unit operating day.
- (c) *Custom schedules.* Notwithstanding the requirements of paragraph (b) of this section, operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in paragraphs (c)(1) and (c)(2) of this section, custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in §60.4330.

Condition 22 on the draft permits will ensure compliance with this requirement.

Section 60.4380 establishes reporting requirements for periods of excess emissions and monitor downtime. Paragraph (a) lists requirements for operators choosing to monitor parameters associated with water or steam to fuel ratios. The facility does not monitor parameters associated with water or steam to fuel ratios to predict what the NO_x emissions from the turbines will be. Therefore, the requirements of this paragraph are not applicable and no further discussion is required.

Paragraph (b) states that for turbines using CEM's:

- (1) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_x emission rate exceeds the applicable emission limit in §60.4320. For the purposes of this subpart, a "4-hour rolling average NO_x emission rate" is the arithmetic average of the average NO_x emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_x emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_x emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a "30-day rolling average NO_x emission rate" is the arithmetic average of all hourly NO_x emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours.
- (2) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x

concentration, CO₂ or O₂ concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

- (3) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

Paragraph (c) lists requirements for operators who choose to monitor combustion parameters that document proper operation of the NO_x emission controls. PEC is not proposing to monitor combustion parameters that document proper operation of the NO_x emission controls. Therefore, the requirements of this paragraph are not applicable and no further discussion is required.

Condition 35 on the draft permits will ensure compliance with this requirement.

Section 60.4385 states that if an operator chooses the option to monitor the sulfur content of the fuel, excess emissions and monitoring downtime are defined as follows:

- (a) For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the combustion turbine exceeds the applicable limit and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
- (b) If the option to sample each delivery of fuel oil has been selected, you must immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 weight percent. You must continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and you must evaluate excess emissions according to paragraph (a) of this section. When all of the fuel from the delivery has been burned, you may resume using the as-delivered sampling option.
- (c) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and

hour of a required sample, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.

The facility follows the definitions and procedures specified above for determining periods of excess SO_x emissions. Therefore, the proposed turbines will be operating in compliance with the requirements of this section.

Sections 60.4375, 60.4380, 60.4385 and 60.4395 establish the reporting requirements for each turbine. These requirements include methods and procedures for submitting reports of monitoring parameters, annual performance tests, excess emissions and periods of monitor downtime.

Condition 40 on the draft permits will ensure compliance with this requirement.

Section 60.4400, paragraph (a) states that an operator must conduct an initial performance test, as required in §60.8. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

Paragraphs (1), (2) and (3) set forth the requirements for the methods that are to be used during source testing.

Conditions 21 and 23 on the draft permits will ensure compliance with this requirement.

Section 60.4405 – Initial CEMS Relative Accuracy Testing:

Section 60.4405 states that if you elect to install and certify a NO_x-diluent CEMS, then the initial performance test required under §60.8 may be performed in the alternative manner described in paragraphs (a), (b), (c) and (d). These are existing units; therefore, the requirements of this section are not applicable and no further discussion is required.

Section 60.4410 sets forth requirements for operators that elect to monitor combustion parameters or parameters indicative of proper operation of NO_x emission controls. The CEMS systems monitor the NO_x emissions from each of these turbines. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 60.4415 states that an operator must conduct an initial performance test, as required in §60.8. Subsequent SO₂ performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are three methodologies that you may use to conduct the performance tests.

(1) If you choose to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see §60.17) for natural gas or ASTM D4177 (incorporated by reference, see §60.17) for oil. Alternatively, for oil, you may follow the procedures for manual pipeline sampling in section 14 of ASTM D4057 (incorporated by reference, see §60.17). The fuel analyses of this section may be performed either by you, a service contractor retained by you, the fuel vendor, or any other qualified agency. Analyze the samples for the total sulfur content of the fuel using:

- (i) For liquid fuels, ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 (all of which are incorporated by reference, see §60.17);
or
- (ii) For gaseous fuels, ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see §60.17).

Condition 25 on the draft permits will ensure compliance with this requirement.

H. 40 CFR Part 63, Subpart Q - National Emissions Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers

40 CFR Part 63 Subpart Q applies to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources of hazardous air pollutants (HAPS) or are integral parts of facilities that are major sources of HAPS.

Section 63.401 states, “Major Source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.”

As shown in Attachment D, the facility is not a major source for HAP emissions. Therefore, this subpart is not applicable and no further discussion is required.

I. 40 CFR Part 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

This subpart establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emissions from stationary combustion turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

Section 63.6085(b) states, "A major source of HAP emissions is a contiguous site under common control that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site."

As shown in Attachment D, the facility is not a major source for HAP emissions. Therefore, this subpart is not applicable to the gas turbines and no further discussion is required.

Conditions 19 and 20 on the draft permits will ensure the requirements of this regulation are not applicable to the turbines.

J. 40 CFR Part 64 - Compliance Assurance Monitoring (CAM)

40 CFR Part 64 requires Compliance Assurance Monitoring for units that meet the following three criteria:

- 1) the unit must have an emission limit for the pollutant;
- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
- 3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

Pollutant	Major Source Threshold (lb/year)
NO _x	20,000
SO _x	140,000
PM ₁₀	140,000
CO	200,000
VOC	20,000

- a. C-7220-1-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
- b. C-7220-2-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
- c. C-7720-3-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
- d. C-7720-4-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

These permit units have emission limits for NO_x, SO_x, PM₁₀, CO, and VOC. The turbines are equipped with a selective catalytic reduction system for control of NO_x emissions, and with an oxidation catalyst for control of CO and VOC emissions. CAM can only potentially be triggered for these pollutants.

Pursuant to Section 64.2(b)(vi), emission limits or standards for which the permit specifies a continuous compliance determination method are exempt from CAM requirements. This turbines are equipped with a Continuous Emission Monitoring system (CEMs) that measures NO_x and CO emissions. Therefore, the turbines are exempt from CAM requirements for NO_x and CO.

For SO_x and PM₁₀, these units are not subject to CAM since they do not have any add-on control device for those pollutants.

For VOC the post-control potential to emit (PE) is listed on the current permit as 2.67 lb-VOC/hr¹, operating limit of 5,000 hr/year², and has a catalytic control efficiency of 71 percent³.

¹ PTOs C-7220-1-3, '-2-3, '-3-3, and '-4-3

² PTOs C-7220-1-3, '-2-3, '-3-3, and '-4-3

³ BACT Guideline 3.4.4

$$\begin{aligned}
 \text{Pre-control PE} &= \text{post-control PE (lb-VOC/hr)} \times \text{Operating Limit (hr/year)} \div \\
 &\quad (1 - \text{CE}) \\
 &= (2.67 \text{ lb-VOC/hr} \times 5,000 \text{ hr/year}) \div (1 - 0.71) \\
 &= 46,034 \text{ lb-VOC/year}
 \end{aligned}$$

Since the pre-control PE for each unit is greater than the major source threshold of 20,000 lb-VOC/year, these units are subject to CAM for VOC emissions.

As discussed above, the turbines are equipped with an oxidation catalyst that controls CO and VOC emissions. Since the CEMs for CO assures that the oxidation catalysts are operating correctly, it would be redundant to monitor other operational parameters of the oxidation catalysts. Therefore, CAM for VOC is satisfied with the use of CEMs for CO.

e. C-7720-5-4: 160 BHP (INTERMITTENT) JOHN DEERE MODEL 6068T TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

This engine has emission limits for NO_x, PM₁₀, CO, and VOC but does not have any add-on controls. Therefore, this unit is not subject to CAM.

f. C-7720-6-3: 27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

1. The cooling tower has an emission limit for PM₁₀.
2. The mist eliminator(s) may be considered an add-on control for PM₁₀.
3. The pre-control potential to emit for PM₁₀ is below the Major Source threshold for PM₁₀ (140,000 lb/yr) as shown by the following calculations.

- Cooling tower water circulation rate: 27,600 gal/min
- EF PM (Uncontrolled): 0.019 lb/1,000 gal (AP-42, table 13.4-1)

$$\begin{aligned}
 \text{Uncontrolled PM}_{10} \text{ emission rate} &= 27,600 \text{ gal/min} \times 0.019 \text{ lb-PM} / 1,000 \\
 &\quad \text{gallons} \times 60 \text{ min/hr} \times 24 \text{ hr/day} \times 365 \text{ day/yr} \times 0.149 \text{ lb-PM}_{10} / 1 \\
 &\quad \text{lb-PM}^4
 \end{aligned}$$

$$\text{Uncontrolled PM}_{10} \text{ emission rate} = 41,068 \text{ lb-PM}_{10}/\text{yr}.$$

Since the pre-control emission rate for PM₁₀ (41,068 lb-PM₁₀/yr) is not greater than the Major Source threshold for PM₁₀ (140,000 lb/yr); therefore, CAM is not required.

⁴ Calculating Realistic PM₁₀ Emissions from Cooling Towers, Joel Reisman and Gordon Frisbie

K. 40 CFR Part 75 - Continuous Emission Monitoring

The purpose of this part is to establish requirements for the monitoring, recordkeeping, and reporting of sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon dioxide (CO₂) emissions, volumetric flow, and opacity data from affected units under the Acid Rain Program.

- a. C-7220-1-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
- b. C-7220-2-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
- c. C-7720-3-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
- d. C-7720-4-3: 100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

Conditions 46, 47, 50, and 59 on the draft permits will ensure the requirements of this regulation are not applicable to the turbines.

L. 40 CFR Part 82, Subpart B - Servicing of Motor Vehicle Air Conditioners

The purpose of 40 CFR Part 82 Subpart B is to implement section 609 of the Clean Air Act, as amended regarding the servicing of motor vehicle air conditioners (MVACs), and to implement section 608 of the Clean Air Act regarding certain servicing, maintenance, repair and disposal of air conditioners in MVACs and MVAC-like appliances.

These regulations apply to any person performing service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner.

The amendments to this subpart did not have any effect on the current permit requirements and will therefore not be addressed further in this evaluation.

M. 40 CFR Part 82 Subpart F - Recycling and Emissions Reductions

The purpose of 40 CFR Part 82 Subpart F is to reduce emissions of class I and class II refrigerants and their substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the service, maintenance, repair, and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I and class II ODS in accordance with Title VI of the Clean Air Act.

These regulations apply to any person servicing, maintaining, or repairing appliances. This subpart also applies to persons disposing of appliances, including small appliances and motor vehicle air conditioners. In addition, this subpart applies to refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons selling class I or class II refrigerants or offering class I or class II refrigerants for sale, and persons purchasing class I or class II refrigerants.

The amendments to this subpart did not have any effect on the current permit requirements and will therefore not be addressed further in this evaluation.

IX. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

A. Requirements Addressed by Model General Permit Templates

1. Model General Permit Template SJV-UM-0-3

By submitting Model General Permit Template SJV-UM-0-3 qualification form, the applicant has requested that a permit shield be granted for all the applicable requirements identified by the template. Therefore, the permit shields as granted in Model General Permit Template are included as conditions 39 and 40 of the facility-wide requirements (C-7220-0-2).

However, condition 39 was modified to remove rescinded and inapplicable county breakdown rules as described Section VIII. A. of this evaluation and

condition 40 was modified as indicated below to remove reference to the December 17, 2009 version of District Rule 4601, Architectural Coatings:

- 40. {4401} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); ~~4601 (12/17/09)~~; 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

X. CALIFORNIA ENVIRONMENTAL QUALITY ACT

The purpose of the Title V permit renewal is to update the permit to ensure that any changes to regulations since the issuance of the initial Title V permit or most recent renewal of the Title V permit are incorporated as permit requirements.

Per the California Environmental Quality Act (CEQA) Statute §21080.24, and CEQA Guidelines §15281, the issuance, modification, amendment, or renewal of any permit by an air pollution control district or air quality management district pursuant to Title V is exempt from CEQA, unless the issuance, modification, amendment, or renewal authorizes a physical or operational change to a source or facility. There will be no physical or operational change to the source or facility nor will the Title V permit renewal authorize a physical or operational change to the source or facility. Therefore, this project, a Title V permit renewal, is subject to a ministerial action that is exempt from CEQA.

XI. PERMIT CONDITIONS

See Attachment A - Draft Renewed Title V Operating Permit.

ATTACHMENTS

- A. Draft Renewed Title V Operating Permit
- B. Previous Title V Operating Permit
- C. Detailed Summary List of Facility Permits
- D. Major Source Determination for Hazardous Air Pollutants
- E. District Rule 4601 Stringency Analysis

ATTACHMENT A

Draft Renewed Title V Operating Permit

San Joaquin Valley Air Pollution Control District

FACILITY: C-7220-0-2

EXPIRATION DATE: 01/31/2021

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1]
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0]
3. {4364} The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. {4365} Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. {4366} The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. {4367} A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. {4368} Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. {4369} The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. {4370} The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: PANOCHE ENERGY CENTER LLC
Location: W PANOCHE RD, FIREBAUGH, CA
C-7220-0-2 : Jun 20 2022 1:57PM -- BUSHT

10. {4371} The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
11. {4372} Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. {4373} If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
13. {4374} It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
14. {4375} The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
15. {4376} The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. {4377} The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
17. {4378} The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
18. {4379} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
19. {4380} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
20. {4381} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
21. {4382} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE
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22. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
23. No person shall manufacture, blend, repackage, supply, market, sell, solicit or apply any architectural coating or colorant with a VOC content in excess of the applicable limits specified in Table 1 (Coatings) and Table 2 (Colorants) of District Rule 4601 (4/16/20), unless exempted under section 4.0 of District Rule 4601 (Amended 4/16/20). [District Rule 4601] Federally Enforceable Through Title V Permit
24. All VOC-containing materials subject to Rule 4601 (4/16/20) shall be stored in closed containers when not in use. [District Rule 4601] Federally Enforceable Through Title V Permit
25. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (4/16/20). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. {4387} With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. {4388} If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. {4389} If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. {4390} Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
30. {4391} Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit
31. {4392} An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit
32. {4393} Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
33. {4394} Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit

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34. {4395} Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit
35. {4396} Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
36. {4397} The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. {4398} The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. {4399} When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced) and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
42. On May 16, 2011, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-1-3

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOx (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three-hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPS or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

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32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO, and O₂ CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NO_x emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NO_x concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O₂ (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO_x emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

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43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

DRAFT

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-2-3

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOx (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three-hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO, and O₂ CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NO_x emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NO_x concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O₂ (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO_x emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

DRAFT

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-3-3

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM₁₀ - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOx (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three-hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM₁₀ 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM₁₀ 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPS or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO, and O₂ CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NO_x emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NO_x concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O₂ (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO_x emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

DRAFT

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-4-3

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOx (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three-hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1.) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rules 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO, and O₂ CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NO_x emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NO_x concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O₂ (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO_x emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-5-4

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

160 BHP (INTERMITTENT) JOHN DEERE MODEL 6068T TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801; 17 CCR 93115 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 4.3.1; 17 CCR 93115; and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
5. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rules 4702 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
6. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed any of the following limits: 4.39 g-NOx/bhp-hr, 0.39 g-CO/bhp-hr, or 0.26 g-VOC/bhp-hr. [District Rule 2201; 13 CCR 2423; 17 CCR 93115 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
8. Emissions from this IC engine shall not exceed 0.20 g-PM10/bhp-hr based on using ISO 8178 test procedure. [District Rules 2201 and 4102; 13 CCR 2423; 17 CCR 93115 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
9. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702, 4.3.1; 17 CCR 93115 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
10. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 6.2.3; 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702, 6.2.3 and 17 CCR 93115] Federally Enforceable Through Title V Permit
12. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 4201 (12/17/92), District Rule 4701 (8/21/03), District Rule 4702 (1/18/07), District Rule 4801 (12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2]
13. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-6-3

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. No chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012] Federally Enforceable Through Title V Permit
4. Drift eliminator drift rate shall not exceed 0.0005%. [District Rule 2201] Federally Enforceable Through Title V Permit
5. PM10 emission rate from the cooling tower shall not exceed 8.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Compliance with the PM10 daily emission limit shall demonstrated as follows: $PM10 \text{ lb/day} = \text{circulating water recirculation rate} \times \text{total dissolved solids concentration in the blowdown water} \times \text{design drift rate}$. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Compliance with the PM10 emission limit shall be determined by blowdown water sample analysis by independent laboratory quarterly. [District Rule 1081, 4.0] Federally Enforceable Through Title V Permit
8. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93) and District Rule 4201 (12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

These terms and conditions are part of the Facility-wide Permit to Operate.

ATTACHMENT B

Previous Title V Operating Permit

San Joaquin Valley Air Pollution Control District

FACILITY: C-7220-0-1

EXPIRATION DATE: 01/31/2021

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: PANOCHE ENERGY CENTER LLC
Location: W PANOCHE RD, FIREBAUGH, CA
C-7220-0-1 : Nov 29 2021 1:46PM -- BUSHT

10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit
22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
25. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
30. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit
31. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit
32. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
33. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit
34. Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit
35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
42. On May 16, 2011, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-1-2

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOX (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPS or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rule 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO, and O₂ CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NO_x emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NO_x concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O₂ (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO_x emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-2-2

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM10 - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOX (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM10 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPS or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rule 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO, and O₂ CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NO_x emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NO_x concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O₂ (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO_x emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-3-2

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM₁₀ - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOx (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM₁₀ 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM₁₀ 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rule 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NOx emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NOX concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NOX or O2 (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NOX emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-4-2

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Combustion turbine generator (CTG) and electrical generator lube oil vents shall be equipped with mist eliminators. Visible emissions from lube oil vents shall not exhibit opacity of 5% or greater, except for a period or periods not exceeding three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
4. The CTG shall be fired exclusively on PUC-regulated natural gas with a sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rules 2201 and 4801; and 40 CFR 60.4330(a)(2)] Federally Enforceable Through Title V Permit
5. Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO₂) - 8.03 lb/hr and 2.5 ppmvd @ 15% O₂; SOx (as SO₂) - 2.51 lb/hr; PM₁₀ - 6.00 lb/hr; CO - 11.81 lb/hr and 6.0 ppmvd @ 15% O₂; or VOC (as methane) - 2.67 lb/hr and 2.0 ppmvd @ 15% O₂. NOX (as NO₂) emission limits are one hour rolling averages. All other pollutant emission concentration limits are based on three hour rolling averages. [District Rules 2201 and 4703, 5.1 & 5.2 and 40 CFR 60.4320(a) & (b)] Federally Enforceable Through Title V Permit
6. Ammonia (NH₃) emissions shall not exceed either of the following limits: 11.90 lb/hr or 10 ppmvd @ 15% O₂ (based on a 24 hour rolling average). [District Rule 2201] Federally Enforceable Through Title V Permit
7. During periods of startup, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 44.40 lb/hr, SOx - 2.51 lb/hr, PM₁₀ 6.00 lb/hr, CO - 106.60 lb/hr, or VOC - 7.60 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of shutdown, CTG exhaust emission rates shall not exceed any of the following limits: NOx (as NO₂) - 34.29 lb/hr, SOx - 2.51 lb/hr, PM₁₀ 6.00 lb/hr, CO - 268.57 lb/hr, or VOC - 17.14 lb/hr, based on one hour averages. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Startup shall be defined as the period of time during which a unit is brought from a shutdown status to its SCR operating temperature and pressure, including the time required by the unit's emission control system to reach full operations. Shutdown shall be defined as the period of time during which a unit is taken from an operational to a non-operational status as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. The duration of each startup or shutdown shall not exceed two hours. Startup and shutdown emissions shall be counted toward all applicable emission limits. [District Rules 2201 and 4703, 5.3.1] Federally Enforceable Through Title V Permit
11. The emission control systems shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
12. Daily emissions from the CTG shall not exceed any of the following limits: NO_x (as NO₂) - 261.1 lb/day; VOC - 79.1 lb/day; CO - 560.4 lb/day; PM₁₀ - 144.1 lb/day; or SO_x (as SO₂) - 60.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Quarterly hours of operation shall not exceed any of the following: 1st Quarter - 1,100 hours, 2nd Quarter - 1,100 hours, 3rd Quarter - 1,600 hours, or 4th Quarter - 1,200 hours. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Annual emissions from the CTG, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: NO_x (as NO₂) - 48,465 lb/year; SO_x (as SO₂) - 12,550 lb/year; PM₁₀ - 30,000 lb/year; CO - 92,750 lb/year; or VOC - 15,174 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Each one hour period shall commence on the hour. Each one hour period in a three hour rolling average will commence on the hour. The three hour average will be compiled from the three most recent one hour periods. Each one hour period in a twenty-four hour average for ammonia slip will commence on the hour. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Daily emissions will be compiled for a twenty-four hour period starting and ending at twelve-midnight. Each month in the twelve consecutive month rolling average emissions shall commence at the beginning of the first day of the month. The twelve consecutive month rolling average emissions to determine compliance with annual emissions limitations shall be compiled from the twelve most recent calendar months. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the ammonia emission limits shall be demonstrated utilizing one of the following procedures: 1) calculate the daily ammonia emissions using the following equation: $(\text{ppmvd @ 15\% O}_2) = ((a - (b \times c/1,000,000)) \times (1,000,000 / b)) \times d$, where a = average ammonia injection rate (lb/hr) / (17 lb/lb mol), b = dry exhaust flow rate (lb/hr) / (29 lb/lb mol), c = change in measured NO_x concentration ppmvd @ 15% O₂ across the catalyst, and d = correction factor. The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip; 2.) Utilize another District-approved calculation method using measured surrogate parameters to determine the daily ammonia emissions in ppmvd @ 15% O₂. If this option is chosen, the permittee shall submit a detailed calculation protocol for District approval at least 60 days prior to commencement of operation; 3.) Alternatively, the permittee may utilize a continuous in-stack ammonia monitor to verify compliance with the ammonia emissions limit. If this option is chosen, the permittee shall submit a monitoring plan for District approval at least 60 days prior to commencement of operation. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to measure startup and shutdown NO_x, CO, and VOC mass emission rates shall be conducted for one of the gas turbines (C-7220-1, C-7220-2, C-7220-3, or C-7220-4) at least once every seven years. CEM relative accuracy shall be determined during startup source testing in accordance with 40 CFR 60, Appendix B. If CEM data is not certifiable to determine compliance with NO_x and CO startup emission limits, then source testing to measure startup NO_x and CO mass emission rates shall be conducted at least once every 12 months. [District Rule 1081, 4.0 and 40 CFR 60.13(j)] Federally Enforceable Through Title V Permit
19. Hazardous Air Pollutant (HAP) emissions shall not exceed 25 tons per year for total HAPS or 10 tons per year for any single HAP. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit
20. Annual compliance with the HAPS emissions limit (25 tpy all HAPs or 10 tpy any single HAP) shall be demonstrated by the combined VOC emissions rates for the GTEs (C-7220-1, '2, '3, and '4) determined during annual compliance source testing and the correlation between VOC emissions and HAP(s) as determined during the initial speciated HAPS and total VOC source test. [40 CFR 63.6085(b)] Federally Enforceable Through Title V Permit

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21. Source testing to measure the NO_x, CO, VOC, and NH₃ emission rates (lb/hr and ppmvd @ 15% O₂) and PM₁₀ emission rate (lb/hr) shall be conducted at least once every twelve months. [District Rules 1081, 4.0 and 4703, 6.3.1 and 40 CFR 60.4400(a)] Federally Enforceable Through Title V Permit
22. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly. If the sulfur content is demonstrated to be less than 1.0 gr/100 scf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume. [District Rule 2201; 40 CFR 60.4360, 60.4365(a) and 60.4370(c)] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x - EPA Method 7E or 20, PM₁₀ - EPA Method 5 or 201A (front half) and 202 or CARB 5 (back half), CO - EPA Method 10 or 10B, O₂ - EPA Method 3, 3A, or 20, VOC - EPA Method 18 or 25, and ammonia - EPA Method 206 or BAST Procedure ST-1B. EPA approved alternative test methods as approved by the District may also be used to address the source testing requirements of this permit. The request to utilize EPA approved alternative source testing methods must be submitted in writing and written approval received from the District prior to the submission of the source test plan. [District Rule 1081, 5.0 and 4703, 6.4 and 40 CFR 60.4400(1)(i)] Federally Enforceable Through Title V Permit
24. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.332(a),(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
25. If fuel sulfur content is not validated per 40 CFR 40.4365, fuel sulfur content shall be monitored using one of the following methods: ASTM Methods D1072, D3246, D4084, D4468, D4810, D6228, D6667 or Gas Processors Association Standard 2377. [40 CFR 60.4415(a)(1)] Federally Enforceable Through Title V Permit
26. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1080, 3.0] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be District witnessed or authorized and samples shall be collected by a certified testing laboratory. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit
28. The turbine shall be equipped with a continuous monitoring system to measure and record fuel consumption. [District Rules 2201 and 4703 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
29. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO_x, CO and O₂ concentrations. Continuous emissions monitor(s) shall be capable of monitoring emissions during normal operating conditions, and during startups and shutdowns provided the CEMS pass the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 4.0, 2201, and 4703, 6.2.1 and 40 CFR 60.4335(b)(1)] Federally Enforceable Through Title V Permit
30. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.4345(b)] Federally Enforceable Through Title V Permit
31. The NO_x, CO and O₂ CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.6 and 40 CFR 60.4345(a)] Federally Enforceable Through Title V Permit

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32. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
33. The owner/operator shall perform a relative accuracy test audit (RATA) for the NO_x, CO, and O₂ CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
34. Results of the CEM system shall be averaged over a one hour period for NO_x emissions and a three hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1; 40 CFR 60.13(h) and 40 CFR 60.4350(a)] Federally Enforceable Through Title V Permit
35. Excess emissions shall be defined as any operating hour in which the 4-hour or 30-day rolling average NO_x concentration exceeds applicable emissions limit and a period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour for either NO_x or O₂ (or both). [40 CFR 60.4380(b)(1)] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2 and 40 CFR 60.4350] Federally Enforceable Through Title V Permit
37. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
38. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 4.0] Federally Enforceable Through Title V Permit
39. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
40. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess NO_x emissions, nature and the cause of excess (if known), corrective actions taken and preventative measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period and used to determine compliance with an emissions standard; Applicable time and date of each period during which the CEM was inoperative (monitor downtime), except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and 40 CFR 60.4375(a) and 60.4395] Federally Enforceable Through Title V Permit
41. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rule 1080, 11.0] Federally Enforceable Through Title V Permit
42. The permittee shall maintain the following records: date and time, duration, and type of any startup, shutdown, or malfunction; performance testing, evaluations, calibrations, checks, adjustments, any period during which a continuous monitoring system or monitoring device was inoperative, and maintenance of any continuous emission monitor. [District Rules 2201 and 4703, 6.2.6 & 6.2.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. The permittee shall maintain the following records: quarterly hours of operation, fuel consumption (scf/hr and scf/rolling twelve month period), continuous emission monitor measurements, calculated ammonia slip, and calculated NOx mass emission rates (lb/hr and lb/twelve month rolling period). [District Rules 2201 and 4703, 6.2.6] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4703, 6.2.4] Federally Enforceable Through Title V Permit
45. The owners and operators of each affected source and each affected unit at the source shall: (i) Operate the unit in compliance with a complete Acid Rain permit application or a superceding Acid Rain permit issued by the permitting authority; and (ii) Have an Acid Rain permit. [40 CFR 72] Federally Enforceable Through Title V Permit
46. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit
47. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
48. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit
49. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit
50. An affected unit shall be subject to the sulfur dioxide requirements starting on the later of January 1, 2000, or the deadline for monitoring certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit. [40 CFR 72, 40 CFR 75] Federally Enforceable Through Title V Permit
51. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit
52. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit
53. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit
54. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit
55. The owners and operators of each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides. [40 CFR 72] Federally Enforceable Through Title V Permit
56. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit
57. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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58. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
59. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit
60. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit
61. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93), District Rule 4201 (12/17/92), District Rule 4703 (8/17/06), District Rule 4801 (12/17/92), 40 CFR 60 Subpart A; 40 CFR 60 Subpart KKKK, and 40 CFR 60 part 72. A permit shield is granted from these requirements. [District Rule 2520, 13.2]
62. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
63. The requirements of 40 CFR 60 Subpart GG are not applicable because this combustion turbine generator is subject to 40 CFR 60 Subpart KKKK. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-5-3

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801; and 17 CCR 93115] Federally Enforceable Through Title V Permit
4. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 4.3.1, 17 CCR 93115, and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
5. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rules 4702 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
6. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit
7. Emissions from this IC engine shall not exceed any of the following limits: 4.39 g-NOx/bhp-hr, 0.39 g-CO/bhp-hr, or 0.26 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115] Federally Enforceable Through Title V Permit
8. Emissions from this IC engine shall not exceed 0.20 g-PM10/bhp-hr based on using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115] Federally Enforceable Through Title V Permit
9. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702, 4.3.1, 17 CCR 93115 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
10. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 6.2.3 and 17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702, 6.2.3 and 17 CCR 93115] Federally Enforceable Through Title V Permit
12. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 4201 (12/17/92), District Rule 4701 (8/21/03), District Rule 4702 (1/18/07), District Rule 4801 (12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2]
13. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirement: Rule 406 (Fresno County). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-7220-6-2

EXPIRATION DATE: 01/31/2021

EQUIPMENT DESCRIPTION:

27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. No chromium containing compounds shall be added to cooling tower circulating water. [District Rule 7012 and 40 CFR 63.402] Federally Enforceable Through Title V Permit
4. Drift eliminator drift rate shall not exceed 0.0005%. [District Rule 2201] Federally Enforceable Through Title V Permit
5. PM10 emission rate from the cooling tower shall not exceed 8.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Compliance with the PM10 daily emission limit shall demonstrated as follows: $PM10 \text{ lb/day} = \text{circulating water recirculation rate} \times \text{total dissolved solids concentration in the blowdown water} \times \text{design drift rate}$. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Compliance with the PM10 emission limit shall be determined by blowdown water sample analysis by independent laboratory within 120 days of initial operation and quarterly thereafter. [District Rule 1081, 4.0] Federally Enforceable Through Title V Permit
8. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following requirements: District Rule 1081 (12/16/93) and District Rule 4201 (12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

These terms and conditions are part of the Facility-wide Permit to Operate.

ATTACHMENT C

Detailed Summary List of Facility Permits

Detailed Facility Report
For Facility=7220 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

PANOCH ENERGY CENTER LLC W PANOCH RD FIREBAUGH, CA	FAC #	C 7220	TYPE:	TitleV	EXPIRE ON:	01/31/2021
	STATUS:	A	TOXIC ID:	51930	AREA:	2 /
	TELEPHONE:				INSP. DATE:	03/22

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
C-7220-1-2	100 MW	3020-08B H	1	15,843.00	15,843.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #1 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-2-2	100 MW	3020-08B H	1	15,843.00	15,843.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #2 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-3-2	100 MW	3020-08B H	1	15,843.00	15,843.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #3 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-4-2	100 MW	3020-08B H	1	15,843.00	15,843.00	A	100 MW SIMPLE-CYCLE POWER GENERATING SYSTEM #4 CONSISTING OF A GENERAL ELECTRIC LMS100 NATURAL GAS-FIRED COMBUSTION TURBINE GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM AND AN OXIDATION CATALYST
C-7220-5-3	160 hp	3020-10 B	1	143.00	143.00	A	160 BHP JOHN DEERE MODEL 6068T TIER 2 COMPLIANT DIESEL- FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP
C-7220-6-2	Electricity Generation Component	999-99	1	0.00	0.00	A	27,600 GPM COOLING TOWER WITH 4 CELLS AND DRIFT ELIMINATOR

Number of Facilities Reported: 1

ATTACHMENT D

MAJOR SOURCE DETERMINATION FOR
HAZARDOUS AIR POLLUTANTS

To be a major source of HAP emissions, a facility must have the potential to emit of 10 tons/year or more for any single HAP or 25 tons/year or more of all HAPs combined. Modesto Irrigation District is the type of source that would emit various HAPs as combustion contaminants. The table below shows the potential to emit from all sources is not greater than 25 tons/year and

The applicant has supplied the following data under project C-1062518.

**Hazardous Air Pollutant Emissions
PEC – General Electric LMS100**

Hazardous Air Pollutant	CATEF (mean) Emission Factor (lb/MMBtu)	CATEF (mean) Emission Factor (lb/MMcf) ⁽¹⁾	Maximum Hourly Emissions per Turbine (lb/hr) ⁽²⁾	Maximum Annual Emissions per Turbine (lb/yr) ⁽³⁾
1,3-Butadiene	1.24E-07	1.27E-04	1.13E-04	5.64E-01
Acetaldehyde	1.34E-04	1.37E-01	1.22E-01	6.09E+02
Acrolein	1.85E-05	1.89E-02	1.68E-02	8.40E+01
Benzene	1.30E-05	1.33E-02	1.18E-02	5.91E+01
Ethyl benzene	1.75E-05	1.79E-02	1.59E-02	7.95E+01
Formaldehyde	8.96E-04	9.17E-01	8.15E-01	4.07E+03
Hexane	2.53E-04	2.59E-01	2.30E-01	1.15E+03
Propylene	7.53E-04	7.71E-01	6.85E-01	3.42E+03
Propylene Oxide	4.67E-05	4.78E-02	4.25E-02	2.12E+02
Toluene	6.93E-05	7.10E-02	6.31E-02	3.15E+02
Xylenes	2.55E-05	2.61E-02	2.32E-02	1.16E+02
PAHs				
Benzo(a)anthracene	2.21E-08	2.26E-05	2.01E-05	1.00E-01
Benzo(a)pyrene	1.36E-08	1.39E-05	1.23E-05	6.17E-02
Benzo(b)fluoranthene	1.10E-08	1.13E-05	1.00E-05	5.02E-02
Benzo(k)fluoranthene	1.07E-08	1.10E-05	9.77E-05	4.89E-02
Chrysene	2.46E-08	2.52E-05	2.24E-05	1.12E-01
Dibenz(a,h)anthracene	2.29E-08	2.35E-05	2.09E-05	1.04E-01
Indeno(1,2,3-cd)pyrene	2.29E-08	2.35E-05	2.09E-05	1.04E+00
Naphthalene	1.62E-06	1.66E-03	1.47E-03	7.37E+00
Total			2.03	10,124

(1) Based on natural gas fuel HHV of 1,024 Btu/scf

(2) Maximum fuel flow 909.7 MMBtu/hr, includes startups, warm-ups, shutdowns, and maintenance

(3) Based on a maximum hourly turbine fuel use of 5,000 hr/yr

**Hazardous Air Pollutant Emissions
PEC – Cooling Tower⁽¹⁾**

Hazardous Air Pollutant	Concentration in Cooling Tower Return Water ⁽²⁾	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (lb/yr)
Arsenic	0.021 ug/L	4.35E-09	2.18E-05
Total		4.35E-09	2.18E-05

- (1) Emissions calculated from maximum circulating water rate of 27,600 gal/min, drift eliminator control of 0.0005%, operation of 5,000 hr/yr.
 (2) Three cycles of concentration, five cells in cooling tower.

**Hazardous Air Pollutant Emissions
PEC – Emergency Diesel Firewater Pump**

Hazardous Air Pollutant	Emission Factor (g/hp-hr)	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (lb/yr)
Diesel Particulate	0.15	5.29E-02	2.75E+00
Total		0.0529	2.75

As shown above, emissions of each individual HAP are below 10 tons per year and total HAP emissions are below 25 tons per year.

The facility has not made modification to any permits since since project C-1062518 was completed. Therefore, the facility is not a major source for HAPS.

ATTACHMENT E

District Rule 4601 Stringency Analysis

Stringency Comparison of District Rule 4601 Non-SIP Version (4/16/20) to Current SIP Version (12/17/09)

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
2.0 Applicability	This rule is applicable to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District.	This rule is applicable to any person who supplies, markets, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District.	The only change is to include applicability of this rule to the person marketing the coatings, therefore, non-SIP version of rule is more stringent than SIP version.
4.0 Exemptions	<p>4.1 The provisions of this rule shall not apply to:</p> <p style="padding-left: 40px;">4.1.1 Any architectural coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.</p> <p style="padding-left: 40px;">4.1.2 Any aerosol coating product.</p> <p>4.2 With the exception of Section 6.2, the provisions of this rule shall not apply to any architectural coating that is sold in a container with a volume of one liter (1.057 quarts) or less.</p>	<p>4.1 The provisions of this rule shall not apply to:</p> <p style="padding-left: 40px;">4.1.1 Any architectural coating that is supplied, sold, offered for sale, or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.</p> <p style="padding-left: 40px;">4.1.2 Any aerosol coating product.</p> <p>4.2 With the exception of Section 6.2 and Section 4.3, the provisions of this rule shall not apply to any architectural coating that is sold in a container with a volume of one liter (1.057 quarts) or less, provided the following requirements are met:</p> <p style="padding-left: 40px;">4.2.1 The coating container is not bundled together with other containers of the same specific coating category (listed in Table 1) to be sold as a unit that exceeds one liter (1.057 quart), excluding containers packed together for shipping to a retail outlet, and</p> <p style="padding-left: 40px;">4.2.2 The label or any other product literature does not suggest combining multiple containers of the same specific category (listed in Table 1) so that the combination exceeds one liter (1.057 quart).</p> <p>4.3 On and after sixty days following the effective date of EPA final rulemaking that the conditions described in Clean Air Act Sections 172(c)(9) and 182(c)(9) have occurred in the San Joaquin Valley regarding the 2008 8-hour Ozone National Ambient Air Quality Standard, the categories of coatings listed below shall no longer be exempt from the provisions of Table 1 of this rule when sold in containers having capacities of one liter (1.057 quarts) or less:</p> <p style="padding-left: 40px;">4.3.1 Bituminous Roof Coatings;</p> <p style="padding-left: 40px;">4.3.2 Flat Coatings that are sold in containers having capacities greater than eight fluid ounces;</p> <p style="padding-left: 40px;">4.3.3 Magnesite Cement Coatings;</p> <p style="padding-left: 40px;">4.3.4 Multi-Color Coatings;</p>	The exemptions for colorant and for architectural coatings sold in a container with a volume of one liter (1.057 quarts) or less have been added to the rule in order to make the amended rule consistent with the exemptions presented in 2020 California Air Resources Board (ARB) Suggested Control Measures (SCM) for Architectural Coatings. Therefore, the non-SIP version of the rule is as stringent as the SIP version of the rule.

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
		<p>4.3.5 Nonflat Coatings that are sold in containers having capacities greater than eight fluid ounces;</p> <p>4.3.6 Pre-Treatment Wash Primers;</p> <p>4.3.7 Reactive Penetrating Sealers;</p> <p>4.3.8 Shellacs (Clear and Opaque);</p> <p>4.3.9 Stone Consolidants;</p> <p>4.3.10 Swimming Pool Coatings;</p> <p>4.3.11 Tub and Tile Refinishing Coatings;</p> <p>4.3.12 Wood Coatings, including Lacquers, Varnishes, and Sanding Sealers; and</p> <p>4.3.13 Wood Preservatives.</p> <p>4.4 Colorant added at the factory or at the worksite is not subject to the VOC limits in Table 2. In addition, containers of colorant sold at the point of sale for use in the field or on a job site are also not subject to the VOC limit in Table 2.</p>	
<p>5.0 Requirements</p>	<p>5.1 VOC Content Limits: Except as provided in Sections 5.2 and 5.3, no person shall: manufacture, blend, or repackage for use within the District; or supply, sell, or offer for sale within the District; or solicit for application or apply within the District any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards 1 or the Table of Standards 2, after the specified effective date in the Table of Standards 1 or the Table of Standards 2. Limits are expressed as VOC Regulatory, thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.</p>	<p>5.1 VOC Content Limits: Except as provided in Sections 5.2 and 5.3, no person shall: manufacture, blend, or repackage for use within the District; or supply, sell, market or offer for sale within the District; or solicit for application or apply within the District any architectural coating or colorant with a VOC content in excess of the corresponding limit specified in Table 1 or Table 2, after the specified effective date in Table 1 or Table 2. Limits are expressed as VOC Regulatory, thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.</p>	<p>The Table of Standards 1 and the Table of Standard 2 have been replaced with more stringent Table 1 with VOC content limit for coatings and Table 2 with VOC content limit for colorants with more stringent VOC limits as shown in the tables at the end of this document. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>
	<p>5.2 Most Restrictive VOC Limit: If a coating meets the definition in Section 3.0 for one or more specialty coating categories listed in the Table of Standards 1 or the Table of Standards 2, then that coating is not required to meet the VOC limits for Flat, Nonflat, or Nonflat – High Gloss coatings, but is required to meet the VOC limit for the applicable specialty coating listed in the Table of Standards 1 or the Table of Standards 2.</p> <p>5.2.1 Effective until December 31, 2010, with the exception of the specialty coating categories specified in Section 5.2.3.1 through 5.2.3.15, if a coating is recommended for use in more than one of the specialty coating categories listed in the Table of Standards 1, the most restrictive (or lowest) VOC content limit shall apply.</p> <p>5.2.2 Effective on and after January 1, 2011, with the exception of the specialty coating categories specified in Sections 5.2.3.2, 5.2.3.3, 5.2.3.5 through 5.2.3.9, and 5.2.3.14 through 5.2.3.18, if a coating is recommended for use in more than one of the</p>	<p>5.2 Most Restrictive VOC Limit: If a coating meets the definition in Section 3.0 for one or more specialty coating categories listed in Table 1 or, then that coating is not required to meet the VOC limits for Flat or Nonflat coatings, but is required to meet the VOC limit for the applicable specialty coating listed in Table 1 or . With the exception of the specialty coating categories specified in Sections 5.2.1 through 5.2.12, if a coating is recommended for use in more than one of the specialty coating categories listed in Table 1, then the most restrictive (or lowest) VOC content limit shall apply. This requirement applies to: usage recommendations that appear anywhere on the coating container, anywhere on any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf.</p>	<p>The VOC limit of the non-SIP version is at least as stringent as the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>specialty coating categories listed in the Table of Standards 2, the most restrictive (or lowest) VOC content limit shall apply.</p> <p>5.2.3 This requirement applies to: usage recommendations that appear anywhere on the coating container, anywhere on any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf.</p> <p>5.2.3.1 Lacquer coatings (including lacquer sanding sealers)</p> <p>5.2.3.2 Metallic pigmented coatings</p> <p>5.2.3.3 Shellacs</p> <p>5.2.3.4 Fire-retardant coatings</p> <p>5.2.3.5 Pretreatment wash primers</p> <p>5.2.3.6 Industrial maintenance coatings</p> <p>5.2.3.7 Low-solids coatings</p> <p>5.2.3.8 Wood preservatives</p> <p>5.2.3.9 High temperature coatings</p> <p>5.2.3.10 Temperature-indicator safety coatings</p> <p>5.2.3.11 Antenna coatings</p> <p>5.2.3.12 Antifouling coatings</p> <p>5.2.3.13 Flow coatings</p> <p>5.2.3.14 Bituminous roof primers</p> <p>5.2.3.15 Specialty primers, sealers and undercoaters</p> <p>5.2.3.16 Aluminum roof coatings</p> <p>5.2.3.17 Zinc-rich primers</p> <p>5.2.3.18 Wood Coatings</p>	<p>5.2.1 Metallic pigmented coatings;</p> <p>5.2.2 Shellacs;</p> <p>5.2.3 Pretreatment wash primers;</p> <p>5.2.4 Industrial maintenance coatings;</p> <p>5.2.5 Low-solids coatings;</p> <p>5.2.6 Wood preservatives;</p> <p>5.2.7 High temperature coatings;</p> <p>5.2.8 Bituminous roof primers;</p> <p>5.2.9 Specialty primers, sealers and undercoaters;</p> <p>5.2.10 Aluminum roof coatings;</p> <p>5.2.11 Zinc-rich primers; and</p> <p>5.2.12 Wood Coatings.</p>	
	<p>5.3 Sell-Through of Coatings: A coating manufactured prior to the effective date specified for that coating in the Table of Standards 1 or the Table of Standards 2, and that complied with the standards in effect at the time the coating was manufactured, may be sold, supplied, or offered for sale for up to three years after the specified effective date. In addition, a coating manufactured before the effective date specified for that coating in the Table of Standards 1 or the Table of Standards 2 may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured. This Section 5.3 does not apply to any coating that does not display the date or date-code required by Section 6.1.1.</p>	<p>5.3 Sell-Through of Coatings: 5.3.1 A coating manufactured prior to January 1, 2022, may be sold, supplied, or offered for sale for up to three years after January 1, 2022. In addition, a coating manufactured before January 1, 2022 may be applied at any time, both before and after January 1, 2022, so long as the coating complied with the standards in effect at the time the coating was manufactured. This subsection 5.3.1 does not apply to any coating that does not display the date or date-code required by subsection 6.1.1. 5.3.2 A colorant manufactured prior to January 1, 2022, may be sold, supplied, or offered for sale for up to three years after January 1, 2022. In addition, a colorant manufactured before January 1, 2022 may be applied at any time, both before and after January 1, 2022, so long as the colorant complied with the standards in effect at the time the colorant was manufactured. This subsection 5.3.2 does not apply to any colorant that does not display the date or date-code required by subsection 6.1.1.</p>	<p>The VOC limit of the non-SIP version is at least as stringent as the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>
	<p>5.4 Painting Practices: All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means,</p>	<p>5.4 Painting Practices: All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding,</p>	<p>No change in the requirements, therefore, non-SIP version of rule is as stringent as SIP version.</p>

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.	ragging or other means, shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.	
	5.5 Thinning: No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in the Table of Standards 1 or the Table of Standards 2.	5.5 Thinning: No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in the Table of Standards 1 or the Table of Standards 2.	No change in the requirements, therefore, non-SIP version of rule is as stringent as SIP version.
	5.6 Rust Preventative Coatings: Effective through December 31, 2010, no person shall apply or solicit the application of any rust preventative coating for industrial use, unless such a rust preventative coating complies with the industrial maintenance coating VOC limit specified in the Table of Standards 1.		The VOC limit of the SIP version is no longer applicable at this time and has been removed.
	5.7 Coatings Not Listed in the Table of Standards 1 or the Table of Standards 2: For any coating that does not meet any of the definitions for the specialty coatings categories listed in the Table of Standards 1 or the Table of Standards 2, the VOC content limit shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat – High Gloss coating, based on its gloss, and the corresponding Flat, Nonflat, or Nonflat – High Gloss VOC limit in the Table of Standards 1 or the Table of Standards 2 shall apply.	5.6 Coatings Not Listed in Table 1: For any coating that does not meet any of the definitions for the specialty coatings categories listed in Table 1, the VOC content limit shall be determined by classifying the coating as Flat or Nonflat, based on its gloss, and the corresponding Flat or Nonflat VOC limit in Table 1 shall apply.	The VOC limit of the non-SIP version is at least as stringent as the SIP version. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.
		5.7 Colorants: No person within the District shall, at the point of sale of any architectural coating subject to subsection 5.1, add to such coating any colorant that contains VOCs in excess of the corresponding applicable VOC limit specified in Table 2. The point of sale includes retail outlets that add colorant to a coating container to obtain a specific color.	The VOC limit for colorants in non-SIP version more stringent than the SIP version of the rule.
	5.8 Prior to January 1, 2011, any coating that meets a definition in Section 3.0 for a coating category listed in the Table of Standards 2 and complies with the applicable VOC limit in the Table of Standards 2 and with Sections 5.2 and 6.1 (including those provision of Section 6.1 otherwise effective on January 1, 2011) shall be considered in compliance with this rule.		The VOC limit of the SIP version is no longer applicable at this time and has been removed.
Table of Standards 1 (Effective on and after 1/1/11)		Table 1 VOC Content Limits for Coatings (Effective on and after 1/1/22) (See end of the document for Table Comparison)	The requirements of Table of Standard 1 are more stringent than the Table 1 in the SIP rule. Therefore, non-SIP version of rule is as stringent as SIP version.

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	Table of Standards 2 (Effective on and after 1/1/11)	Table 2 VOC Content Limits for Colorants (Effective on and after 1/1/22) (See end of the document for Table Comparison)	VOC content limits for colorants were added under the amended rule. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.
6.0 Administrative Requirements	<p>6.1 Labeling Requirements: Each manufacturer of any architectural coating subject to this rule shall display the information listed in Sections 6.1.1 through 6.1.14 on the coating container (or label) in which the coating is sold or distributed.</p> <p>6.1.1 Date Code: The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the ARB.</p> <p>6.1.2 Thinning Recommendations: A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.</p> <p>6.1.3 VOC Content: Each container of any coating subject to this rule shall display one of the following values, in grams of VOC per liter of coating:</p> <p>6.1.3.1 Maximum VOC Content, as determined from all potential product formulations; or</p> <p>6.1.3.2 VOC Content, as determined from actual formulation data; or</p> <p>6.1.3.3 VOC Content, as determined using the test methods in Section 6.3.2.</p> <p>If the manufacturer does not recommend thinning, the container must display the VOC Content, as supplied. If the manufacturer recommends thinning, the container must display the VOC Content, including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multicomponent product, the container must display the VOC content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing.</p> <p>6.1.4 Faux Finishing Coatings: Effective January 1, 2011, the labels of all clear topcoat Faux Finishing coatings shall prominently display the statement "This product can only be sold or used as part</p>	<p>6.1 Labeling Requirements: Each manufacturer of any architectural coating subject to this rule shall display the information listed in Sections 6.1.1 through 6.1.12 on the coating container (or label) in which the coating is sold or distributed.</p> <p>6.1.1 Date Code: The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the ARB.</p> <p>6.1.2 Thinning Recommendations: A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.</p> <p>6.1.3 VOC Content: Each container of any coating subject to this rule shall display one of the following values, in grams of VOC per liter of coating:</p> <p>6.1.3.1 Maximum VOC Content, as determined from all potential product formulations; or</p> <p>6.1.3.2 VOC Content, as determined from actual formulation data; or</p> <p>6.1.3.3 VOC Content, as determined using the test methods in Section 6.3.2.</p> <p>If the manufacturer does not recommend thinning, the container must display the VOC Content, as supplied. If the manufacturer recommends thinning, the container must display the VOC Content, including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multicomponent product, the container must display the VOC content as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing. VOC Content shall be determined as defined in subsections</p>	The non-SIP approved rule contain sections listed in the SIP rule plus additional requirements not found in the SIP version for colorants. Therefore, non-SIP version of rule is as stringent as SIP version.

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>of a Faux Finishing coating system".</p> <p>6.1.5 Industrial Maintenance Coatings: Each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or lid of the container in which the coating is sold or distributed one or more of the following descriptions listed in Section 6.1.5.1 through 6.1.5.3.</p> <p>6.1.5.1 "For industrial use only"</p> <p>6.1.5.2 "For professional use only"</p> <p>6.1.5.3 "Not for residential use" or "Not intended for residential use"</p> <p>6.1.6 Clear Brushing Lacquers: The labels of all clear brushing lacquers shall prominently display the statements "For brush application only," and "This product must not be thinned or sprayed." (Category deleted effective January 1, 2011.)</p> <p>6.1.7 Rust Preventative Coatings: The labels of all rust preventative coatings shall prominently display the statement "For Metal Substrates Only".</p> <p>6.1.8 Specialty Primers, Sealers and Undercoaters: Effective until December 31, 2010, the labels of all specialty primers, sealers and undercoaters shall prominently display one or more of the descriptions listed in Section 6.1.8.1 through 6.1.8.5. Effective on and after January 1, 2011, the labels of all specialty primers, sealers, and undercoaters shall prominently display one or more of the descriptions listed in Sections 6.1.8.1 through 6.1.8.3. On and after January 1, 2011, Sections 6.1.8.4 and 6.1.8.5 will be no longer effective.</p> <p>6.1.8.1 For fire-damaged substrates.</p> <p>6.1.8.2 For smoke-damaged substrates.</p> <p>6.1.8.3 For water-damaged substrates.</p> <p>6.1.8.4 For excessively chalky substrates.</p> <p>6.1.8.5 For blocking stains.</p> <p>6.1.9 Quick Dry Enamels: The labels of all quick dry enamels shall prominently display the words "Quick Dry" and the dry hard time. (Category deleted effective January 1, 2011.)</p> <p>6.1.10 Reactive Penetrating Sealers: Effective January 1, 2011, the labels of all Reactive Penetrating Sealers shall prominently display the statement "Reactive Penetrating Sealer."</p> <p>6.1.11 Stone Consolidants: Effective January 1, 2011, the labels of all Stone Consolidants shall prominently display the statement "Stone Consolidant - For Professional Use Only."</p> <p>6.1.12 Nonflat- High Gloss Coatings: The labels of all Nonflat - high gloss coatings shall prominently display the words "High Gloss."</p>	<p>3.72, 3.73, and 3.74.</p> <p>6.1.4 Faux Finishing Coatings: The labels of all clear topcoat Faux Finishing coatings shall prominently display the statement "This product can only be sold or used as part of a Faux Finishing coating system".</p> <p>6.1.5 Industrial Maintenance Coatings: Each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or lid of the container in which the coating is sold or distributed one or more of the following descriptions listed in Section 6.1.5.1 through 6.1.5.3.</p> <p>6.1.5.1 "For industrial use only"</p> <p>6.1.5.2 "For professional use only"</p> <p>6.1.6 Rust Preventative Coatings: The labels of all rust preventative coatings shall prominently display the statement "For Metal Substrates Only".</p> <p>6.1.7 Specialty Primers, Sealers and Undercoaters: The labels of all specialty primers, sealers, and undercoaters shall prominently display the statement "Specialty Primer, Sealer, Undercoater"</p> <p>6.1.8 Reactive Penetrating Sealers: The labels of all Reactive Penetrating Sealers shall prominently display the statement "Reactive Penetrating Sealer."</p> <p>6.1.9 Stone Consolidants: The labels of all Stone Consolidants shall prominently display the statement "Stone Consolidant - For Professional Use Only."</p> <p>6.1.10 Wood Coatings: The labels of all Wood Coatings shall prominently display the statement "For Wood Substrates Only."</p> <p>6.1.11 Zinc Rich Primers: The labels of all Zinc Rich Primers shall prominently display the statement "For professional use only.</p> <p>6.1.12 Colorants: Effective January 1, 2022, each manufacturer of any colorant subject to this rule shall display the information listed in subsections 6.1.12.1 and 6.1.12.2 on the container (or label) in which the colorant is sold or distributed.</p> <p>6.1.12.1 Date Code: The date the colorant was manufactured, or a date code representing the date, shall be indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any colorant, the manufacturer shall file an explanation of each code with the APCO.</p> <p>6.1.12.2 VOC Content: Each container of any colorant subject to this rule shall display one of the following values in grams of VOC per liter of</p>	

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>6.1.13 Wood Coatings: Effective January 1, 2011, the labels of all Wood Coatings shall prominently display the statement "For Wood Substrates Only."</p> <p>6.1.14 Zinc Rich Primers: Effective January 1, 2011, the labels of all Zinc Rich Primers shall prominently display one or more of the following descriptions listed in Section 6.1.14.1 through 6.1.14.3.</p> <p>6.1.14.1 "For industrial use only"</p> <p>6.1.14.2 "For professional use only"</p> <p>6.1.14.3 "Not for residential use" or "Not intended for residential use"</p>	<p>colorant.</p> <p>6.1.12.2.1 Maximum VOC Content as determined from all potential product formulations; or</p> <p>6.1.12.2.2 VOC Content as determined from actual formulation data; or</p> <p>6.1.12.2.3 VOC Content as determined using the test methods in subsection 6.3.2.</p> <p>If the colorant contains silanes, siloxanes, or other ingredients that generate ethanol or other VOCs during the curing process, the VOC content must include the VOCs emitted during curing. VOC Content shall be determined as defined in subsections 3.72, 3.73, and 3.74.</p>	
	<p>6.2 Reporting Requirements</p> <p>The reporting requirements specified in Sections 6.2.1 through 6.2.6 shall apply until December 31, 2010.</p> <p>6.2.1 Clear Brushing Lacquers: Each manufacturer of clear brushing lacquers shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of clear brushing lacquers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.2 Rust Preventative Coatings: Each manufacturer of rust preventative coatings shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of rust preventative coatings sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.3 Specialty Primers, Sealers and Undercoaters: Each manufacturer of specialty primers, sealers and undercoaters shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of specialty primers, sealers and undercoaters sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.</p> <p>6.2.4 Toxic Exempt Compounds: For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of</p>	<p>6.2 Reporting Requirements</p> <p>6.2.1 Sales Data: All sales data listed in Sections 6.2.1.1 to 6.2.1.14 shall be maintained on-site by the responsible official for a minimum of three years. A responsible official from each manufacturer shall upon request of the Executive Officer of CARB, or his or her delegate, provide data concerning the distribution and sales of architectural coatings. Sales data submitted by the responsible official to the Executive Officer of the ARB may be claimed as confidential, and such information shall be handled in accordance with the procedures specified in Title 17, California Code of Regulations Sections 91000-91022. The responsible official shall within 180 days provide information, including, but not limited to the data listed in Sections 6.2.1.1 through 6.2.1.14:</p> <p>6.2.1.1 The name and mailing address of the manufacturer;</p> <p>6.2.1.2 The name, address and telephone number of a contact person;</p> <p>6.2.1.3 The name of the coating product as it appears on the label and the applicable coating category;</p> <p>6.2.1.4 Whether the product is marketed for interior or exterior use or both;</p> <p>6.2.1.5 The number of gallons sold in California in containers greater than one liter (1.057 quart) and equal to or less than one liter (1.057 quart);</p> <p>6.2.1.6 The VOC Actual content and VOC Regulatory content in grams per liter. If thinning is recommended, list the VOC Actual content and VOC Regulatory content after maximum recommended thinning. If containers less</p>	<p>All the reporting requirements were removed except the sales data requirements presented in 2020 California Air Resources Board (ARB) Suggested Control Measures (SCM) for Architectural Coatings in order to make the amended rule consistent with SCM. Therefore, non-SIP version of rule is as stringent as SIP version.</p>

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>the ARB the following information for products sold in the State during the preceding year:</p> <p>6.2.4.1 the product brand name and a copy of the product label with legible usage instructions;</p> <p>6.2.4.2 the product category listed in the Table of Standards 1 or the Table of Standards 2 to which the coating belongs;</p> <p>6.2.4.3 the total sales in California during the calendar year to the nearest gallon;</p> <p>6.2.4.4 the volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.</p> <p>6.2.5 Recycled Coatings: Manufacturers of recycled coatings must submit a letter to the Executive Officer of the ARB certifying their status as a Recycled Paint Manufacturer. The manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall include, for all recycled coatings, the total number of gallons distributed in the State during the preceding year, and shall describe the method used by the manufacturer to calculate State distribution.</p> <p>6.2.6 Bituminous Coatings: Each manufacturer of bituminous roof coatings or bituminous roof primers shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of ARB. The report shall specify the number of gallons of bituminous roof coatings or bituminous roof primers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate state sales.</p> <p>6.2.7 Effective on and after January 1, 2011, Sales Data: All sales data listed in Sections 6.2.7.1 to 6.2.7.14 shall be maintained on-site by the responsible official for a minimum of three years. A responsible official from each manufacturer shall upon request of the Executive Officer of the ARB, or his or her delegate, provide data concerning the distribution and sales of architectural coatings. Sales data submitted by the responsible official to the Executive Officer of the ARB may be claimed as confidential, and such information shall be handled in accordance with the procedures specified in Title 17, California Code of Regulations Sections 91000-91022. The responsible official shall within 180 days provide information, including, but not limited to the data listed in Sections</p>	<p>than one liter have a different VOC content than containers greater than one liter, list separately. If the coating is a multi-component product, provide the VOC content as mixed or catalyzed;</p> <p>6.2.1.7 The names and CAS numbers of the VOC constituents in the product;</p> <p>6.2.1.8 The names and CAS numbers of any compounds in the product specifically exempted from the VOC definition;</p> <p>6.2.1.9 Whether the product is marketed as solvent-borne, waterborne, or 100% solids;</p> <p>6.2.1.10 Description of resin or binder in the product;</p> <p>6.2.1.11 Whether the coating is a single-component or multi-component product;</p> <p>6.2.1.12 The density of the product in pounds per gallon;</p> <p>6.2.1.13 The percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC definition; and</p> <p>6.2.1.14 The percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition.</p>	

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>6.2.7.1 through 6.2.7.14:</p> <p>6.2.7.1 the name and mailing address of the manufacturer;</p> <p>6.2.7.2 the name, address and telephone number of a contact person;</p> <p>6.2.7.3 the name of the coating product as it appears on the label and the applicable coating category;</p> <p>6.2.7.4 whether the product is marketed for interior or exterior use or both;</p> <p>6.2.7.5 the number of gallons sold in California in containers greater than one liter (1.057 quart) and equal to or less than one liter (1.057 quart);</p> <p>6.2.7.6 the VOC Actual content and VOC Regulatory content in grams per liter. If thinning is recommended, list the VOC Actual content and VOC Regulatory content after maximum recommended thinning. If containers less than one liter have a different VOC content than containers greater than one liter, list separately. If the coating is a multi-component product, provide the VOC content as mixed or catalyzed;</p> <p>6.2.7.7 the names and CAS numbers of the VOC constituents in the product;</p> <p>6.2.7.8 the names and CAS numbers of any compounds in the product specifically exempted from the VOC definition;</p> <p>6.2.7.9 whether the product is marketed as solvent-borne, waterborne, or 100% solids;</p> <p>6.2.7.10 description of resin or binder in the product;</p> <p>6.2.7.11 whether the coating is a single-component or multi-component product;</p> <p>6.2.7.12 the density of the product in pounds per gallon;</p> <p>6.2.7.13 the percent by weight of: solids, all volatile materials, water, and any compounds in the product specifically exempted from the VOC definition; and</p> <p>6.2.7.14 the percent by volume of: solids, water, and any compounds in the product specifically exempted from the VOC definition.</p>		
	<p>6.3 Test Methods</p> <p>The test methods listed below shall be used to demonstrate compliance with this rule. Alternate equivalent test methods</p>	<p>6.3 Test Methods</p> <p>The test methods listed below shall be used to demonstrate compliance with this rule. Alternate equivalent test</p>	<p>Numerous definitions were added, deleted or modified in order to make the amended rule</p>

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>may be used provided the test methods have been approved by the APCO and EPA.</p> <p>6.3.1 Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in the Table of Standards 1 or the Table of Standards 2, the VOC content of a coating shall be determined as defined in Section 3.77, 3.78, or 3.79 as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC Content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC Content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOC during the curing process, the VOC content must include the VOCs emitted during curing.</p> <p>6.3.2 VOC Content of Coatings: To determine the physical properties of a coating in order to perform the calculations in Section 3.77 and 3.79, the reference method for VOC content is EPA Method 24, except as provided in Sections 6.3.3 and 6.3.16. An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996). The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised 1993), BAAQMD Method 43 (Revised 1996), or BAAQMD Method 41 (Revised 1995), as applicable. To determine the VOC content of a coating, the manufacturer may use EPA Method 24, or an alternative method as provided in Section 6.3.3, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of EPA Method 24 test and any other means for determining VOC content, the EPA Method 24 test results will govern, except when an alternative method is approved as specified in Section 6.3.3. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct an EPA Method 24 analysis.</p> <p>6.3.3 Alternative Test Methods: Other test methods demonstrated to provide results that are acceptable for purposes</p>	<p>methods may be used provided the test methods have been approved by the APCO and EPA.</p> <p>6.3.1 Calculation of VOC Content: For the purpose of determining compliance with the VOC content limits in Table 1 or the 2, the VOC content of a coating shall be determined as defined in Section 3.71, 3.72, or 3.73 as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured. If the manufacturer does not recommend thinning, the VOC Content must be calculated for the product as supplied. If the manufacturer recommends thinning, the VOC Content must be calculated including the maximum amount of thinning solvent recommended by the manufacturer. If the coating is a multi-component product, the VOC content must be calculated as mixed or catalyzed. If the coating contains silanes, siloxanes, or other ingredients that generate ethanol or other VOC during the curing process, the VOC content must include the VOCs emitted during curing.</p> <p>6.3.2 VOC Content of Coatings: To VOC Content of Coatings or Colorants: To determine the physical properties of a coating or colorant in order to perform the calculations in Section 3.71 and 3.73, the reference method for VOC content is EPA Method 24, except as provided in Sections 6.3.3 and 6.3.15. An alternative method to determine the VOC content of coatings or colorants is SCAQMD Method 304-91 (Revised February 1996). The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised 1996), BAAQMD Method 43 (Revised 2005), or BAAQMD Method 41 (Revised 2005), as applicable. To determine the VOC content of a coating or colorant, the manufacturer may use EPA Method 24, or an alternative method as provided in Section 6.3.4, formulation data, or any other reasonable means for predicting that the coating or colorant has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of EPA Method 24 test and any other means for determining VOC content, the EPA Method 24 test results will govern, except when an alternative method is approved as specified in Section 6.3.4. The District Air Pollution Control Officer (APCO) may require</p>	<p>consistent with definitions and rule requirements presented in 2020 California Air Resources Board (ARB) Suggested Control Measures (SCM) for Architectural Coatings. Therefore, the non-SIP version of the rule is more stringent than the SIP version of the rule.</p>

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>of determining compliance with Section 6.3.2 4, after review and approved in writing by the staffs of the District, ARB and EPA, may also be used.</p> <p>6.3.4 Methacrylate Traffic Marking Coatings: Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of EPA Method 24 (40 CFR 59, subpart D, Appendix A). This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.</p> <p>6.3.5 Flame Spread Index: The flame spread index of a fire-retardant coating shall be determined by ASTM E84-07, "Standard Test Method for Surface Burning Characteristics of Building Materials" (see Section 3.0, Fire-Retardant Coating).</p> <p>6.3.6 Fire Resistance Rating: The fire resistance rating of a fire-resistive coating shall be determined by ASTM E119-07, "Standard Test Methods for Fire Tests of Building Construction Materials" (see Section 3.0, Fire-Resistive Coating).</p> <p>6.3.7 Gloss Determination: The gloss of a coating shall be determined by ASTM D523-89 (1999), "Standard Test Method for Specular Gloss" (see Section 3.0, Flat Coating, Nonflat Coating, Nonflat-High Gloss Coating and Quick-Dry Enamel).</p> <p>6.3.8 Metal Content of Coatings: The metallic content of a coating shall be determined by SCAQMD Method 318-95, Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction, <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3.0, Metallic Pigmented Coating, Aluminum Roof Coating and Faux Finish).</p> <p>6.3.9 Acid Content of Coatings: The acid content of a coating shall be determined by ASTM D1613-06, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and related products" (see Section 3.0, Pre-Treatment Wash Primer).</p> <p>6.3.10 Drying Times: The set-to-touch, dry-hard, dry-to-touch and dry-to-recoat times of a coating shall be determined by ASTM D1640-95, "Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature" (see Section 3.0, Quick-Dry Enamel and Quick-Dry Primer, Sealer and Undercoater) The tack-free time of a quick-dry enamel coating shall be determined by the Mechanical Test Method of ASTM D1640-95. (Category</p>	<p>the manufacturer to conduct an EPA Method 24 analysis.</p> <p>6.3.3 To determine the VOC content of a coating or colorant with a VOC content of 150 g/l or less, the manufacturer may use SCAQMD Method 313, incorporated by reference in subsection 6.3.34, ASTM D6886-18, incorporated by reference in subsection 6.3.35, or any other reasonable means for predicting that the coating or colorant has been formulated as intended (e.g., quality assurance checks, record keeping).</p> <p>6.3.4 Alternative Test Methods: Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with Section 6.3.2 4, after review and approved in writing by the staffs of the District, ARB and EPA, may also be used.</p> <p>6.3.5 Methacrylate Traffic Marking Coatings: Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of EPA Method 24 (40 CFR 59, subpart D, Appendix A). This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.</p> <p>6.3.6 Flame Spread Index: The flame spread index of a fire-retardant coating shall be determined by ASTM E84-18B, "Standard Test Method for Surface Burning Characteristics of Building Materials" (see Section 3.0, Fire-Retardant Coating).</p> <p>6.3.7 Fire Resistance Rating: The fire resistance rating of a fire-resistive coating shall be determined by ASTM E119-18ce1, "Standard Test Methods for Fire Tests of Building Construction Materials" (see Section 3.0, Fire-Resistive Coating).</p> <p>6.3.8 Gloss Determination: The gloss of a coating shall be determined by ASTM D523-14 (2018), "Standard Test Method for Specular Gloss" (see Section 3.0, Flat Coating and Nonflat Coating).</p> <p>6.3.9 Metal Content of Coatings: The metallic content of a coating shall be determined by SCAQMD Method 318-95, Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction, <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3.0, Metallic Pigmented Coating, Aluminum Roof Coating and Faux Finish).</p> <p>6.3.10 Acid Content of Coatings: The acid content of a coating shall be</p>	

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>deleted effective January 1, 2011.)</p> <p>6.3.11 Surface Chalkiness: The chalkiness of a surface shall be determined using ASTM D4214-98, "Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films"(see Section 3, Specialty Primer, Sealer and Undercoater). (Category deleted effective January 1, 2011.)</p> <p>6.3.12 Exempt Compounds—Siloxanes: Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section 6 by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," <i>BAAQMD Manual of Procedures</i>, Volume III, adopted 11/6/96 (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.13 Exempt Compounds—Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with Section 6 by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," <i>BAAQMD Manual of Procedures</i>, Volume III, adopted 12/20/95 (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.14 Exempt Compounds: The content of compounds under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), "Determination of Exempt Compounds," <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.15 VOC Content of Coatings: The VOC content of a coating shall be determined by EPA Method 24 as it exists in appendix A of 40 <i>Code of Federal Regulations</i> (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Weight Solids of Surface Coatings" (see Section 6.3.2).</p> <p>6.3.16 Alternative VOC Content of Coatings: <i>The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," SCAQMD Laboratory Methods of Analysis for Enforcement Samples.</i></p> <p>6.3.17 Methacrylate Traffic Marking Coatings: The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be</p>	<p>determined by ASTM D1613-17, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and related products" (see Section 3.0, Pre-Treatment Wash Primer).</p> <p>6.3.11 Exempt Compounds—Siloxanes: Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with Section 6 by BAAQMD Method 43, "Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials," <i>BAAQMD Manual of Procedures</i>, Volume III, revised 2006 (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.12 Exempt Compounds—Parachlorobenzotrifluoride (PCBTF): The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with Section 6 by BAAQMD Method 41, "Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride," <i>BAAQMD Manual of Procedures</i>, Volume III, revised 2006 (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.13 Exempt Compounds: The content of compounds exempted under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1996), "Determination of Exempt Compounds," <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples</i> (see Section 3.0, Volatile Organic Compound, and Section 6.3.2).</p> <p>6.3.14 VOC Content of Coatings: The VOC content of a coating shall be determined by EPA Method 24 as it exists in appendix A of 40 <i>Code of Federal Regulations</i> (CFR) part 60, "Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Weight Solids of Surface Coatings" (see Section 6.3.2).</p> <p>6.3.15 Alternative VOC Content of Coatings: The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), "Determination of Volatile Organic Compounds (VOC) in Various Materials," <i>SCAQMD Laboratory Methods of Analysis for Enforcement Samples.</i></p> <p>6.3.16 Methacrylate Traffic Marking Coatings: The VOC content of</p>	

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998).</p> <p>6.3.18 Hydrostatic Pressure for Basement Specialty Coatings: The hydrostatic pressure resistance for basement specialty coatings shall be analyzed using ASTM D7088-04, "Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry".</p> <p>6.3.19 Tub and Tile Refinish Coating Adhesion: The adhesion of tub and tile coating shall be determined by ASTM D4585-99, "Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation" and ASTM D3359-02, "Standard Test Methods for Measuring Adhesion by Tape Test".</p> <p>6.3.20 Tub and Tile Refinish Coating Hardness: The hardness of tub and tile refinish coating shall be determined by ASTM D3363-05, "Standard Test Method for Film Hardness by Pencil Test".</p> <p>6.3.21 Tub and Tile Refinish Coating Abrasion Resistance: Abrasion resistance of tub and tile refinish coating shall be analyzed by ASTM D4060-07, "Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser".</p> <p>6.3.22 Tub and Tile Refinish Coating Water Resistance: Water resistance of tub and tile refinish coatings shall be determined by ASTM D4585-99, "Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation" and ASTM D714-02e1, "Standard Test Method for Evaluating Degree of Blistering of Paints".</p> <p>6.3.23 Waterproofing Membrane: Waterproofing membrane shall be tested by ASTM C836-06, "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course".</p> <p>6.3.24 Mold and Mildew Growth for Basement Specialty Coatings: Mold and mildew growth resistance for basement specialty coatings shall be determined by ASTM D3273-00, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber" and ASTM D3274-95, "Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation".</p>	<p>methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, "Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings" (September 11, 1998).</p> <p>6.3.17 Hydrostatic Pressure for Basement Specialty Coatings: The hydrostatic pressure resistance for basement specialty coatings shall be analyzed using ASTM D7088-17, "Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry".</p> <p>6.3.18 Tub and Tile Refinish Coating Adhesion: The adhesion of tub and tile coating shall be determined by ASTM D4585/4585M-18, "Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation" and ASTM D3359-17, "Standard Test Methods for Measuring Adhesion by Tape Test".</p> <p>6.3.19 Tub and Tile Refinish Coating Hardness: The hardness of tub and tile refinish coating shall be determined by ASTM D3363-05 (2011)e2, "Standard Test Method for Film Hardness by Pencil Test".</p> <p>6.3.20 Tub and Tile Refinish Coating Abrasion Resistance: Abrasion resistance of tub and tile refinish coating shall be analyzed by ASTM D4060-14, "Standard Test Methods for Abrasion Resistance of Organic Coatings by the Taber Abraser".</p> <p>6.3.21 Tub and Tile Refinish Coating Water Resistance: Water resistance of tub and tile refinish coatings shall be determined by ASTM D4585/4585M-18, "Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation" and ASTM D714-02 (2017), "Standard Test Method for Evaluating Degree of Blistering of Paints".</p> <p>6.3.22 Waterproofing Membrane: Waterproofing membrane shall be ASTM C836/836M-18, "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course".</p> <p>6.3.23 Mold and Mildew Growth for Basement Specialty Coatings: Mold and mildew growth resistance for basement specialty coatings shall be determined by ASTM D3273-16, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an</p>	

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
	<p>6.3.25 Reactive Penetrating Sealer Water Repellency: Reactive penetrating sealer water repellency shall be analyzed by ASTM C67-07, "Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile"; or ASTM C97-02, "Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone"; or ASTM C140-06, "Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units".</p> <p>6.3.26 Reactive Penetrating Sealer Water Vapor Transmission: Reactive penetrating sealer water vapor transmission shall be analyzed ASTM E96/E96M-05, "Standard Test Method for Water Vapor Transmission of Materials".</p> <p>6.3.27 Reactive Penetrating Sealer - Chloride Screening Applications: Reactive penetrating sealers shall be analyzed by National Cooperative Highway Research Report 244 (1981), "Concrete Sealers for the Protection of Bridge Structures".</p> <p>6.3.28 Stone Consolidants: Stone consolidants shall be tested using ASTM E2167-01, "Standard Guide for Selection and Use of Stone Consolidants".</p>	<p>Environmental Chamber" and ASTM D3274-09 (2017), "Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Fungal or Algal Growth or Soil and Dirt Accumulation". 6.3.25 Reactive Penetrating Sealer Water Repellency: Reactive penetrating sealer water repellency shall be analyzed by ASTM C67-07, "Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile"; or ASTM C97-02, "Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone"; or ASTM C140-06, "Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units".</p> <p>6.3.24 Reactive Penetrating Sealer Water Repellency: Reactive penetrating sealer water repellency shall be analyzed by ASTM C67/C67M-18, "Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile"; or ASTM C97/97M-18, "Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone"; or ASTM C140-140M-18a, "Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units"</p> <p>6.3.25 Reactive Penetrating Sealer Water Vapor Transmission: Reactive penetrating sealer water vapor transmission shall be analyzed ASTM E96/E96M-16, "Standard Test Method for Water Vapor Transmission of Materials" or ASTM D6490-99 (2014), "Standard Test Method for Water Vapor Transmission of Nonfilm Forming Treatments Used on Cementitious Panels".</p> <p>6.3.26 Reactive Penetrating Sealer - Chloride Screening Applications: Reactive penetrating sealers shall be analyzed by National Cooperative Highway Research Report 244 (1981), "Concrete Sealers for the Protection of Bridge Structures".</p> <p>6.3.27 Stone Consolidants: Stone consolidants shall be tested using ASTM E2167-01 (2008), "Standard Guide for Selection and Use of Stone Consolidants".</p> <p>6.3.28 Building Envelope Coating Air Permeance of Building Materials: ASTM E2178-13, "Standard Test Method for Air Permeance of Building Materials".</p> <p>6.3.29 Building Envelope Coating Water Penetration Testing: ASTM E331-00 (2016), "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air</p>	

Requirement Category	SIP Version of Rule 4601 (12/17/09)	Non-SIP Version of Rule 4601 (4/16/20)	Conclusion
		Pressure Difference". 6.3.30 Building Envelope Coating Water Vapor Transmission: ASTM E96/96M-16, "Standard Test Methods for Water Vapor Transmission of Materials". 6.3.31 Tile and Stone Sealers Absorption: ASTM C373-18, "Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tile and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products"; or ASTM C97/97M-18, "Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone"; or ASTM C642-13, "Standard Test Method for Density, Absorption, and Voids in Hardened Concrete". 6.3.32 Tile and Stone Sealers – Static Coefficient of Friction: ANSI A137.1 (2012), "American National Standard of Specifications for Ceramic Tile". 6.3.33 Tile and Stone Sealers Water Vapor Transmissions: ASTM E96/96M-16, "Standard Test Methods for Water Vapor Transmission of Materials". 6.3.34 VOC Content of Coatings: South Coast AQMD Method 313, "Determination of Volatile Organic Compounds (VOC) by Gas Chromatography/Mass Spectrometry/Flame Ionization Detection (GS/MS/FID)". 6.3.35 VOC Content of Coatings: ASTM D6886-18, "Standard Test Method for Determination of the Weight Percent Individual Volatile Organic Compounds in Waterborne Air-Dry Coatings by Gas Chromatography".	
7.0 Compliance Schedule	Persons subject to this rule shall be in compliance with this rule by the dates specified within the rule.	Persons subject to this rule shall be in compliance with this rule by the dates specified within the rule.	No change in the requirements, therefore, non-SIP version of rule is as stringent as SIP version.

District Rule 4601 was amended (4/16/20). As analyzed, each amended section of the non-SIP version of the rule is at least as stringent as, or more stringent than the corresponding section of the SIP version of the rule. Therefore, it is concluded that overall the non-SIP version of the rule is more stringent than the SIP version of the rule.

Here is the link to 2020 California Air Resources Board (ARB) Suggested Control Measures (SCM) for Architectural Coatings:

https://ww2.arb.ca.gov/sites/default/files/2020-07/2020SCM_final.pdf

Table 1 VOC Content Limits for Coatings

COATING CATEGORY	Current Rule 4601 VOC Limit (g/l) Effective on and after 1/1/2012	Amended Rule 4601 VOC Limit (g/l) Effective on and after 1/1/2022
Flat Coatings	50	50
Nonflat Coatings	100	50
Specialty Coatings -		
Aluminum Roof Coatings	400	100
Basement Specialty Coatings	400	400
Bituminous Roof Coatings	50	50
Bituminous Roof Primers	350	350
Bond Breakers	350	350
Building Envelope Coatings	-	50
Concrete Curing Compounds	350	350
Concrete/Masonry Sealers	100	100
Driveway Sealers	50	50
Dry Fog Coatings	150	50
Faux Finishing Coatings	350	350
Fire Resistive Coatings	350	150
Floor Coatings	100	50
Form-Release Compounds	250	100
Graphic Arts Coatings (Sign Paints)	500	500
High Temperature Coatings	420	420
Industrial Maintenance Coatings	250	250
Low Solids Coatings ¹²	120 ¹	120 ¹
Magnesite Cement Coatings	450	450
Mastic Texture Coatings	100	100
Metallic Pigmented Coatings	500	500
Multi-Color Coatings	250	250
Pre-Treatment Wash Primers	420	420
Primers, Sealers, and Undercoaters	100	100
Reactive Penetrating Sealers	350	350
Recycled Coatings	250	250
Roof Coatings	50	50
Rust Preventative Coatings	250	250
Shellacs:		
Clear	730	730
Opaque	550	550
Specialty Primers, Sealers, and Undercoaters	100	100
Stains	250	100
Interior Stains	250	
Stone Consolidants	450	450
Swimming Pool Coatings	340	340
Tile and Stone Sealers	100	
Traffic Marking Coatings	100	100
Tub and Tile Refinish Coatings	420	420
Waterproofing Membranes	250	100
Wood Coatings	275	275
Wood Preservatives	350	350
Zinc-Rich Primers	340	340

Table 2 VOC Content Limits for Colorants

Colorants Added To	VOC Limit (g/l) Effective on and after 1/1/2022
Architectural Coatings, excluding Industrial Maintenance Coatings	50
Solvent Based Industrial Maintenance Coatings	600
Waterborne Industrial Maintenance Coatings	50
Wood Coatings	600