



October 13, 2021

Mr. Paul Mercer Modesto Irrigation District PO Box 4060 Modesto, CA 95352

Re: Notice of Preliminary Decision - Title V Permit Renewal

Facility Number: N-3233 Project Number: N-1201888

Dear Mr. Mercer:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Modesto Irrigation District at 920 Woodland Ave, Modesto, 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 Laura Yannayon, EPA (w/enclosure) via EPS CC:

> Samir Sheikh Executive Director/Air Pollution Control Officer

# **SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT**

# **Proposed Title V Permit Renewal Evaluation Modesto Irrigation District** N-3233

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### TITLE V PERMIT RENEWAL EVALUATION

## **Power Generation Facility**

Engineer: Gurpreet Brar

**Date:** October 13, 2021

Facility Number: N-3233

Facility Name: Modesto Irrigation District

Mailing Address: PO Box 4060

Modesto, CA 95352

**Contact Name:** Paul Mercer

**Phone:** (209) 526-7616

Responsible Official: Paul Mercer

**Title:** Generation Manager

**Project #:** N-1201888

**Deemed Complete:** June 22, 2020

### I. PROPOSAL

Modesto Irrigation District was issued their initial Title V permit in 2000. The permit was previously renewed in 2016. As required by District Rule 2520, the applicant is requesting a permit renewal. The existing Title V permit has been reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the previously 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

Modesto Irrigation District is located at 920 Woodland Ave in Modesto, CA.

## 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 Templates:

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

The applicant has requested to utilize template No. SJV-UM-0-3, <u>Facility Wide Umbrella</u>. 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 form model general permit templates and are not subject to further EPA or public review.

Conditions 1 through 40 of the requirements for permit units N-3233-0-5.

## VI. FEDERALLY ENFORCEABLE REQUIREMENTS

# **Rules Addressed by General Permit Template**

### A. Rules Updated or Evaluated

- District Rule 2520, <u>Federally Mandated Operating Permits</u> (amended June 21, 2001– SIP version ⇒ amended August 15, 2019 – non-SIP version)
- District Rule 4601, <u>Architectural Coatings</u> (amended December 17, 2009
   SIP version ⇒ amended April 16, 2020 Non-SIP version)
- 40 CFR Part 82, Subpart B, <u>Servicing of Motor Vehicle Air Conditioners</u> (amended May 6, 2021)
- 40 CFR Part 82, Subpart F, <u>Recycling and Emissions Reduction</u> (amended May 6, 2021)

### B. Rules Not Updated

- District Rule 1100, <u>Equipment Breakdown</u> (amended December 17, 1992)
- District Rule 1160, Emission Statements (adopted November 18, 1992)
- District Rule 2010, Permits Required (adopted 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 (adopted December 17, 1992)
- District Rule 2070, <u>Standards for Granting Applications</u> (amended December 17, 1992)
- District Rule 2080, Conditional Approval (amended December 17, 1992)
- District Rule 4101, Visible Emissions (amended February 17, 2005)
- District Rule 8021, <u>Construction</u>, <u>Demolition Excavation</u>, <u>Extraction</u>, <u>and</u>
   Other Earthmoving Activities (amended August 19, 2004)

- District Rule 8031, <u>Bulk Materials</u> (amended August 19, 2004)
- District Rule 8041, <u>Carryout and Trackout</u> (amended August 19, 2004)
- District Rule 8051, Open Areas (amended August 19, 2004)
- District Rule 8061, <u>Paved and Unpaved Roads</u> (amended August 19, 2004)
- District Rule 8071, <u>Unpaved Vehicle/Equipment Traffic Areas</u> (amended September 16, 2004)
- 40 CFR Part 61, Subpart M, <u>National Emission Standards for Asbestos</u> (amended July 20, 2004)

## **Rules Not Addressed by General Permit Template**

# A. Rules Updated or Evaluated

- District Rule 1080, <u>Stack Monitoring</u> (amended December 17,1992)
- District Rule 2201, New and Modified Stationary Source Review Rule (amended April 21, 2011 – SIP version ⇒ amended August 15, 2019 – non-SIP version)
- District Rule 4702, <u>Internal Combustion Engines</u> (amended November 14, 2013 – SIP version ⇒ amended August 19, 2021 – non-SIP version)
- 40 CFR Part 60 Subpart A, <u>General Provisions</u> (amended August 30, 2016)
- 40 CFR Part 60, Subpart IIII, <u>Standards of Performance for Stationary</u> <u>Compression Ignition Internal Combustion Engines</u> (amended December 4, 2020)
- 40 CFR Part 60 Subpart KKKK, <u>Standards of Performance for Stationary</u> <u>Combustion Turbines</u> (amended October 7, 2020)
- 40 CFR Part 63, Subpart YYYY, <u>National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines</u> (amended November 19, 2020)

- 40 CFR Part 63, Subpart ZZZZ, <u>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</u> (amended December 4, 2020)
- 40 CFR Part 64, <u>Compliance Assurance Monitoring</u> (adopted October 22, 1997)
- 40 CFR Part 68, <u>Chemical Accident Prevention Provisions</u> (amended December 19, 2019)
- 40 CFR Part 75, <u>Continuous Emission Monitoring</u> (amended April 22, 2020)

#### **B.** Rules Removed

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

### C. Rules Added

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

### D. Rules Not Updated

- District Rule 1070, <u>Inspections</u> (amended December 17, 1992)
- District Rule 1081, Source Sampling (amended December 16, 1993)
- District Rule 2410, <u>Prevention of Significant Deterioration</u>, (adopted June 16, 2011)
- District Rule 4201, <u>Particulate Matter Concentration</u> (amended December 17, 1992)
- District Rule 4701, <u>Internal Combustion Engines Phase 1</u> (amended August 21, 2003)
- District Rule 4703, <u>Stationary Gas Turbines</u> (amended September 20, 2007)
- District Rule 4801, Sulfur Compounds (amended December 17, 1992)
- District Rule 7012, <u>Hexavalent Chromium Cooling Towers</u> (amended December 17, 1992)

- 40 CFR Part 60 Subpart GG, <u>Standards of Performance for Stationary Gas Turbines</u> (amended February 27, 2014)
- 40 CFR Part 72, Subpart A, <u>Acid Rain Program General Provisions</u> (amended March 28, 2011)
- 40 CFR Part 73, <u>Sulfur Dioxide Allowance System</u> (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 Updated

No rules were updated.

#### B. Rules Added

No rules were added.

### C. Rules Not Updated

### 1. District Rule 4102, Nuisance

This rule prevents the discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.

The following condition is based on this rule and is therefore not federally enforceable through Title V:

Permit Unit	Permit Condition
N-3233-0-5	41

### 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 adopted since the issuance of the last renewed Title V permit.

# 1. District Rule 1080 - Stack Monitoring

District Rule 1080 requires the installation, use maintenance, and inspection of continuous monitoring equipment (CEM). This rule has not been amended since this Title V permit was last renewed. However, the requirement to allow additional time for notification of breakdown and scheduled shutdown of CEM has been removed from the renewed permit N-3233-1-9. Condition 6 on current permit N-3233-1-8 has been subsumed by condition 1 on renewed facility-wide permit N-3233-0-5 that has more stringent requirements for breakdown notifications. The following condition on current permit N-3233-1-8 will be not be included on the renewed permit N-3233-1-9:

 Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. Operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Y

### 2. District Rule 2201 - New and Modified Stationary Source Review Rule

District Rule 2201 has been amended since this Title V permit was last renewed. 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. The updated requirements of this rule are therefore not applicable at this time.

# 3. District Rule 2520 - Federally Mandated Operating Permits

This rule has been amended since the issuance of the initial TV permit, but the last amended version of the rule is not SIP approved. Additionally, the amendments to this rule do not have any effect on current permit requirements. However, only 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.

# 4. 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 addressed by the District's facility-wide umbrella template. Therefore, template SJV-UM-0-3 is still valid for this project.

### 5. District Rule 4702 - Internal Combustion Engines

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter (PM), and sulfur oxides (SOx) from internal combustion engines. This rule applies to any internal combustion engine rated at 25 brake horsepower or greater. The engines under permit units N-3233-13 and N-3233-14 are in compliance with the current SIP approved version of the rule. However, the last amended version of the rule, which is not SIP approved, requires lowering NOx and VOC emissions for spark-ignited IC engines, clarifying definitions, and updating test methods. Also the Particulate Matter Emission Control Requirements were added to the rule as Section 5.8, and as such the purpose of the rule was amended to encompass the new requirements.

The diesel-fired engines under permit units N-3233-13 and N-3233-14 are compression-ignited emergency standby engines equipped with nonresettable elapsed time meters. Therefore, the amended sections of this rule are not applicable to these engines. Because the amendments to District Rule 4702 do not affect the requirements for any permit units at this site and no additional conditions are required, the changes will not be addressed further in this evaluation.

## 6. 40 CFR Part 60, Subpart A - General Provisions

Section 60.8(f) of Subpart A has been amended to require the reporting of specific emissions test data in test reports regardless of whether the report is submitted electronically or in paper format. The data elements will provide clarity and more appropriately define and limit the extent of elements reported for each test method included in a test report. The amendment to this section ensure that emissions test reporting includes all data necessary to assess and assure the quality of the reported emissions data and that the reported information appropriately describes and identifies the specific unit covered by the emissions test report. Also, Section 60.17(g) was amended to add ASTM D6911-15 to the list of incorporations by reference.

Conditions 25 and 29 on draft permits N-3233-6 through N-3233-11 requires compliance with Section 60.8 of this subpart by installing continuous emission monitor system (CEMS), and frequency to submit the audit and quarterly compliance reports. Since this amendment to Section 60.8 does not affect the permit conditions, and the draft permits are not required to comply with Section 60.17(g). Therefore, the amendment to this Subpart does not require any change to the permit conditions.

The following conditions will be included on the renewed permits as a mechanism to ensure continued compliance with the requirements of this subpart.

Permit Units	Permit Conditions
N-3233-6-4 through N-3233-11-4	25 and 29

# 7. 40 CFR 60 Subpart IIII, <u>Standards of Performance for Stationary</u> <u>Compression Ignition Internal Combustion Engines</u>

### §60.4200 - Applicability

This subpart is applicable to owners and operators of stationary compression ignited internal combustion engines that commence construction after July 11, 2005, where the engines are:

- 1) Manufactured after April 1, 2006, if not a fire pump engine.
- 2) Manufactured as a National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

# N-3233-13-2: 62 bhp Diesel Fired IC Engine Powering an Emergency Fire Pump

# N-3233-14-3: 480 bhp Diesel Fired IC Engine Powering an Emergency Generator

Since the engines under permit units N-3233-13 & N-3233-14 were installed after July 11, 2005 and manufactured after April 1, 2006, this subpart applies.

Sections 60.4201 through 60.4203 apply to engine manufacturers. Therefore, these sections will not be discussed unless they are referenced later by another section of this subpart.

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

Section 60.4205(b) states that owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in Section 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

Section 60.4202(a) states that Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

Section (a)(1) is not applicable as it applies to engines with a maximum engine power less than 37 KW (50 HP).

Section (a)(2) states for engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

The applicable standards from 40 CFR 89.112 are NMHC + NOx = 6.4 g/kw-hr, CO = 3.5 g/kw-hr, and PM = 0.20 g/kw-hr. The following conditions on the draft permits will ensure compliance with this requirement:

### N-3233-13-2:

- The emissions from this engine shall not exceed any of the following limits: 4.24 g-NOx/bhp-hr, 0.82 g-CO/bhp-hr, 0.18 g-VOC/bhp-hr or 0.0053 g-SOx/bhp-hr. [District Rule 2201, 13 CCR 2423, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]
- The emissions from this engine shall not exceed 0.17 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 13 CCR 2423, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

#### N-3233-14-3:

- The emissions from this engine shall not exceed any of the following limits: 4.11 g-NOx/bhp-hr, 0.25 g-CO/bhp-hr, 0.06 g-VOC/bhp-hr or 0.0058 g-SOx/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
- The PM<sub>10</sub> emissions from this engine shall not exceed 0.033 g/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

The smoke emission standard in 40 CFR 89.113 applies to compressionignition non-road engines. An emergency-standby IC engine is not a non-road engine as defined in 40 CFR 89 Subpart A; therefore, section 40 CFR 89.113 does not apply.

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 3 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.

The following condition on draft permits N-3233-13-2 and N-3233-14-3 will ensure the use of CARB certified diesel fuel, which meets all of the fuel requirements listed in Subpart IIII.

 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 Part 60 Subpart IIII]

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 units N-3233-13 and N-3233-14. 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. The following condition on draft permits N-3233-13-2 and N-3233-14-3 will ensure compliance with this section:

 This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

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.

The following condition on draft permits N-3233-13-2 and N-3233-14-3 will ensure compliance with this section:

 This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart IIII]

Section 60.4211(b) applies to pre-2007 model year engines. The engines under permits N-3233-13-2 and N-3233-14-3 were installed in 2012; 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 permits N-3233-13-2 and N-3233-14-3 are Tier 2 and Tier 3 emissions level engines that comply with the emission standards in Section 60.4205(b) and were 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 engines under permits N-3233-13-2 and N-3233-14-3 are 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 engines under permits N-3233-13-2 and N-3233-14-3 were 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.

The following conditions on draft permits will ensure compliance with this section:

### N-3233-13-2:

 This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

### N-3233-14-3:

 This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 41 hours per calendar year. [District Rule 4702, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

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 these engines; 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 each engine under permits N-3233-13-2 and N-3233-14-3, 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 engines under permits N-3233-13-2 and N-3233-14-3 are post-2007 model year emergency engine rated less than 3,000 hp and have 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.

The following condition on draft permits N-3233-13-2 and N-3233-14-3 will ensure compliance with this section:

• 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, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. 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, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

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 engines under permits N-3233-13-2 and N-3233-14-3 are diesel-fired and meet the emission limits that the engines were originally certified to, this section does not apply.

As demonstrated above, the engines under draft permits N-3233-13-2 and N-3233-14-3 meet the requirements of this subpart.

# 8. 40 CFR Part 60 Subpart KKKK, <u>Standards of Performance for Stationary Combustion Turbines</u>

Section 60.4305(a) states that stationary combustion turbines with a heat input at peak load equal to or greater than 10 MMBtu/hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, are subject to this Subpart. The turbines operated under permit units N-3233-1 and N-3233-4 were constructed prior to this date, and have not been modified or reconstructed after February 18, 2005. Therefore, Subpart KKKK is not applicable to these turbines. No further analysis is necessary.

# 9. 40 CFR Part 63, Subpart YYYY, <u>National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines</u>

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 calculated in the previous Title V Renewal project N-1152278, the facility was not a major source of HAPs as defined in Section 63.6085(b). The facility has not been modified since the last Title V Renewal project was finalized, there is no change to the total HAP emissions for the facility. Therefore, this subpart is not applicable and no further discussion is required.

# 10.40 CFR Part 63, Subpart ZZZZ, <u>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</u>

This national emission standard for hazardous air pollutants (NESHAP) is intended to regulate emissions of HAP from stationary reciprocating IC engines. This facility was determined to be an Area Source of HAP emissions in the previous Title V Renewal.

Pursuant to 40 CFR 63 63.6590(1), a new or reconstructed stationary reciprocating internal combustion engine (RICE) located at an area source must meet the requirements of 40 CFR 63 Subpart ZZZZ by complying with 40 CFR 60 Subpart IIII if the engine is a new compression-ignited.

The engines under draft permits N-3233-13-2 and N-3233-14-3 were installed after June 12, 2006, and were determined to be in compliance with 40 CFR 60 Subpart IIII requirements. Therefore, these are not subject to the requirements of 40 CFR 63 Subpart ZZZZ.

### 11.40 CFR Part 64 - Compliance Assurance Monitoring

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

- 1) The unit must have an emission limit for the pollutant;
- 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)
VOC	20,000
NOx	20,000
CO	200,000
PM <sub>10</sub>	140,000
SOx	140,000

40 CFR Part 64 defines a control device as equipment, other than inherent process equipment, that is used to destroy or remove air pollutants prior to discharge to the atmosphere.

# a. N-3233-1-9: ONE GENERAL ELECTRIC LM5000 PD AERO-DERIVATIVE 460 MMBTU/HR (HHV) GAS TURBINE ENGINE

- 1. This unit has emission limits for NOx, CO, VOC, SOx, and PM<sub>10</sub>.
- 2. This unit has add-on controls for NOx (SCR), CO (oxidation catalyst), and VOC (oxidation catalyst), but not for SOx, and PM<sub>10</sub>. Therefore, CAM is not required for SOx and PM<sub>10</sub>.
- 3. The pre-control potential to emit for VOC is calculated below:

The uncontrolled emission factor calculated using AP-42 emission factor for an uncontrolled gas turbine is 0.0021 lb-VOC/MMBtu.

Uncontrolled PE<sub>VOC</sub> = 0.0021 lb-VOC/MMBtu × 460 MMBtu/hr × 8,760 hour/year = 8,462 lb-VOC/year

The pre-control potential to emit for VOC is below the major source threshold; therefore, CAM is not triggered for VOC.

The turbine has a part 70 permit that specifies continuous emission monitor system (CEMS) for NOx and CO; therefore, NOx and CO are exempt from the CAM requirements per 40 CFR 64.2(b)(1)(vi).

- b. N-3233-4-7: 87 MW LOAD FOLLOWING POWER PLANT SERVED BY
  A 466 MMBTU/HR GENERAL ELECTRIC LM6000 SPRINT MODEL
  NATURAL GAS FIRED TURBINE AND A 234 MMBTU/HR JOHN ZINK
  LDRW-LE OR EQUIVALENT DUCT BURNER
  - 1. This unit has emission limits for NOx, CO, VOC, SOx, and PM<sub>10</sub>.
  - 2. This unit has add-on controls for NOx (SCR), CO (oxidation catalyst), and VOC (oxidation catalyst), but not for SOx, and PM<sub>10</sub>. Therefore, CAM is not required for SOx and PM<sub>10</sub>.
  - 3. The pre-control potential to emit for VOC is calculated below:

The uncontrolled emission factor calculated using AP-42 emission factor for an uncontrolled gas turbine is 0.0021 lb-VOC/MMBtu.

Uncontrolled PE $_{VOC}$  = 0.0021 lb-VOC/MMBtu × (466 + 234) MMBtu/hr × 8,760 hour/year = 12,877 lb-VOC/year

The pre-control potential to emit for VOC is below the major source threshold; therefore, CAM is not triggered for VOC.

The turbine has a part 70 permit that specifies CEMS for NOx and CO; therefore, NOx and CO are exempt from the CAM requirements per 40 CFR 64.2(b)(1)(vi).

# c. N-3233-5-5: 27,000 GALLON PER MINUTE COOLING TOWER WITH A HIGH EFFICIENCY DRIFT ELIMINATOR

- 1. The cooling tower has an emission limit for  $PM_{10}$ .
- 2. The mist eliminator(s) may be considered an add-on control for PM<sub>10</sub>.
- 3. The pre-control potential to emit for PM<sub>10</sub> is below the Major Source threshold for PM<sub>10</sub> (140,000 lb/year) as shown by the following calculations.

Cooling tower water circulation rate: 27,000 gal/min (Per current permit)

Emission Factor (Uncontrolled): 0.019 lb-PM/1,000 gal (AP-42, table 13.4-1)

Uncontrolled PM<sub>10</sub> emission rate =  $27,000 \text{ gal/min} \times 0.019 \text{ lb-PM/} 1,000 \text{ gallons} \times 60 \text{ min/hr} \times 8,760 \text{ hour/year} \times 0.149 \text{ lb-PM10/} 1 \text{ lb-PM}^1$ 

Uncontrolled PM<sub>10</sub> emission rate = 40,175 lb-PM<sub>10</sub>/year.

Since the pre-control emission rate for PM<sub>10</sub> (40,175 lb-PM<sub>10</sub>/year) is not greater than the Major Source threshold for PM<sub>10</sub> (140,000 lb/year), CAM is not required.

# d. N-3233-6-4 through N-3233-11-4: SIX 11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINES POWERING 8.44 MW ELECTRICAL GENERATORS WITH SCR AND OXIDATION CATALYST

- 1. The gas-fired engine permits have emission limits for NOx, SOx,  $PM_{10}$ , CO, and VOC.
- 2. These engines do not have add-on controls for SO<sub>X</sub> or PM<sub>10</sub><sup>2</sup>; therefore, CAM is not applicable to SO<sub>X</sub> or PM10. The engines do have add-on controls for NO<sub>X</sub> (SCR, 95.8% reduction), CO (oxidation catalyst, 95.0% reduction), VOC (oxidation catalyst, 81.8% reduction).<sup>3</sup>
- 3. These permit units are equipped with Continuous Emissions Monitoring System (CEMS) for NOx, CO, and VOC.

Part 70 permit for each engine specifies CEMS for NOx and CO; therefore, NOx and CO are exempt from the CAM requirements per 40 CFR 64.2(b)(1)(vi).

<sup>&</sup>lt;sup>1</sup> Calculating Realistic PM10 Emissions from Cooling Towers, Joel Reisman and Gordon Frisbie

<sup>&</sup>lt;sup>2</sup> An oxidation catalyst may have some control on PM10; however, the oxidation catalyst was not identified as a PM10 control device in the District's application review for these engines (N-1083510)

<sup>&</sup>lt;sup>3</sup> % reductions indicated are from the District's application review N-1083510.

Since VOC and CO are both a by-products of incomplete combustion and both are controlled by the oxidation catalyst, the CO concentration as monitored by the CEMS will serve as a surrogate for VOC<sup>4</sup>. The continuous CO monitoring would satisfy the CAM requirements for the oxidation catalyst triggered by VOC.

e. N-3233-13-2: 62 BHP CUMMINS MODEL CFP33-F25 TIER 2
CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING A
FIREWATER PUMP

This permit unit has emission limits for NOx, SOx, PM<sub>10</sub>, CO, and VOC. However, the engine is not equipped with any add-on control equipment and is not subject to CAM requirements.

f. N-3233-14-3: 480 BHP CATERPILLAR MODEL C9 ATAAC TIER 3
CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING AN
ELECTRICAL GENERATOR

This permit unit has emission limits for  $NO_X$ ,  $SO_X$ ,  $PM_{10}$ , CO, and VOC. However, the engine is not equipped with any add-on control equipment and is not subject to CAM requirements.

#### **CONTINUOUS MONITORING SYSTEMS**

A CEMS is an instrument that continuously measures actual emissions levels from a stationary source. The CEMS measures directly the pollutant of concern or measures a surrogate pollutant for the pollutant of concern. An example of direct measurement of the pollutant of concern is the use of a Nitrogen Oxides (NOx) CEMS to monitor the NOx concentration (emissions level) of the effluent from a process stack on a stationary source that must comply with a NOx emissions limit. An example of monitoring a surrogate pollutant is the use of a Carbon Monoxide (CO) CEMS to monitor the CO concentration of the effluent from a stationary combustion source that must comply with a Volatile Organic Compounds (VOC) limit. In this instance, CO concentration is used as a surrogate for VOC because CO is a product of incomplete combustion and elevated levels of CO indicate incomplete combustion (i.e., low CO concentrations indicate complete combustion of VOC compounds).

<sup>&</sup>lt;sup>4</sup> From EPA online introduction to air emissions monitoring: http://cfpub.epa.gov/oarweb/mkb/basic\_information.cfm

### 12.40 CFR Part 68 - Chemical Accident Prevention Provisions

Condition 43 on draft facility-wide permit N-3233-0-5 states that when the facility is subject 40 CFR Part 68, the facility shall submit to the proper authority a Risk Management Plan per Subpart G when mandated by the regulation. Since the actual requirements of 40 CFR Part 68 are not placed on the draft permit, it does not impact the permit conditions. Therefore, the amendment to this Subpart does not require any change to the permit conditions.

### 13.40 CFR Part 75 – Continuous Emission Monitoring

The purpose of 40 CFR Part 75 is to establish requirements for the monitoring, recordkeeping, and reporting of SO2, NOx, and CO2 emissions, volumetric flow, and opacity data from affected units under the Acid Rain Program pursuant to sections 412 and 821 of the Clean Air Act. In addition, this part sets forth provisions for the monitoring, recordkeeping, and reporting of NOx mass emissions with which EPA, individual States, or groups of States may require sources to comply in order to demonstrate compliance with a NOx mass emission reduction program, to the extent these provisions are adopted as requirements under such a program.

These regulations apply to each affected unit subject to Acid Rain emission limitations or reduction requirements for SO2 or NOx, except as provided in (b) and (c) of Section 75.2 in 40 CFR Part 75.

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

The following conditions on the draft renewed permits is a mechanism to ensure compliance with the requirements of this part:

Renewed Permits	Permit Conditions
N-3233-1-9	25, 44, 45, 48, 57, and 58
N-3233-4-7	23, 38, 39, 42, 51, and 52

### 14.40 CFR Part 82 Subpart B – <u>Servicing of Motor Vehicle Air Conditioners</u>

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.

The following condition on the draft renewed permit is a mechanism to ensure compliance with the requirements of this subpart:

Renewed Permit	Permit Condition
N-3233-0-5	28

### 15.40 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.

The following condition on the draft renewed permit is a mechanism to ensure compliance with the requirements of this subpart:

Renewed Permit	Permit Condition
N-3233-0-5	27

## 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

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 shield as granted in Model General Permit Template is included as conditions 39 and 40 of the facility-wide requirements (N-3233-0-5).

### B. Requirements not Addressed by Model General Permit Templates

This Title V permit renewal application does not include any proposals for new permit shields or modifications to any pre-existing permit shields. The proposed renewed Title V permit therefore does not include any new or modified permit shields.

### 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**

- Draft Renewed Title V Operating Permit A.
- B.
- Previous Title V Operating Permit
  Detailed Summary List of Facility Permits C.

# ATTACHMENT A

Draft Renewed Title V Operating Permit

# San Joaquin Valley Air Pollution Control District

FACILITY: N-3233-0-5 EXPIRATION DATE: 1/30/2020

# **FACILITY-WIDE REQUIREMENTS**

- 1. {4362} 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. {4363} 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. {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 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

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-0-5:Oct 13:2021 5:17PM -- BRARG

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

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

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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. {4384} 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. {4385} 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. {4386} 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. {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

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

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location:

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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. {4400} 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. {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] 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. The facility-wide CO emissions shall not exceed 199,999 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 43. The facility-wide SOx emissions shall not exceed 54,750 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 44. The permittee shall retain records of the facility-wide CO and SOx emissions on a rolling 12-month basis. The record shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 45. The facility-wide SOx emissions for natural gas shall be calculated utilizing the monthly quantity of natural gas burned and the permitted natural gas sulfur content limit. The facility-wide SOx emissions for liquid fuels shall be calculated utilizing the monthly quantity of liquid fuels burned and either the permitted fuel sulfur content limit or the actual measured sulfur content of the liquid fuels burned. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351

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46. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin January 1st every year, 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:** N-3233-1-9

EXPIRATION DATE: 11/30/2020

#### **EQUIPMENT DESCRIPTION:**

ONE GENERAL ELECTRIC LM5000 PD AERO-DERIVATIVE 460 MMBTU/HR (HHV) GAS TURBINE PNGINE WITH STEAM INJECTION, OXIDIZATION CATALYST, AMMONIA INJECTION, AND SELECTIVE CATALYTIC REDUCTION SERVING A 49.9 MW ELECTRICAL GENERATOR

# PERMIT UNIT REQUIREMENTS

- 1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
- 2. When operating on natural gas, the unit shall be fired exclusively on PUC-regulated natural gas which has a sulfur content of less than or equal to 0.017% by weight. When operating on liquid fuel, the unit shall be fired on low sulfur light distillate fuel with less than or equal to 0.05% sulfur by weight. [District Rule 2201, 40 CFR 60.333(b), and Stanislaus County Rule 407] Federally Enforceable Through Title V Permit
- 3. The sulfur content of each fuel source shall be documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract. [District Rule 2520, 9.3.2 and 40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
- 4. Start-up is defined as the period beginning with the initial firing of the turbine and ending when the turbine meets the NOx and CO limits for steady state operation. Shutdown is defined as the period beginning with initiation of the turbine shutdown sequence and ending with cessation of firing of the gas turbine. [District Rule 4703] Federally Enforceable Through Title V Permit
- 5. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
- 6. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report shall be received by the District within 30 days of the end of the quarter and shall include the following: time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which a 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 60.334(j), (j)(5)] Federally Enforceable Through Title V Permit
- 7. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device was inoperative and emission measurements. [District Rules 1080 and 2201, and 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit
- 8. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. 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 from the date the facility is notified of the problem by the District, provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 7.1] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

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- 9. The turbine and associated ancillary equipment must be properly maintained and kept in good operating condition at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The turbine and associated ancillary equipment shall only be operated by personnel properly trained in its operation. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. Natural gas; OGT; JP4; Jet A; Jet B; No. 1d; No 1; 1GT; No. 2d; No. 2; and 2GT are the only fuels permitted for combustion in the turbine. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The turbine shall be equipped and operated with an Automatic Combustion Control System. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The turbine shall not be operated unless the exhaust gas is subjected to the Oxidation (CO) Catalyst System and the Selective Catalytic Reduction (SCR) System prior to discharge to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The CO Catalyst System and the SCR Systems must be in full use whenever the turbine is in operation, except during start-up and shutdown periods. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The Ammonia Injection System must be utilized whenever the flue gas temperature at the inlet of the SCR System exceeds 550 degrees F, except during start up and shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The NOx emission concentration shall not exceed 3.5 ppmv, dry, corrected to 15% O2, when operating on natural gas; and 6.2 ppmv, dry, corrected to 15% O2, when operating on fuel oil, except for start-up or shut-down periods. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
- 17. A visible emissions inspection shall be conducted after every 400 cumulative hours of operation on fuel oil. If a visible emissions inspection documents opacity, a EPA Method 9 evaluation shall be completed within three working days, or during the next period of operation if the unit ceases firing on fuel oil within the three working day period. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 18. The CO emission concentration, at maximum heat input capacity shall not exceed 16.0 ppmv, dry, corrected to 15% O2, when operating on Natural Gas, and 20.0 ppmv, dry, corrected to 15% O2, when operating on Fuel Oil, except for start-up and shut-down periods. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. The VOC emission concentration, at maximum heat input capacity shall not exceed 0.000475% by weight, wet, while operating on Natural Gas and 0.000713% by weight, wet, while operating on Fuel Oil, except for start-up and shutdown periods. [District Rule 2201] Federally Enforceable Through Title V Permit
- 20. The NH3 emission concentration shall not exceed 25.0 ppmv, dry, corrected to 15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
- 21. The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081, 3.0, and 6.0 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. All concentrations of gaseous emissions must be expressed in parts per million, by volume, dry basis, corrected to 15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
- 23. A complete laboratory analysis of Fuel Oil combusted during any source test shall be provided along with the source test results. Testing shall include, but not be limited to, an ultimate analysis of Fuel Oil & a full set of metals pursuant to AB2588. [District Rule 2201] Federally Enforceable Through Title V Permit
- 24. Annual performance testing shall include, but not be limited to, an analysis of the exhaust stream directly after the HRSG for: A. Flow rate; B. Oxides of Nitrogen; C. Carbon Monoxide; D. Hydrocarbons: Methane & Non-Methane, including saturated and unsaturated; E. Ammonia; F. Particulates (Fuel Oil only); G. Oxides of Sulfur (Fuel Oil only). [District Rule 2201] Federally Enforceable Through Title V Permit

PERMITURIT REQUIREMENTS CONTINUE ON NEXT PAGE
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Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

LOCATION: 920 VV OODL N-3233-1-9 : Oct 13 2021 5:17PM -- BRARG

- 25. Performance testing shall be conducted annually to measure NOx and CO emission concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The operator shall conduct RATA testing according to 40 CFR 60 Appendix B and 40 CFR 75 Appendix A. [District Rule 4703, 40 CFR 60.335(a), 40 CFR 60 Appendix B, and 40 CFR 75 Appendix A] Federally Enforceable Through Title V Permit
- 26. Annual performance testing shall be performed at representative performance as specified by the APCO, between 90 and 100 percent of peak, or the highest physically achievable load. Annual performance testing is required for Natural Gas only, unless Fuel Oil usage exceeds 200 hours per year. [District Rule 2201 and 40 CFR 60.8(c)] Federally Enforceable Through Title V Permit
- 27. The District shall be notified at least 30 days prior to any performance testing and a test plan shall be submitted for District approval at least 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
- 28. Performance testing shall be witnessed or authorized by District personnel. Test results shall be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2 and 7.3] Federally Enforceable Through Title V Permit
- 29. A Continuous Monitoring System shall be operated to measure and record the fuel consumption, the mass ratio of steam-to-fuel injected, the mass ratio of water-to-fuel injected into the Combustor, the flue gas temperature at the inlet of the SCR System, NOx, SOx (when firing on fuel oil), O2 or CO2 and CO emission concentration in the exhaust gas after the HRSG. [District Rule 2201] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) for NOx, CO, and O2. The CEMS shall continuously measure and record the exhaust gas NOx and O2 concentrations, hours of operation and fuel consumption. The CEMS shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 2201 and 4703, 6.2.1 and 40 CFR 60.334 (b)(2)] Federally Enforceable Through Title V Permit
- 31. The Continuous Monitoring System shall convert the actual NOx, SOx (when firing on fuel oil), and CO concentrations to corrected concentrations at 15% O2, dry basis. The System shall also record the total lb/day emissions of NOx, SOx (when firing on fuel oil), and CO. [District Rule 2201] Federally Enforceable Through Title V Permit
- 32. Results of the CEM system shall be averaged over a three hour time period, using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1 and 6.4, and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 33. The NOx emission rate shall not exceed 150.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 34. The CO emission rate shall not exceed 550.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 35. The VOC emission rate shall not exceed 143.0 lb/day while operating on Natural Gas and 143.4 lb/day when operating on Fuel Oil. [District Rule 2201] Federally Enforceable Through Title V Permit
- 36. The SOx emission rate shall not exceed 12.9 lb/day while operating on Natural Gas and 150.0 lb/day when operating on Fuel Oil. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. The PM10 emission rate shall not exceed 10.0 lb/hr while operating on either Natural Gas or Fuel Oil. The PM10 emission rate shall not exceed 74.4 lb/day while operating on Natural Gas and 80.0 lb/day when operating on Fuel Oil. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. The start-up period must not exceed two (2) hours in any one day, commencing at midnight. The shut-down period must not exceed two (2) hours in any one day, commencing at midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. The emissions during the start-up and shut-down periods must be counted towards the applicable daily emission limitations. [District Rule 2201] Federally Enforceable Through Title V Permit

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

920 WOODLAND AVE, MODESTO, CA 95351

Facility Name: MODESTO IRRIGATION DISTRICT Location: N-3233-1-9 : Oct 13 2021 5:17PM -- BRARG

- 40. There shall be no visible emissions from the turbine, except for uncombined water and except during periods of startup and shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The owner or operator shall maintain a stationary gas turbine system operating log that includes on a daily basis, the actual local time start-up and stop time, length and reason for reduced load periods, total hours of operation, the quantity and type of fuel used, steam-to-fuel ratios, water-to-fuel ratios and ammonia usage. [District Rule 4703, 6.2.6 and 40 CFR 60.334 (i)] Federally Enforceable Through Title V Permit
- 42. The permittee shall retain records of the cumulative annual facility-wide CO and SOx emissions. The record shall be updated daily. [District Rule 2201] Federally Enforceable Through Title V Permit
- 43. 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
- 44. 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
- 45. 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
- 46. 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
- 47. 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
- 48. 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
- 49. 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
- 50. 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
- 51. 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
- 52. 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
- 53. 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
- 54. 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
- 55. 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

PERMITURIT REQUIREMENTS CONTINUE ON NEXT PAGE
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Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location:

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- 56. 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 superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
- 57. 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
- 58. 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

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

Facility Name: MODESTO IRRIGATION DISTRICT
Location: 920 WOODLAND AVE, MODESTO, CA 95351

**PERMIT UNIT:** N-3233-4-7

#### **EQUIPMENT DESCRIPTION:**

87 MW LOAD FOLLOWING POWER PLANT SERVED BY A 466 MMBTU/HR GENERAL ELECTRIC LYM6000 SPRINT MODEL NATURAL GAS FIRED TURBINE WITH WATER INJECTION, A 234 MMBTU/HR JOHN ZINK LDRW-LE OR EQUIVALENT DUCT BURNER. A HEAT RECOVERY STEAM GENERATOR, A CONDENSING STEAM TURBINE, AN INLET AIR COOLING/FILTERING SYSTEM, A SELECTIVE CATALYTIC REDUCTION SYSTEM, AN OXIDATION CATALYST AND A LUBE OIL COALESCER

### PERMIT UNIT REQUIREMENTS

- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- The exhaust stack exit shall be at least 90 feet in height, the exhaust shall be vertical and the stack exhaust flow shall not be impeded. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The gas turbine engine and 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 up to three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- All equipment shall be maintained in proper 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
- The owner or operator shall certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) for NOx, CO, and O2. The CEMS shall continuously measure and record the exhaust gas NOx and O2 concentrations, hours of operation and fuel consumption. The CEMS shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [District Rules 2201 and 4703, 6.2.1; and 40 CFR 60.334 (b)(2)] Federally Enforceable Through Title V Permit
- 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 60.334(b)(2)] Federally Enforceable Through Title V Permit
- The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. 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, 7.1] Federally Enforceable Through Title V Permit
- The permittee shall monitor and record the NOx emission rate, the ammonia injection rate, the water injection rate, the exhaust temperature and the calculated exhaust flow rate. [District Rules 4703 and 4001] Federally Enforceable Through Title V Permit
- The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081, 3.0, and 6.0 (as amended 12/16/93). [District Rule 1081, 3.0 and 6.0] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location:

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- 10. Start-up and shutdown durations shall not exceed 2 hours per day and 365 hours per calendar year. Start-up is defined as the period beginning with the initial firing of the turbine and ending when the turbine meets the NOx and CO limits for steady state operation. Shutdown is defined as the period beginning with initiation of the turbine shutdown sequence and ending with cessation of firing of the gas turbine. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
- 11. The NOx emissions from this unit shall not exceed 58,340 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The NOx emissions during start-up and shutdown periods shall not exceed 24.6 pounds during any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The NOx emissions, except during start-up and shutdown periods, shall not exceed 2.5 ppmvd @ 15% O2 over a 1 hour rolling average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
- 14. The CO emissions during start-up and shutdown periods shall not exceed 40.8 pounds during any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The CO emissions, except during start-up and shutdown periods, shall not exceed 6.0 ppmvd @ 15% O2 over a 3 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The VOC emissions shall not exceed 2.0 ppmvd, as methane, @ 15% O2 over a 3 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The PM10 emissions shall not exceed 2.5 pounds during any one hour while only the turbine is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The PM10 emission shall not exceed 3.0 pounds during any one hour while both the turbine and duct burner are operating. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) which has a total sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 scf. [District Rule 2201, 40 CFR 60.333(b), and Stanislaus County Rule 407] Federally Enforceable Through Title V Permit
- 20. 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 using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 1.0 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [District Rule 2520, 9.3.2 and 40 CFR 60.334(h)(3)] Federally Enforceable Through Title V Permit
- 21. The ammonia (NH3) emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 22. Ammonia slip shall be calculated utilizing the following procedure: NH3 slip (ppmvd at 15% O2) = ((a (b x c/1,000,000)) x (1,000,000/b)) x ((20.9 15.0)/(20.9 e)) x d; where a = ammonia injection rate (lb/hr)/(17 lb/lb-mol), b = dry exhaust flow rate (lb/hr)/(29 lb/lb-mol), c = change in measured NOx concentration ppmvd across the catalyst, d = correction factor, and e = stack O2 concentration (%vd). The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. Should the calculated ammonia slip value indicate a violation of the emission limit, source testing for ammonia slip shall be conducted with the turbine system operating under conditions similar to those it was operating at during the calculated violation. Source testing shall be conducted within 60 days of the calculated violation. Alternatively, the permittee may utilize a continuous instack ammonia monitor, acceptable to the District to monitor compliance. At least 60 days prior to using a NH3 CEM, the permittee shall submit a monitoring plan for District review and approval. [District Rule 4102]
- 23. Performance testing shall be conducted annually to measure NOx and CO emission concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The operator shall conduct RATA testing according to 40 CFR 60 Appendix B and 40 CFR 75 Appendix A. [District Rule 4703], 40 CFR 60.335(a), 40 CFR 60 Appendix B, and 40 CFR 75 Appendix A] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-47-10d 13 2021 5 TYPM - BRARG

- 24. Performance testing to demonstrate compliance with the VOC, PM10 and NH3 requirements of this permit shall be conducted at least once every twelve months. [District Rules 2201 and 4001] Federally Enforceable Through Title V Permit
- 25. The District shall be notified at least 30 days prior to any performance testing and a test plan shall be submitted for District approval at least 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
- 26. Performance testing shall be witnessed or authorized by District personnel. Test results shall be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2 and 7.3] Federally Enforceable Through Title V Permit
- 27. Performance testing for VOC shall be conducted utilizing EPA method 18 or EPA method 25. Alternative source testing methods will be allowed provided prior written approval is received from both the District and the EPA. [District Rule 2201] Federally Enforceable Through Title V Permit
- 28. Performance testing to measure concentrations of PM10 shall be conducted using EPA methods 201 and 202, or EPA methods 201A and 202, or CARB method 501 in conjunction with CARB method 5. Alternative source testing methods will be allowed provided prior written approval is received from both the District and the EPA. [District Rule 2201] Federally Enforceable Through Title V Permit
- 29. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device was inoperative and emission measurements. [District Rules 1080 and 2201, and 40 CFR 60.7 (b)] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall maintain a stationary gas turbine system operating log that includes on a daily basis, the actual local time start-up and stop time, length and reason for reduced load periods, total hours of operation, and the quantity and type of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit
- 31. The rolling 12-month CO emissions from the turbines shall be determined utilizing CEMS data. [District Rule 2201] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain hourly records of the NOx, CO and ammonia concentrations (ppmv @ 15% O2). [District Rules 2201 and 4201] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain records of the rolling 12-month NOx emissions from this unit. The record shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report shall be received by the District within 30 days of the end of the quarter and shall include the following: time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which a 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 60.334(j), (j)(5)] Federally Enforceable Through Title V Permit
- 35. Results of the CEM system shall be averaged over the time period applicable to each emission limit listed on this permit, using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1, 6.4; and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 36. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [District Rule 4703, 6.3.3; and 40 CFR 60.335(b)(3)] Federally Enforceable Through Title V Permit
- 37. 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 of 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

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- 38. 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
- 39. 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
- 40. 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
- 41. 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
- 42. 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 and 40 CFR 75] Federally Enforceable Through Title V Permit
- 43. 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
- 44. 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
- 45. 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
- 46. 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
- 47. 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
- 48. 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
- 49. 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
- 50. 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 superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location:

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- 51. 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
- 52. 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

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Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

**PERMIT UNIT:** N-3233-5-5

#### **EQUIPMENT DESCRIPTION:**

27,000 GALLON PER MINUTE COOLING TOWER WITH A HIGH EFFICIENCY DRIFT ELIMINATO

### PERMIT UNIT REQUIREMENTS

- No hexavalent chromium containing compounds shall be added to the water that is circulating through the cooling tower or will circulate through the cooling tower. [District Rule 7012]
- The drift rate shall not exceed 0.0005%. [District Rule 2201] Federally Enforceable Through Title V Permit 2.
- 3. The PM10 emission rate shall not exceed 0.17 pounds during any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- Compliance with the PM10 daily emission limit shall be demonstrated as follows: PM10 lb/day = circulating water recirculation rate \* total dissolved solids concentration in the blowdown water \* design drift rate. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- Total Dissolved Solids (TDS) in the blowdown water shall be sampled and analyzed using a conductivity analyzer at least quarterly. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- Water recirculation rate shall be measured and recorded quarterly. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- {2256} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] 7. Federally Enforceable Through Title V Permit
- The operator shall maintain records of all circulating water tests performed. Records shall be maintained for at least 5 years and shall be made available to the District upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-5-5 : Oct 13 2021 5:17PM -- BRARG

**PERMIT UNIT:** N-3233-6-4

EXPIRATION DA

#### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW EVECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3A)

## PERMIT UNIT REQUIREMENTS

- The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title 1. V Permit
- The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2,010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location:

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- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351

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- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201, and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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, and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

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- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

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

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**PERMIT UNIT:** N-3233-7-4

EXPIRATION DATE: 11/30/2020

#### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW EVECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3B)

## PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2,010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

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- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74.864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmy, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 18, 25A or 25B, or ARB Method 100, SOx - CARB Method 100, PM10 - EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia - BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351

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- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702, 40 CFR 60.8, and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201, and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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, and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-7-4: Oct 13: 2021 5:17PM -- BRARG

- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

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

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-7-4 : Oct 13 2021 5:17PM -- BRARG

**PERMIT UNIT:** N-3233-8-4

EXPIRATION DATE: 11/30/2020

#### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW EVECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3C)

## PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2,010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

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- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74.864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmy, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 18, 25A or 25B, or ARB Method 100, SOx - CARB Method 100, PM10 - EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia - BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351

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- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702, 40 CFR 60.8, and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201, and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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, and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

LOCATION: 920 WOODLAN N-3233-8-4 : Oct 13 2021 5:17PM -- BRARG

- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

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

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-8-4: Oct 13: 2021 5:17PM -- BRARG

**PERMIT UNIT:** N-3233-9-4

EXPIRATION DATE: 11/30/2020

#### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW EVECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3D)

## PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2,010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

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- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

Location: 920 WOODLAND N-3233-9-4 : Oct 13 2021 5:17PM -- BRARG

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201, and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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, and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351

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- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

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

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-9-4 : Oct 13 2021 5:17PM -- BRARG

**PERMIT UNIT:** N-3233-10-4

EXPIRATION DA

#### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW EVECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3E)

## PERMIT UNIT REQUIREMENTS

- The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title 1. V Permit
- The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2,010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-10-4 : Oct 13 2021 5:17PM -- BRARG

Location:

- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702, 40 CFR 60.8, and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201, and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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, and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-2933-10-4: Opt 13 2021 - 1779M - BRARG

- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12 month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

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

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-10-4: Oct 13 2021 5:17PM – BRARG

**PERMIT UNIT:** N-3233-11-4

EXPIRATION DA

#### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW EVECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3F)

## PERMIT UNIT REQUIREMENTS

- The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title 1. V Permit
- The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2,010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location:

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- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74.864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmy, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) -EPA Method 18, 25A or 25B, or ARB Method 100, SOx - CARB Method 100, PM10 - EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia - BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

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- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702, 40 CFR 60.8, and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080, 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201, and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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, and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

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- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12 month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated month. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

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

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE,MODESTO, CA 95351

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**PERMIT UNIT:** N-3233-13-2

#### **EQUIPMENT DESCRIPTION:**

62 BHP CUMMINS MODEL CFP33-F25 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

### PERMIT UNIT REQUIREMENTS

- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally 1. Enforceable Through Title V Permit
- This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 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]
- This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- The emissions from this engine shall not exceed any of the following limits: 4.24 g-NOx/bhp-hr, 0.82 g-CO/bhp-hr, 0.18 g-VOC/bhp-hr or 0.0053 g-SOx/bhp-hr. [District Rule 2201, 13 CCR 2423, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- The emissions from this engine shall not exceed 0.17 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 13 CCR 2423, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 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 Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit

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

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- 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, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. 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, 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 11. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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

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**PERMIT UNIT:** N-3233-14-3

#### **EQUIPMENT DESCRIPTION:**

480 BHP CATERPILLAR MODEL C9 ATAAC TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING AN ELECTRICAL GENERATOR

### PERMIT UNIT REQUIREMENTS

- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally 1. Enforceable Through Title V Permit
- This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- {1898} 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]
- This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- The emissions from this engine shall not exceed any of the following limits: 4.11 g-NOx/bhp-hr, 0.0058 g-SOx/bhp-hr, 0.25 g-CO/bhp-hr, or 0.06 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- The PM10 emissions from this engine shall not exceed 0.033 g/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 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 Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- Operation of this engine shall not exceed 12 hours for any purpose in any one day. [District Rule 2201] 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. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 41 hours per calendar year. [District Rule 4702, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 10. 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
- 11. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] 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.

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- 12. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
- 13. 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, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. 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, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 14. 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 and 17 CCR 93115] Federally Enforceable Through Title V Permit

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

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# **ATTACHMENT B**

Previous Title V Operating Permit

**FACILITY:** N-3233-0-4 **EXPIRATION DATE: 11/30/2020** 

## **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
- 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
- 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
- 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
- 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
- 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
- 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
- The facility-wide CO emissions shall not exceed 199,999 pounds during any rolling 12-month period. [District Rule 2201]
- The facility-wide SOx emissions shall not exceed 54,750 pounds during any rolling 12-month period. [District Rule
- 10. The permittee shall retain records of the facility-wide CO and SOx emissions on a rolling 12-month basis. The record shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351

- 11. The facility-wide SOx emissions for natural gas shall be calculated utilizing the monthly quantity of natural gas burned and the permitted natural gas sulfur content limit. The facility-wide SOx emissions for liquid fuels shall be calculated utilizing the monthly quantity of liquid fuels burned and either the permitted fuel sulfur content limit or the actual measured sulfur content of the liquid fuels burned. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. 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
- 13. 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
- 14. 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
- 15. 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
- 16. 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
- 17. 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
- 18. 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
- 19. 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
- 20. 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
- 21. 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
- 22. 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
- 23. 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

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

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- 24. 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
- 25. 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
- 26. 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
- 27. 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
- 28. 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
- 29. 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
- 30. 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
- 31. 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
- 32. 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
- 33. 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
- 34. 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
- 35. 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
- 36. 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
- 37. 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

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE,MODESTO, CA 95351 N-3233-0-4: Oct 13 2021 5:15PM -- BRARG

- 38. 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
- 39. 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
- 40. 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
- 41. 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**
- 42. 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
- 43. 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
- 44. 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
- 45. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin January 1st every year, 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
- 46. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location:

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**PERMIT UNIT:** N-3233-1-8 **EXPIRATION DATE:** 11/30/2020

### **EQUIPMENT DESCRIPTION:**

ONE (1) GENERAL ELECTRIC LM5000 PD AERO-DERIVATIVE 460 MMBTU/HR (HHV) GAS TURBINE ENGINE WITH STEAM INJECTION, OXIDIZATION CATALYST, AMMONIA INJECTION, AND SELECTIVE CATALYTIC REDUCTION SERVING A 49.9 MW ELECTRICAL GENERATOR

## PERMIT UNIT REQUIREMENTS

- 1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
- 2. When operating on natural gas, the unit shall be fired exclusively on PUC-regulated natural gas which has a sulfur content of less than or equal to 0.017% by weight. When operating on liquid fuel, the unit shall be fired on low sulfur light distillate fuel with less than or equal to 0.05% sulfur by weight. [District Rule 2201; 40 CFR 60.333(b); Stanislaus County Rule 407] Federally Enforceable Through Title V Permit
- 3. The sulfur content of each fuel source shall be documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 4. Start-up is defined as the period beginning with the initial firing of the turbine and ending when the turbine meets the NOx and CO limits for steady state operation. Shutdown is defined as the period beginning with initiation of the turbine shutdown sequence and ending with cessation of firing of the gas turbine. [District Rule 4703] Federally Enforceable Through Title V Permit
- 5. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
- 6. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. Operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit
- 7. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report shall be received by the District within 30 days of the end of the quarter and shall include the following: time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which a 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. [40 CFR 60.334(j), (j)(5) and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
- 8. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device was inoperative and emission measurements. [40 CFR 60.7 (b) and District Rules 1080 and 2201] 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.

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- 9. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. 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 from the date the facility is notified of the problem by the District, provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit
- 10. The Turbine and associated ancillary equipment must be properly maintained and kept in good operating condition at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The Turbine and associated ancillary equipment shall only be operated by personnel properly trained in its operation. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. Natural gas; OGT; JP4; Jet A; Jet B; No. 1d; No 1; 1GT; No. 2d; No. 2; and 2GT are the only fuels permitted for combustion in the Turbine. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The Turbine shall be equipped and operated with an Automatic Combustion Control System. [District Rule 2201] Federally Enforceable Through Title V Permit
- 14. The Turbine shall not be operated unless the exhaust gas is subjected to the Oxidation (CO) Catalyst System and the Selective Catalytic Reduction (SCR) System prior to discharge to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The CO Catalyst System and the SCR Systems must be in full use whenever the Turbine is in operation, except during start-up and shutdown periods. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The Ammonia Injection System must be utilized whenever the flue gas temperature at the inlet of the SCR System exceeds 550 degrees F, except during start up and shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The NOx emission concentration shall not exceed 3.5 ppmv, dry, corrected to 15% O2, when operating on natural gas; and 6.2 ppmv, dry, corrected to 15% O2, when operating on fuel oil, except for start-up or shut-down periods. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
- 18. A visible emissions inspection shall be conducted after every 400 cumulative hours of operation on fuel oil. If a visible emissions inspection documents opacity, a EPA Method 9 evaluation shall be completed within three working days, or during the next period of operation if the unit ceases firing on fuel oil within the three working day period. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 19. The CO emission concentration, at maximum heat input capacity shall not exceed 16.0 ppmv, dry, corrected to 15% O2, when operating on Natural Gas, and 20.0 ppmv, dry, corrected to 15% O2, when operating on Fuel Oil, except for start-up and shut-down periods. [District Rule 2201] Federally Enforceable Through Title V Permit
- 20. The NMHC emission concentration, at maximum heat input capacity shall not exceed 0.000475% by weight, wet, while operating on Natural Gas and 0.000713% by weight, wet, while operating on Fuel Oil, except for start-up and shut-down periods. [District Rule 2201] Federally Enforceable Through Title V Permit
- 21. The NH3 emission concentration shall not exceed 25.0 ppmv, dry, corrected to 15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
- 22. The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081, 3.0, and 6.0 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit
- 23. All concentrations of gaseous emissions must be expressed in parts per million, by volume, dry basis, corrected to 15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
- 24. A complete laboratory analysis of Fuel Oil combusted during any source test shall be provided along with the source test results. Testing shall include, but not be limited to, an ultimate analysis of Fuel Oil & a full set of metals pursuant to AB2588. [District Rule 2201] Federally Enforceable Through Title V Permit

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- 25. Annual performance testing shall include, but not be limited to, an analysis of the exhaust stream directly after the HRSG for: A. Flow rate; B. Oxides of Nitrogen; C. Carbon Monoxide; D. Hydrocarbons: Methane & Non-Methane, including saturated and unsaturated; E. Ammonia; F. Particulates (Fuel Oil only); G. Oxides of Sulfur (Fuel Oil only). [District Rule 2201] Federally Enforceable Through Title V Permit
- 26. Performance testing shall be conducted annually to measure NOx and CO emission concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The operator shall conduct RATA testing according to 40 CFR 60 Appendix B and 40 CFR 75 Appendix A. [40 CFR 60.335(a), 40 CFR 60 Appendix B, 40 CFR 75 Appendix A, and District Rule 4703] Federally Enforceable Through Title V Permit
- 27. Annual performance testing shall be performed at representative performance as specified by the APCO, between 90 and 100 percent of peak, or the highest physically achievable load. Annual performance testing is required for Natural Gas only, unless Fuel Oil usage exceeds 200 hours per year. [District Rule 2201 and 40 CFR 60.8(c)] Federally Enforceable Through Title V Permit
- 28. The District shall be notified at least 30 days prior to any performance testing and a test plan shall be submitted for District approval at least 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
- 29. Performance testing shall be witnessed or authorized by District personnel. Test results shall be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit
- 30. A Continuous Monitoring System shall be operated to measure and record the fuel consumption, the mass ratio of steam-to-fuel injected, the mass ratio of water-to-fuel injected into the Combustor, the flue gas temperature at the inlet of the SCR System, NOx, SOx (when firing on fuel oil), O2 or CO2 and CO emission concentration in the exhaust gas after the HRSG. [District Rule 2201] Federally Enforceable Through Title V Permit
- 31. The owner or operator shall certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) for NOx, CO, and O2. The CEMS shall continuously measure and record the exhaust gas NOx and O2 concentrations, hours of operation and fuel consumption. The CEMS shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [40 CFR 60.334 (b)(2) and District Rules 2201 and 4703, 6.2.1] Federally Enforceable Through Title V Permit
- 32. The Continuous Monitoring System shall convert the actual NOx, SOx (when firing on fuel oil), and CO concentrations to corrected concentrations at 15% O2, dry basis. The System shall also record the total lb/day emissions of NOx, SOx (when firing on fuel oil), and CO. [District Rule 2201] Federally Enforceable Through Title V Permit
- 33. Results of the CEM system shall be averaged over a three hour time period, using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit
- 34. The NOx emission rate shall not exceed 150.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 35. The CO emission rate shall not exceed 550.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 36. The NMHC emission rate shall not exceed 143.0 lb/day while operating on Natural Gas and 143.4 lb/day when operating on Fuel Oil. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. The SOx emission rate shall not exceed 12.9 lb/day while operating on Natural Gas and 150.0 lb/day when operating on Fuel Oil. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. The PM10 emission rate shall not exceed 10.0 lb/hr while operating on either Natural Gas or Fuel Oil. The PM10 emission rate shall not exceed 74.4 lb/day while operating on Natural Gas and 80.0 lb/day when operating on Fuel Oil. [District Rule 2201] Federally Enforceable Through Title V Permit

- 39. The start-up period must not exceed two (2) hours in any one day, commencing at midnight. The shut-down period must not exceed two (2) hours in any one day, commencing at midnight. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. The emissions during the start-up and shut-down periods must be counted towards the applicable daily emission limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. There shall be no visible emissions from the turbine, except for uncombined water and except during periods of startup and shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
- 42. The owner or operator shall maintain a stationary gas turbine system operating log that includes on a daily basis, the actual local time start-up and stop time, length and reason for reduced load periods, total hours of operation, the quantity and type of fuel used, steam-to-fuel ratios, water-to-fuel ratios and ammonia usage. [40 CFR 60.334 (j) and District Rule 4703; 6.2.6] Federally Enforceable Through Title V Permit
- 43. The permittee shall retain records of the cumulative annual facility-wide CO and SOx emissions. The record shall be updated daily. [District Rule 2201] Federally Enforceable Through Title V Permit
- 44. 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
- 45. 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
- 46. 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
- 47. 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
- 48. 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
- 49. 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
- 50. 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
- 51. 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
- 52. 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
- 53. 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
- 54. 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

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- 55. 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
- 56. 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
- 57. 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 superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit
- 58. 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
- 59. 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

**PERMIT UNIT:** N-3233-4-6 **EXPIRATION DATE:** 11/30/2020

### **EQUIPMENT DESCRIPTION:**

87 MW LOAD FOLLOWING POWER PLANT SERVED BY A 466 MMBTU/HR GENERAL ELECTRIC LM6000 SPRINT MODEL NATURAL GAS FIRED TURBINE WITH WATER INJECTION, A 234 MMBTU/HR JOHN ZINK LDRW-LE OR EQUIVALENT DUCT BURNER, A HEAT RECOVERY STEAM GENERATOR, A CONDENSING STEAM TURBINE, AN INLET AIR COOLING/FILTERING SYSTEM, A SELECTIVE CATALYTIC REDUCTION SYSTEM, AN OXIDATION CATALYST AND A LUBE OIL COALESCER

## 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 exit shall be at least 90 feet in height, the exhaust shall be vertical and the stack exhaust flow shall not be impeded. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The gas turbine engine and 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 up to three minutes in any hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. All equipment shall be maintained in proper 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
- 5. The owner or operator shall certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) for NOx, CO, and O2. The CEMS shall continuously measure and record the exhaust gas NOx and O2 concentrations, hours of operation and fuel consumption. The CEMS shall be capable of monitoring emissions during startups and shutdowns as well as during normal operating conditions. [40 CFR 60.334 (b)(2) and District Rules 2201 and 4703, 6.2.1] Federally Enforceable Through Title V Permit
- 6. 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. [40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
- 7. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. 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, 7.1] Federally Enforceable Through Title V Permit
- 8. The permittee shall monitor and record the NOx emission rate, the ammonia injection rate, the water injection rate, the exhaust temperature and the calculated exhaust flow rate. [District Rules 4703 and 4001] Federally Enforceable Through Title V Permit
- 9. The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081, 3.0, and 6.0 (as amended 12/16/93). [District Rule 1081, 3.0, and 6.0] Federally Enforceable Through Title V Permit

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- 10. Start-up and shutdown durations shall not exceed 2 hours per day and 365 hours per calendar year. Start-up is defined as the period beginning with the initial firing of the turbine and ending when the turbine meets the NOx and CO limits for steady state operation. Shutdown is defined as the period beginning with initiation of the turbine shutdown sequence and ending with cessation of firing of the gas turbine. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
- 11. The NOx emissions from this unit shall not exceed 58,340 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The NOx emissions during start-up and shutdown periods shall not exceed 24.6 pounds during any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The NOx emissions, except during start-up and shutdown periods, shall not exceed 2.5 ppmvd @ 15% O2 over a 1 hour rolling average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
- 14. The CO emissions during start-up and shutdown periods shall not exceed 40.8 pounds during any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The CO emissions, except during start-up and shutdown periods, shall not exceed 6.0 ppmvd @ 15% O2 over a 3 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The VOC emissions shall not exceed 2.0 ppmvd, as methane, @ 15% O2 over a 3 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The PM10 emissions shall not exceed 2.5 pounds during any one hour while only the turbine is operating. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The PM10 emission shall not exceed 3.0 pounds during any one hour while both the turbine and duct burner are operating. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) which has a total sulfur content of no greater than 1.0 grain of sulfur compounds (as S) per 100 scf. [40 CFR 60.333(b), Stanislaus County Rule 407, and District Rule 2201] Federally Enforceable Through Title V Permit
- 20. 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 using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 1.0 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 21. The ammonia (NH3) emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 22. Ammonia slip shall be calculated utilizing the following procedure: NH3 slip (ppmvd at 15% O2) = ((a (b x c/1,000,000)) x (1,000,000/b)) x ((20.9 15.0)/(20.9 e)) x d; where a = ammonia injection rate (lb/hr)/(17 lb/lb-mol), b = dry exhaust flow rate (lb/hr)/(29 lb/lb-mol), c = change in measured NOx concentration ppmvd across the catalyst, d = correction factor, and e = stack O2 concentration (%vd). The correction factor shall be derived annually during compliance testing by comparing the measured and calculated ammonia slip. Should the calculated ammonia slip value indicate a violation of the emission limit, source testing for ammonia slip shall be conducted with the turbine system operating under conditions similar to those it was operating at during the calculated violation. Source testing shall be conducted within 60 days of the calculated violation. Alternatively, the permittee may utilize a continuous instack ammonia monitor, acceptable to the District to monitor compliance. At least 60 days prior to using a NH3 CEM, the permittee shall submit a monitoring plan for District review and approval. [District Rule 4102]
- 23. Performance testing shall be conducted annually to measure NOx and CO emission concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The operator shall conduct RATA testing according to 40 CFR 60 Appendix B and 40 CFR 75 Appendix A. [40 CFR 60.335(a), 40 CFR 60 Appendix B, 40 CFR 75 Appendix A, and District Rule 4703] 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.

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- 24. Performance testing to demonstrate compliance with the VOC, PM10 and NH3 requirements of this permit shall be conducted at least once every twelve months. [District Rules 2201 and 4001] Federally Enforceable Through Title V Permit
- 25. The District shall be notified at least 30 days prior to any performance testing and a test plan shall be submitted for District approval at least 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
- 26. Performance testing shall be witnessed or authorized by District personnel. Test results shall be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit
- 27. Performance testing for VOC shall be conducted utilizing EPA method 18 or EPA method 25. Alternative source testing methods will be allowed provided prior written approval is received from both the District and the EPA. [District Rule 2201] Federally Enforceable Through Title V Permit
- 28. Performance testing to measure concentrations of PM10 shall be conducted using EPA methods 201 and 202, or EPA methods 201A and 202, or CARB method 501 in conjunction with CARB method 5. Alternative source testing methods will be allowed provided prior written approval is received from both the District and the EPA. [District Rule 2201] Federally Enforceable Through Title V Permit
- 29. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device was inoperative and emission measurements. [40 CFR 60.7 (b) and District Rules 1080 and 2201] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall maintain a stationary gas turbine system operating log that includes on a daily basis, the actual local time start-up and stop time, length and reason for reduced load periods, total hours of operation, and the quantity and type of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit
- 31. The rolling 12-month CO emissions from the turbines shall be determined utilizing CEMS data. [District Rule 2201] Federally Enforceable Through Title V Permit
- 32. The permittee shall maintain hourly records of the NOx, CO and ammonia concentrations (ppmv @ 15% O2). [District Rules 2201 and 4201] Federally Enforceable Through Title V Permit
- 33. The permittee shall maintain records of the rolling 12-month NOx emissions from this unit. The record shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEM operations for each calendar quarter to the APCO. The report shall be received by the District within 30 days of the end of the quarter and shall include the following: time intervals, data and magnitude of excess NOx emissions, nature and the cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which a 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. [40 CFR 60.334(j), (j)(5) and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
- 35. Results of the CEM system shall be averaged over the time period applicable to each emission limit listed on this permit, using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [40 CFR 60.13 and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit
- 36. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [40 CFR 60.335(b)(3) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
- 37. 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

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351

- 38. 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
- 39. 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
- 40. 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
- 41. 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
- 42. 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
- 43. 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
- 44. 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
- 45. 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
- 46. 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
- 47. 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
- 48. 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
- 49. 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
- 50. 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 superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

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- 51. 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
- 52. 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

PERMIT UNIT: N-3233-5-4 EXPIRATION DATE: 11/30/2020

### **EQUIPMENT DESCRIPTION:**

27.000 GALLON PER MINUTE COOLING TOWER WITH A HIGH EFFICIENCY DRIFT ELIMINATOR

### PERMIT UNIT REQUIREMENTS

- 1. No hexavalent chromium containing compounds shall be added to the water that is circulating through the cooling tower or will circulate through the cooling tower. [District Rule 7012]
- 2. The drift rate shall not exceed 0.0005%. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The PM10 emission rate shall not exceed 0.17 pounds during any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. Compliance with the PM10 daily emission limit shall be demonstrated as follows: PM10 lb/day = circulating water recirculation rate \* total dissolved solids concentration in the blowdown water \* design drift rate. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 5. Total Dissolved Solids (TDS) in the blowdown water shall be sampled and analyzed using a conductivity analyzer at least quarterly. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 6. Water recirculation rate shall be measured and recorded quarterly. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
- 7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
- 8. The operator shall maintain records of all circulating water tests performed. Records shall be maintained for at least 5 years and shall be made available to the District upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-5-4: Oct 13 2021 5:15PM -- BRARG

PERMIT UNIT: N-3233-6-3 EXPIRATION DATE: 11/30/2020

### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3A).

### PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-6-3: Oct 13: 2021 5:15PM -- BRARG

- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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 and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] 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.

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- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351

Location: N-3233-6-3 : Oct 13 2021 5:15PM -- BRARG

**EXPIRATION DATE: 11/30/2020 PERMIT UNIT:** N-3233-7-3

### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3B).

### PERMIT UNIT REQUIREMENTS

- The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title 1. V Permit
- The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-7-3 : Oct 13 2021 5:15PM -- BRARG

- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-7-3: Oct 13: 2021 5:15PM -- BRARG

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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 and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: N-3233-7-3 : Oct 13 2021 5:15PM -- BRARG

- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-7-3 : Oct 13 2021 5:15PM -- BRARG

**PERMIT UNIT:** N-3233-8-3 **EXPIRATION DATE:** 11/30/2020

### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3C).

### PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-8-3: Oct 13: 2021 5:15PM -- BRARG

- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-8-3: Oct 13: 2021 5:15PM -- BRARG

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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 and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT
Location: 920 WOODLAND AVE, MODESTO, CA 95351
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- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-8-3 : Oct 13 2021 5:15PM -- BRARG

**PERMIT UNIT:** N-3233-9-3 **EXPIRATION DATE:** 11/30/2020

### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3D).

### PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-9-3: Oct 13: 2021 5:15PM -- BRARG

- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-9-3: Oct 13: 2021 5:15PM -- BRARG

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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 and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-9-3 : Oct 13 2021 5:15PM -- BRARG

- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12-month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-9-3 : Oct 13 2021 5:15PM -- BRARG

PERMIT UNIT: N-3233-10-3 EXPIRATION DATE: 11/30/2020

### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3E).

## PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-10-3: Oct 13 2021 5:15PM -- BRARG

- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-10-3: Oct 13 2021 5:15PM -- BRARG

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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 and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-10-3 : Oct 13 2021 5:15PM -- BRARG

- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12 month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-10-3 : Oct 13 2021 5:15PM -- BRARG

**PERMIT UNIT:** N-3233-11-3 **EXPIRATION DATE:** 11/30/2020

### **EQUIPMENT DESCRIPTION:**

11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3F).

### PERMIT UNIT REQUIREMENTS

- 1. The unit shall be fueled solely with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
- 2. The combined start-up and shutdown duration of this unit shall not exceed 2 hours during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- 3. The combined start-up and shutdown duration for permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 2010 hours during any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
- 4. The NOx emissions during steady state operation shall not exceed 5 ppmvd @15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 5. The NOx emissions during start-up and shutdown periods shall not exceed 9.48 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 6. The CO emissions during steady state operation shall not exceed 13 ppmvd @ 15% O2, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 7. The CO emissions during start-up and shutdown periods shall not exceed 14.3 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 8. The VOC emissions during steady state operation shall not exceed 20 ppmvd @ 15% O2 as methane, over a 3 hour averaging period. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit
- 9. The VOC emissions during start-up and shutdown periods shall not exceed 7.53 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 10. The SOx emissions shall not exceed 0.4 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 11. The PM10 emissions shall not exceed 1.3 lb/hr. The filterable portion of the PM10 shall not exceed 0.02 g/bhp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit
- 12. The ammonia emissions shall not exceed 10 ppmvd @ 15% O2 over a 24 hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
- 13. The combined NOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 12,049 pounds during the first calendar quarter, 12,049 pounds during the second calendar quarter, 12,049 pounds during the third calendar quarter and 12,050 pounds during the fourth calendar quarter. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-11-3: Oct 13 2021 5:15PM -- BRARG

- 14. The combined CO emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 74,864 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
- 15. The combined VOC emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 13,920 pounds during the first calendar quarter, 13,920 pounds during the second calendar quarter, 13,920 pounds during the third calendar quarter and 13,921 pounds during the fourth calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit
- 16. The combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 49,993 lb/yr, based on a 12-month rolling total. The start-up and shutdown period contributions shall be determined utilizing the number of start-up and shutdown hours in combination with the start-up and shutdown period emission limit. The steady-state contribution shall be determined utilizing the fuel usage during the previous 12 months and the VOC emission concentration determined during the most recent District approved source test or representative testing allowed by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
- 17. The combined SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 9,600 pounds during any rolling 12-month period. The SOx emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 18. The combined PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall not exceed 7,800 pounds during the first calendar quarter, 7,800 pounds during the second calendar quarter, 7,800 pounds during the third calendar quarter and 7,800 pounds during the fourth calendar quarter. The PM10 emissions shall be determined by applying the hourly emission limit of these permits to the combined number of operating hours of these engines. [District Rule 2201] Federally Enforceable Through Title V Permit
- 19. Source testing to determine compliance with the NOx, CO, VOC, PM10 and ammonia emission limits of this permit shall be conducted not less than once every 12 months. The filterable and condensible PM10 emissions shall be determined separately. Representative testing, as specified in Rule 4702, may be allowed provided prior written District authorization is received. [District Rule 4702] Federally Enforceable Through Title V Permit
- 20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
- 21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
- 22. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702] Federally Enforceable Through Title V Permit
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC, NOx, and CO concentrations shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702] Federally Enforceable Through Title V Permit
- 24. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100, SOx CARB Method 100, PM10 EPA Methods 201A and 202, CARB Method 5, or EPA Methods 5 and 202, and ammonia BAAQMD Method ST-1B. Alternative source test methods are allowed provided prior written District authorization is received. [District Rules 1081, 2201 and 4702] Federally Enforceable Through Title V Permit

- 25. The owner or operator shall certify, maintain, operate, and quality-assure a continuous emission monitor system (CEMS) on each engine exhaust that continuously measures and records the exhaust gas NOx, CO, and O2 concentrations. Continuous emissions monitors shall be capable of monitoring emissions during normal operating conditions and during startups and shutdowns. [District Rules 1080 and 4702 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 26. NOx, CO and O2 CEMS shall meet the requirements in 40 CFR Part 60, Appendix F and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 27. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 28. The CEMS data shall be reduced to hourly averages as specified in 40 CFR Part 60 section 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 29. In accordance with 40 CFR Part 60, Appendix F, each CEMS shall be audited at least once each calendar quarter. The audit shall be either a Relative Accuracy Test Audit (RATA) or a Cylinder Gas Audit (CGA). A RATA must be conducted at least once every four calendar quarters. A CGA may be conducted in three of four calendar quarters, but in no more than three quarters in succession. The audit reports and the quarterly compliance reports shall be submitted to the District. [District Rule 1080 and 40 CFR 60.8 and 40 CFR 60.13] Federally Enforceable Through Title V Permit
- 30. The owner or operator shall perform a RATA for NOx, CO and O2 as specified by 40 CFR Part 60, Appendix F 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 monitoring equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 31. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 32. The facility shall maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS 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 CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 33. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period that a continuous monitoring system or monitoring device was inoperative. [District Rules 1080 and 2201 and 40 CFR 60.7(f)] Federally Enforceable Through Title V Permit
- 34. The owner or operator shall submit a written report of CEMS operations for each calendar quarter to the District. 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 emissions (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEMS was inoperative, 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 and 40 CFR 60.7(c) and (d)] Federally Enforceable Through Title V Permit
- 35. A record of the combined quarterly and annual NOx, VOC and PM10 emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a calendar quarter and a rolling 12-month basis and shall be updated monthly. [District Rule 2201] 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.

Facility Name: MODESTO IRRIGATION DISTRICT N-3233-11-3 : Oct 13 2021 5:15PM -- BRARG

- 36. A record of the combined VOC emissions from units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11, based on a 12 month rolling total, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 37. A record of the combined annual CO and SOx emissions from permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 38. A record of the combined number of hours of operation of permit units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated month. [District Rule 2201] Federally Enforceable Through Title V Permit
- 39. A record of the daily number of hours of start-up and shutdown time for this unit shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
- 40. A record of the combined number of hours of start-up and shutdown time for units N-3233-6, N-3233-7, N-3233-8, N-3233-9, N-3233-10 and N-3233-11 shall be kept. The records shall be kept on a rolling 12-month basis and shall be updated monthly. [District Rule 2201] Federally Enforceable Through Title V Permit
- 41. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. The permittee may request a change to the I&M plan at any time. [District Rule 4702] Federally Enforceable Through Title V Permit
- 42. The permittee shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, compliance source test results, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
- 43. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-11-3 : Oct 13 2021 5:15PM -- BRARG

**PERMIT UNIT:** N-3233-13-1 **EXPIRATION DATE:** 11/30/2020

### **EQUIPMENT DESCRIPTION:**

62 BHP CUMMINS CFP33-F25 (OR EQUIVALENT) TIER 2 CERTIFIED DIESEL FIRED IC ENGINE POWERING AN EMERGENCY FIRE 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. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 3. 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]
- 4. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702] Federally Enforceable Through Title V Permit
- 5. The emissions from this engine shall not exceed any of the following limits: 4.24 g-NOx/bhp-hr, 0.82 g-CO/bhp-hr, 0.18 g-VOC/bhp-hr or 0.0053 g-SOx/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 6. The emissions from this engine shall not exceed 0.17 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 7. 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 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 8. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per calendar year. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 9. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] 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, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. 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 and 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.

Facility Name: MODESTO IRRIGATION DISTRICT Location: 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-13-1: Oct 13 2021 5:15PM -- BRARG 11. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

**PERMIT UNIT:** N-3233-14-2 **EXPIRATION DATE: 11/30/2020** 

### **EQUIPMENT DESCRIPTION:**

480 BHP CATERPILLAR MODEL C9 ATAAC TIER 3 CERTIFIED DIESEL FIRED IC ENGINE POWERING AN **EMERGENCY GENERATOR** 

## PERMIT UNIT REQUIREMENTS

- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
- This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- 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]
- This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702] Federally Enforceable Through Title V Permit
- The emissions from this engine shall not exceed any of the following limits: 4.11 g-NOx/bhp-hr, 0.25 g-CO/bhp-hr, 0.06 g-VOC/bhp-hr or 0.0058 g-SOx/bhp-hr. [District Rule 2201 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]] Federally Enforceable Through Title V Permit
- The PM10 emissions from this engine shall not exceed 0.033 g/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]] Federally Enforceable Through Title V Permit
- 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 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
- Operation of this engine shall not exceed 12 hours for any purpose in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
- This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 41 hours per calendar year. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]] Federally Enforceable Through Title V Permit
- 10. 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
- 11. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] 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.

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 N-3233-14-2 : Oct 13 2021 5:15PM -- BRARG

- 12. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
- 13. 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, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. 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 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]] Federally Enforceable Through Title V Permit
- 14. 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 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]] Federally Enforceable Through Title V Permit

Facility Name: MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE, MODESTO, CA 95351 Location: N-3233-14-2 : Oct 13 2021 5:15PM -- BRARG

## ATTACHMENT C

**Detailed Summary List of Facility Permits** 

Detailed Facility Report
For Facility=3233 and excluding Deleted Permits
Sorted by Facility Name and Permit Number
FAC # N 3233

9/14/21 5:01 pm

MODESTO IRRIGATION DISTRICT 920 WOODLAND AVE MODESTO, CA 95351		FAC # STATUS: TELEPHONE:		N 3233 A 2095267616		TYPE: <b>TitleV</b> EXPIRE ON: 11/30/2020 TOXIC ID: <b>51162</b> AREA: 5 / INSP. DATE: 01/22	
PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
N-3233-1-8	49,900 kW	3020-08A G	1	12,254.00	12,254.00	A	ONE (1) GENERAL ELECTRIC LM5000 PD AERO-DERIVATIVE 460 MMBTU/HR (HHV) GAS TURBINE ENGINE WITH STEAM INJECTION, OXIDIZATION CATALYST, AMMONIA INJECTION, AND SELECTIVE CATALYTIC REDUCTION SERVING A 49.9 MW ELECTRICAL GENERATOR
N-3233-4-6	87,000 kW electrical generation	3020-08B G	1	12,254.00	12,254.00	Α	87 MW LOAD FOLLOWING POWER PLANT SERVED BY A 466 MMBTU/HR GENERAL ELECTRIC LM6000 SPRINT MODEL NATURAL GAS FIRED TURBINE WITH WATER INJECTION, A 234 MMBTU/HR JOHN ZINK LDRW-LE OR EQUIVALENT DUCT BURNER, A HEAT RECOVERY STEAM GENERATOR, A CONDENSING STEAM TURBINE, AN INLET AIR COOLING/FILTERING SYSTEM, A SELECTIVE CATALYTIC REDUCTION SYSTEM, AN OXIDATION CATALYST AND A LUBE OIL COALESCER
N-3233-5-4	No applicable fee	999-99	1	0.00	0.00	Α	27,000 GALLON PER MINUTE COOLING TOWER WITH A HIGH EFFICIENCY DRIFT ELIMINATOR
N-3233-6-3	8,440 kW	3020-08A D	1	3,674.00	3,674.00	А	11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3A).
N-3233-7-3	8,440 kW	3020-08A D	1	3,674.00	3,674.00	А	11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3B).
N-3233-8-3	8,440 kW	3020-08A D	1	3,674.00	3,674.00	А	11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3C).
N-3233-9-3	8,440 kW	3020-08A D	1	3,674.00	3,674.00	А	11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3D).

9/14/21 5:01 pm

Detailed Facility Report

For Facility=3233 and excluding Deleted Permits

Sorted by Facility Name and Permit Number

FEE FEE PERMIT

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
N-3233-10-3	8,440 kW	3020-08A D	1	3,674.00	3,674.00	A	11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3E).
N-3233-11-3	8,440 kW	3020-08A D	1	3,674.00	3,674.00	Α	11,667 BHP NATURAL GAS FIRED WARTSILA 20V34SG IC ENGINE POWERING AN 8.44 MW ELECTRICAL GENERATOR. THE ENGINE IS EQUIPPED WITH A TURBOCHARGER, AN INTERCOOLER, A SELECTIVE CATALYTIC REDUCTION SYSTEM WITH AMMONIA INJECTION AND AN OXIDATION CATALYST (MODESTO IRRIGATION DISTRICT DESIGNATION 3F).
N-3233-13-1	62 BHP	3020-10 A	1	98.00	98.00	Α	62 BHP CUMMINS CFP33-F25 (OR EQUIVALENT) TIER 2 CERTIFIED DIESEL FIRED IC ENGINE POWERING AN EMERGENCY FIRE PUMP.
N-3233-14-2	480 BHP	3020-10 D	1	577.00	577.00	Α	480 BHP CATERPILLAR MODEL C9 ATAAC TIER 3 CERTIFIED DIESEL FIRED IC ENGINE POWERING AN EMERGENCY GENERATOR

Number of Facilities Reported: 1