

**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY**

**AIR PROGRAM**

**33 N. Stone Avenue, Suite 700 • Tucson, AZ 85701 • Phone (520) 724-7400**

**AIR QUALITY PERMIT**

(As require by Title 17.12, Article II, Pima County Code)

**TMC HEALTHCARE  
5301 E. GRANT ROAD  
TUCSON, AZ 85712**

*This air quality permit does not relieve applicant of responsibility for meeting all air pollution regulations*

**THIS PERMIT ISSUED SUBJECT TO THE SPECIFIC AND GENERAL CONDITIONS  
IDENTIFIED IN THIS PERMIT**

**PERMIT NUMBER 971**

**PERMIT CLASS II**

**ISSUED: April 2, 2016**

**EXPIRES: April 1, 2021**



SIGNATURE

***Rupesh Patel, Air Permit Manager, PDEQ***

TITLE

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## PERMIT SUMMARY

Tucson Medical Center (TMC) is a healthcare facility located at 5301 E. Grant Road, Tucson, Arizona that provides medical services to the community. The facility operates under the following industrial classification: General Medical and Surgical Hospitals – SIC code 8062 (NAICS 621999)

TMC operates 10 emergency generators, and 3 boilers in support of its operations.

The boilers are dual fired boilers having the ability to be fired by either natural gas or distillate fuel oil. The boilers are primarily fired by natural gas. The permit places operating restrictions on the allowable fuels and requires the submittal of a significant revision to fire fuels that do not meet the permit conditions or should the boilers be operated as oil fired boilers in accordance with NESHAP Subpart JJJJJ.

TMC operates 4 high capacity (> 600 hp) emergency generators (13, 840 hp combined) and 6 smaller capacity (< 600 hp) emergency generators. The permit places operating restrictions on the emergency generators to operate no more than 100 hours per year for maintenance and readiness testing to avoid triggering federally applicable requirements. Operation during true emergencies is not limited by the permit.

The facility is a true minor source of criteria pollutants, and an area source of HAPS. The facility is located in an area that is designated as attainment for all pollutants.

The following table summarizes the potential to emit of the source. These emission values are a taken from the information contained in the renewal application and from standard emission factors in AP-42 Sections 1.3, 3.3, and 3.4. The emission values are for information purposes only and are not intended to be enforceable limits.

Facility-Wide Potential Emissions of Pollutants <sup>1</sup> (tons/yr)										
Conventional or Criteria Air Pollutant								NSPS	HAPs	
PM <sub>2.5</sub>	PM <sub>10</sub>	PM	NOx	VOC	CO	SO <sub>2</sub>	Lead	N/A	Total	Single
2.03	2.99	4.73	35.99	1.74	18.90	90.04	ND <sup>2</sup>	N/A	0.33	< 0.33

<sup>1</sup> Emergency generator engine PTE is calculated on limited operation (100 hour/year). Boiler PTE is calculated on limited operation firing fuel oil (5100 hrs.) or natural gas. Fuel oil is restricted to < 0.5% wt. S.

<sup>2</sup> No Data. These emissions are insignificant.

## **SPECIFIC CONDITIONS**

[References are to Title 17 of the Pima County Code [PCC] unless otherwise noted]

### **SECTION 1**

#### **GENERAL APPLICABILITY**

##### **I. Statutory Authority**

The Specific and General Conditions contained in this air quality permit apply to the operations, equipment, and sources provided in the permit application and shall not relieve the Permittee or its subcontractors from compliance with all local, county, state, and federal laws, statutes, and codes or from obtaining permits for other operations or activities when required. [PCC 17.12.010.D & PCC 17.12.165]

##### **II. Permitted Facility Sources**

The Specific Conditions apply to the following source categories, affected facilities, equipment, emission sources, installations, activities and operations at the facility. Section 6 of this permit contains the specific conditions related to the applicability of facility sources.

- A. Facility-Wide Operations
- B. Fossil Fuel Fired Industrial and Commercial Equipment (Boilers and Heaters)
- C. Non-NSPS / Non-NESHAP Generators
- D. NSPS for Compression Ignition 'CI' Internal Combustion Engines 'ICE'

##### **III. Permit Sections**

The Specific Conditions have been organized into the following permit sections:

Section 1 – General Applicability (This Section)

Section 2 – Facility-Wide Operations

Section 3 – Fossil Fuel Fired Industrial and Commercial Equipment (Boilers and Heaters)

Section 4 – Non-NSPS / Non-NESHAP Generators

Section 5 – NSPS for Stationary Compression Ignition 'CI' Internal Combustion Engines 'ICE'

Section 6 – Specific Applicability

##### **IV. Applicability of more than one standard**

If more than one emission limit or emission standard in this permit is applicable to the same source, the more stringent standard or emission limit shall apply. [PCC 17.16.010.B]

**[Locally Enforceable Condition]**

## SECTION 2

### FACILITY-WIDE OPERATIONS

In accordance with I.A of Section 6, the provisions of this Section apply to facility-wide operations and all sources of air contaminants. All provisions in this Section are locally enforceable unless otherwise noted.

[PCC 17.16.010.B]

#### **I. EMISSION LIMITS AND STANDARDS**

##### **A. Operating Restrictions**

The Permittee shall comply with the limitations in I.A of Sections 3 through 5 of this permit.

[PCC 17.12.350.A.3.a]

**[Material Permit Condition]**

##### **B. General Control Standards**

1. The Permittee shall not cause or permit the planning, construction, installation, erection, modification, use or operation of an emission source which will cause or contribute to a violation of a performance standard in Title 17 of the Pima County Code. [PCC 17.12.020 & PCC 17.16.020.A]

2. The Permittee shall keep complete records of the materials used as fuel for any stationary or portable source of air pollution which burns any material except natural gas. [PCC 17.16.010.C]

3. The Permittee is prohibited from firing high sulfur oil in any stationary or portable source without submitting a revision, as provided in V of this Section, demonstrating to the satisfaction of the Control Officer, both that sufficient quantities of low sulfur oil are not available for use by the Permittee, and that the Permittee has adequate facilities and contingency plans to ensure that the sulfur dioxide ambient air quality standards will not be violated. For purposes of this paragraph "high sulfur oil" means oil containing 0.90 percent or more by weight of sulfur. Notwithstanding the prohibition to use high sulfur oil, the Specific Conditions contained in this permit may prescribe lower fuel sulfur limits for specific stationary or portable sources.

[PCC 17.12.185.A.2 & PCC 17.12.350.A.3.a]

**[Material Permit Condition]**

4. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the owner or operator thereof to a degree that will adequately reduce or eliminate the discharge of air pollution to adjoining property. [PCC 17.16.020.B]

##### **C. Materials Handling Standards**

1. The Permittee shall not transport or store VOC's without taking necessary and feasible measures to control evaporation, leakage, or other discharge into the atmosphere. [PCC 17.16.400.A]

2. Materials including solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [PCC 17.16.430.F]

#### D. Odor Limiting Standard

The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution. [PCC 17.16.030]

#### E. Opacity Limit

Except as otherwise specified in the Specific Conditions of this permit and the Table in Attachment 4, the opacity of all plumes and effluents from all point, non-point, or fugitive emission sources shall not exceed 20% as determined by EPA Reference Method 9, Appendix A, 40 CFR Part 60.

[PCC 17.12.140.C.3, PCC 17.16.040, PCC 17.16.050.B, & PCC 17.16.130.B.1]

***[This condition is Federally Enforceable when opacity is above 40%]***

1. Opacities (optical densities), as measured in accordance with Method 9, of an effluent shall be measured by a certified visible emissions evaluator with his natural eyes, approximately following the procedures which were used during his certification, or by an approved and precisely calibrated in-stack monitoring instrument. [PCC 17.16.040.A.1]
2. A violation of an opacity standard shall be determined by measuring and recording a set of consecutive, instantaneous opacities, and calculating the arithmetic average of the measurements within the set unless otherwise noted in this permit. The measurements shall be made at approximately fifteen-second intervals for a period of at least six minutes, and the number of required measurements shall be as specified in Attachment 4. Sets need not be consecutive in time, and in no case shall two sets overlap. If the average opacity of the set of instantaneous measurements exceeds the maximum allowed by any rule, this shall constitute a violation. [PCC 17.16.040.A.2]
3. The use of air or other gaseous diluents solely for the purpose of achieving compliance with an opacity standard is prohibited. [PCC 17.16.040.A.3]
4. When the presence of uncombined water is the only reason for failure of a source to otherwise meet the requirements of I.E and I.F of this Section, I.E and I.F of this Section shall not apply. [PCC 17.16.040.B]

#### F. Visibility Limiting Standard

[PCC 17.16.050]

1. The Permittee shall not cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne.
2. The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken.
  - a. I.F.2 of this Section shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source.
  - b. I.F.2 of this Section shall not apply to the generation of airborne particulate matter from undisturbed land.

### **G. Asbestos Requirements for Demolition and Renovation Activities**

The Permittee shall not allow or commence demolition or renovation of any NESHAP facility, as defined in 40 CFR Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants – Asbestos, without first obtaining an activity permit from the Control Officer. Should this stationary source, pursuant to 40 CFR Part 61, Subpart M, become subject to asbestos regulations when conducting any renovation or demolition at this premises, then the Permittee or operator shall submit proper notification as described in 40 CFR Part 61, Subpart M and shall comply with all other applicable requirements of Subpart M. The Permittee shall keep a record of all relevant paperwork on file.

[PCC 17.12.475 & 40 CFR 61, Subpart M]

## **II. MONITORING REQUIREMENTS**

[PCC 17.12.185.A.3]

### **A. Visible Emissions (VE)**

If at any time or while conducting an opacity check required by the Specific Conditions of this permit the Permittee sees any plume or effluent from a facility source, that, on an instantaneous basis, appears to exceed 20% opacity, or diffuse beyond the property boundary line, the Permittee shall investigate the source of the emissions and, if required, take corrective action. If the plume persists or the activity or operation which is causing or contributing to the emissions cannot be corrected or halted, the Permittee shall, when practicable, make a visual determination of the opacity in accordance with EPA reference Method 9 using a certified visible emissions evaluator. If the VE determination exceeds the applicable opacity limit, or the emissions diffuse beyond the property boundary line, the Permittee shall report this as an excess emission in accordance with IV.A of this Section.

[PCC 17.16.040]

### **B. Additional Monitoring Requirement**

Except as otherwise contained in the Specific Conditions of this permit, additional monitoring for compliance with the facility-wide standards in I.A through G of this Section shall not be necessary. The Control Officer may ask the Permittee to conduct additional monitoring if the Control Officer has reasonable cause to believe a violation of the standards has been committed.

## **III. RECORDKEEPING REQUIREMENTS**

[PCC 17.12.185.A.4.a]

### **A. Monitoring Records**

The Permittee shall maintain records of required monitoring information. Records shall include at a minimum:

[PCC 17.12.184.A.4.a]

1. The date, time, and the place defined in the permit requiring the measurement, sampling, inspection, or observation;
2. The name of the person conducting the measurement, sampling, inspection or observation;
3. The particular piece of equipment, process, or area being measured, sampled, inspected or observed including a description of the operating conditions and monitoring techniques or methods used as applicable; and,
4. The results of the measurement, sampling, inspection or observation including any discrepancy or excess emissions. If there are any monitoring discrepancies or excess emissions, the record shall include the corrective action taken.



**B. Record Retention**

[PCC 17.12.185.4.b]

The Permittee shall retain records of all required monitoring and support information for at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, and copies of all reports required by the permit.

**C. Recordkeeping for Compliance Determinations**

The Permittee shall retain a copy of the permit onsite including all required monitoring records and support information for review by the Control Officer. In addition, all equipment identified in the permit equipment list shall be marked with a unique, clearly visible, and accessible ID to identify the piece of equipment. The Permittee shall be considered in compliance by demonstrating that sufficient information on the equipment and facility operations is periodically collected, recorded, and maintained to assure that the compliance status of any specific condition of this permit can be readily ascertained at any time.

[PCC 17.12.080, & PCC 17.24.020.A]

**IV. REPORTING REQUIREMENTS**

[PCC 17.12.185.A.5]

**A. Excess Emissions Reporting**

The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit in accordance with I.B of the General Conditions.

[PCC 17.12.040]

**B. Emissions Inventory Reporting:**

[PCC 17.12.320]

When requested by the Control Officer, the Permittee shall complete and submit an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Control Officer makes request and inventory form available, whichever occurs later, and shall include emission information for the previous calendar year. The questionnaire shall be on a form provided by or approved by the Control Officer and shall include the information required by PCC 17.12.320.

**C. Certification of Truth Accuracy and Completeness**

[PCC 17.12.165.H]

All reports required by this permit shall contain certification by a responsible official of truth, accuracy and completeness. The certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

**V. FACILITY CHANGES**

**A. Permit Revision Application**

Before installing additional emission sources, modifying existing emission sources, switching fuels, or changing the method of operation at the facility such that the changes increase actual emissions more than 10% of the major source threshold for any conventional pollutant, the Permittee shall, if applicable, apply for the appropriate revision in accordance with PCC 17.12.235, PCC 17.12.255, or PCC 17.12.260.

[PCC 17.12.240.C.3, PCC 17.12.235, PCC 17.12.255, PCC 17.12.260]

**B. Notification**

For facility changes that do not require revision, the Permittee may make the changes if written notice is provided to the Control Officer in advance of the changes in accordance with PCC 17.12.240.C

[PCC 17.12.240.C]

### C. Recordkeeping Log

The Permittee shall maintain a log of other facility changes that do not require revision or notice in accordance with PCC 17.12.240.B. [PCC17.12.240.B]

## VI. TESTING REQUIREMENTS

[PCC 17.12.045, PCC 17.12.050 & PCC 17.20.010]

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. Unless otherwise noted, the following test methods and standards are from 40 CFR Part 60, Appendix A or incorporated by reference in 40 CFR §60.17.

- A. When required, EPA Test Method 9 shall be used to monitor compliance with the opacity standards identified in this Permit. [PCC 17.12.045.B]
- B. When required, the Permittee may submit an alternate and equivalent test method(s) that is listed in 40 CFR Subpart 60, Appendix A, to the Control Officer in a test plan, for approval by the Control Officer.
- C. Documentation, such as invoices or statements from the fuel supplier, showing that the fuel sulfur content is below the applicable standards shall be an acceptable means to demonstrate compliance with fuel sulfur limitations identified in this Permit. If otherwise required or when requested by the Control Officer, the fuel sulfur content of fuels shall be determined using ASTM D-129-91 or an equivalent for liquid fuels, and ASTM D0172-90 or an equivalent for gaseous fuels.
- D. Except as provided in this Section, should the Permittee desire to test or be required to test to demonstrate compliance with the standards contained in this permit, the Permittee shall contact the Control Officer for test methods and guidelines.

### SECTION 3

#### FOSSIL FUEL FIRED INDUSTRIAL AND COMMERCIAL EQUIPMENT (BOILERS AND HEATERS)

In accordance with I.B and C of Section 6 of this permit, the provisions of this Section are applicable to boilers, heaters, and other fuel fired equipment identified on the equipment list in Table 1 of Attachment 3. In addition to the following provisions, the general provisions of 40 CFR Part 60 and 63, Subpart A apply to affected steam generating units (boilers) as applicable. All Provisions of this section are locally enforceable unless otherwise noted. [PCC 17.16.010.B]

#### **I. EMISSION LIMITATIONS AND STANDARDS** [PCC 17.12.185.A.2]

##### **A. Fuel Limitations**

The Permittee shall burn only the following fuels in each boiler, heater, or other fuel fired equipment listed in Table 1 of Attachment 2, subject to the following limitations: [PCC 17.12.350.A.3.a]  
**[Material Permit Conditions]**

##### **1. Natural Gas**

- a. There are no operating hours or fuel limitations for equipment when burning natural gas. For the purpose of this provision, *Natural gas* means: A naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835; or a mixture of hydrocarbons that maintains a gaseous state at ISO conditions (*i.e.*, a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals), additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or propane or propane-derived synthetic natural gas. *Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure C<sub>3</sub>H<sub>8</sub>. [40 CFR 63.11237]
- b. The Permittee shall not co-fire fuel oil and natural gas simultaneously in any dual fired boiler unless complying with each provision in I.A.2.a through c of this Section. [40 CFR 63.11223(a)]

##### **2. Fuel Oil**

- a. The Permittee shall not fire a volume of fuel oil in excess of the yearly volume allowed, or in excess of the annual capacity factor identified in Table 1 of Attachment 2.
- b. The Permittee shall not burn fuel oil that contains greater than 0.5 weight percent sulfur (5000 ppm<sub>mass</sub>) in each boiler identified in Attachment 2. For the purpose of this provision distillate fuels meeting the specifications for Number 1 and Number 2 fuel oils per ASTM D-396, or diesel fuel oils Numbers 1-D and 2-D per ASTM D-975 shall be considered to comply with this requirement. [40 CFR 60.42c(d), & 40 CFR 63.11210(e)]

- c. The Permittee shall only burn liquid fuels in dual fired boiler(s) during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. For the purpose of this provision, the periodic testing on liquid fuel shall not exceed a combined total of 48 hours during any calendar year. A “period of gas curtailment or supply interruption” means a period of time during which the supply of gaseous fuel to an affected boiler is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

[40 CFR 63.11195(e) & 40 CFR 63.11237]

## **B. Opacity Limit**

The opacity of all plumes and effluents from equipment listed in Table 1 of Attachment 2 shall not exceed 20% as determined by EPA Reference Method 9, Appendix A, 40 CFR Part 60.

[PCC 17.16.040, PCC 17.16.130.B]

## **II. MONITORING AND RECORDKEEPING REQUIREMENTS**

[PCC 17.12.185.A.3]

### **A. Natural Gas Consumption**

For each NSPS affected steam generating unit (boiler) listed in Table 1 of Attachment 2 that fires natural gas the Permittee shall determine and record the total monthly amount of natural gas combusted (delivered) in the boiler, each calendar month. The volume of natural gas consumption shall be measured directly from the flow meter upstream of the boiler.

[40 CFR 60.48c(g)]

**[Federally Enforceable Condition]**

### **B. Fuel Oil Consumption**

For each boiler listed in Table 2 of Attachment 2 designed to accommodate fuel oil, the Permittee shall monitor and keep records of the fuel oil supplier certifications, the monthly fuel oil use, and the hours fired using fuel oil. For dual fired boilers that operate as a gas fired unit, the Permittee shall keep additional records on the purpose for firing fuel oil (i.e. gas curtailment, gas supply interruption, startup, or periodic testing on liquid fuel) to demonstrate compliance with I.A.2.c of this Section.

[40 CFR 60.48(g), 40 CFR 63.11237 & 40 CFR 63.11195]

**[Federally Enforceable Condition]**

### **C. Annual Capacity Factor**

The Permittee shall monitor and record the monthly volume of fuel oil used and the annual capacity factor of equipment subject to a fuel oil limitation for compliance with I.A.2.a of this Section. If the equipment does not have a means to meter or measure the volume of fuel oil delivered, the fuel oil usage, in gallons, shall be calculated and recorded using the maximum firing rate of the equipment multiplied by the hours operated while burning fuel oil, divided by 0.137 MMBtu/gallon of fuel oil. For the purpose of this provision, the annual capacity factor means the ratio between the actual heat input to equipment from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to equipment from all fuels had the equipment been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity.

#### **D. Opacity**

The Permittee shall conduct a visible emissions check on the exhaust stack of equipment designed to accommodate fuel oil at least once during startup and each weekly period when the equipment fires fuel oil. The Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required).

### **III. REPORTING REQUIREMENTS**

[PCC 17.12.185.A.5]

Follow the reporting requirements in IV.A through C of Section 2.

### **IV. TESTING REQUIREMENTS**

[PCC 17.12.045, PCC 17.12.050 & PCC 17.20.010]

- A. Follow the testing requirements in VI of Section 2 of this permit.
- B. Documentation, such as invoices or statements from the fuel supplier, showing that the fuel sulfur content is below the applicable standards shall be an acceptable means to demonstrate compliance with fuel sulfur limitations identified in this Section. If otherwise required or when requested by the Control Officer, the fuel sulfur content of fuels shall be determined using ASTM D-129-91 or an equivalent for liquid fuels, and ASTM D0172-90 or an equivalent for gaseous fuels.

## SECTION 4

### NON-NSPS / NON-NESHAP GENERATORS

In accordance with I.D, of Section 6 of this permit, the provisions in this Section apply to generators listed in Table 2 of Attachment 2. All provisions of this Section are locally enforceable unless otherwise noted.

#### **I. EMISSION LIMITATIONS AND STANDARDS**

[PCC 17.12.185.A.2 & PCC 17.12.190.B]

##### **A. Hour Limitation**

The Permittee shall not operate the generator(s) for more than the number of hours per year allowed in Table 2 of Attachment 2 on a rolling twelve (12) month total basis. [PCC 17.12.350.A.3.a]

**[Material Permit Condition]**

##### **B. Fuel Limitation**

The Permittee shall burn only the specified fuel(s) allowed for each generator in Table 2 of Attachment 2. The Permittee shall only fire fuel with sulfur content less than 0.90% by weight. [PCC 17.16.340.F]

**[Material Permit Condition]**

##### **C. Opacity Limit**

Generators shall comply with the facility-wide opacity limit in I.E of Section 2. In addition, the Permittee shall not cause or permit to be emitted into the atmosphere from any rotating stationary rotating machinery (generators) smoke for any period greater than ten consecutive seconds which exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [PCC 17.16.130.B & PCC 17.16.340.E]

#### **II. MONITORING & RECORDKEEPING REQUIREMENTS**

[PCC 17.12.185.A.3.d]

##### **A. Hour limitation**

For each generator identified as having an hour limitation in Table 1 of Attachment 2, the Permittee shall record the monthly operating hours and recalculate a rolling twelve (12) month total within 10 calendar days of the end of the month.

##### **B. Fuel Limitation**

In order to demonstrate compliance with the fuel limitation required in I.B of this Section, the Permittee shall maintain records of fuel supplier specifications which verify the sulfur content of the fuel, piped and/or as delivered.

##### **C. Opacity Limit**

The Permittee shall conduct a visible emissions check on the exhaust stack of each generator at least monthly if run during the month. For the purposes of this Section, a visible emission check is verification that abnormal emissions are not present at the generator stack. The Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required). No quarterly visible emissions checks are required for generators that only fire natural gas.

#### **III. REPORTING AND TESTING REQUIREMENTS**

Comply with the reporting and testing requirements in V and VI. of Section 2 of this permit.

## SECTION 5

### NSPS FOR STATIONARY COMPRESSION IGNITION 'CI' INTERNAL COMBUSTION ENGINES 'ICE'

In accordance with I.E, of Section 6 of this permit, the provisions in this Section apply to CI ICE listed in Tables 3 and 3a of Attachment 2. The General Provisions of 40 CFR Part 60, §60.1 through §19 apply to applicable CI ICE sources as indicated in Table 8 of 40 CFR Part 60, Subpart III. All provisions of this Section are Federally Enforceable unless otherwise noted.

#### **I. EMISSION LIMITATIONS AND STANDARDS**

[PCC 17.12.185.A.2]

##### **A. Hour Limitation**

The Permittee shall not operate the generator(s) for more than the number of hours per year specified in the permit equipment list on a rolling twelve (12) month total basis.

[PCC 17.12.350.A.3.a]

**[Material Permit Condition]**

##### **B. Operational Limitations**

[40 CFR 60.4203, 40 CFR 4205(b) & 40 CFR 60.4202(a)]

###### 1. Emissions Standards

- a. New CI ICE subject to this Section must be certified by the manufacturer at or below the applicable emission standards and shall continue to meet them for the certified emissions life of the engine.
- b. Modified or reconstructed CI ICE subject to this Section shall be certified by the entity that conducts the modification or reconstruction (via the appropriate testing according to 40 CFR 60.4212, if appropriate). This certification shall state that emissions will be at or below the applicable emission standards and the unit shall continue to meet them for the useful life of the engine.
- c. The applicable emission standards and the certified emissions life of the engine(s) is identified in the equipment list in Table 3a of Attachment 2.
- d. The Permittee must operate and maintain applicable units that achieve the emission standards as required in I.B.1.c of this Section according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine.

[40 CFR 60.4206]

###### 2. Opacity

- a. Except for constant-speed engines, opacity shall not exceed:

[40 CFR 60.4202(a)(1) & (a)(2), 40 CFR 89.113 & 40 CFR 1039.105]

  1. 20 percent during the acceleration mode;
  2. 15 percent during the lugging mode; and
  3. 50 percent during the peaks in either the acceleration or lugging modes.

- b. CI ICE subject to this Section shall comply with the facility-wide opacity limit in I.E of Section 2 of this permit. In addition, the Permittee shall not cause or permit to be emitted into the atmosphere from any rotating stationary rotating machinery (generators) smoke for any period greater than ten consecutive seconds which exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.

[PCC 17.16.040 & 17.16.340.E]

**[Locally Enforceable Condition]**

### **C. Fuel Requirements**

Beginning October 1, 2010, stationary CI ICE subject to this Section that use diesel fuel must purchase diesel fuel that meets the following requirements on a per-gallon basis:

[40 CFR 60.4207(b) & 40 CFR 80.510(b)]

- a. Sulfur content: 15 ppm maximum;
- b. Cetane index or aromatic content, as follows:
- i. A minimum cetane index of 40; or
- ii. A maximum aromatic content of 35 volume percent.

### **D. Installation Restrictions**

[40 CFR 60.4208]

1. After December 31, 2008, the Permittee may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year. [40 CFR 60.4208(a)]
2. After December 31, 2009, the Permittee may not install stationary CI ICE with a maximum engine power of less than 25 HP (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year. [40 CFR 60.4208(b)]
3. The requirements of I.D.1 and 2 of this Section do not apply to stationary CI ICE that have been modified or reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. This provision does not extend to imported units which shall be treated as new sources. [40 CFR 4208(g) & (h)]

### **E. Emergency Designation**

The Permittee must operate the emergency stationary ICE according to the requirements in paragraphs I.E.1 through I.E.3 of this Section. In order for the engine to be considered an emergency stationary ICE, 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 I.E.1 through I.E.3 of this Section, is prohibited. If the Permittee does not operate the engine according to the requirements in paragraphs I.E.1 through I.E.3 of this Section, the engine will not be considered an emergency engine under this Section and will need to meet all requirements for non-emergency engines. [40 CFR 60.4211(f)]

1. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]
2. The Permittee may operate the subject emergency stationary ICE for any combination of the purposes specified in I.E.2.a through I.E.2.c of this Section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed in I.E.3 of this Section counts as part of the 100 per calendar year allowed by this paragraph I.E.2. [40 CFR 60.4211(f)(2)]



- a. The subject emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Control Officer for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 CFR 60.4211(f)(2)(i)]
  - b. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [40 CFR 60.4211(f)(2)(ii)]
  - c. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. [40 CFR 63.6640(f)(2)(iii)]
3. The Permittee may operate the subject emergency stationary ICE up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing and emergency demand response provided in paragraph I.E.2 of this Section. Except as provided in paragraph I.E.3.a of this Section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4211(f)(3)]
- a. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [40 CFR 60.4211(f)(3)(i)]
    - i. The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
    - ii. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
    - iii. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
    - iv. The power is provided only to the facility itself or to support the local transmission and distribution system.
    - v. The Permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the Permittee.

## F. Compliance

[40 CFR 60.4211]

1. The Permittee must operate and maintain the applicable stationary CI ICE and control device (if applicable) according to the manufacturer's emission-related written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. In addition, the Permittee may only change those settings that are permitted by the manufacturer. [40 CFR 60.4211(a)]
2. With respect to 2007 model year and later stationary CI ICE subject to this Section, the Permittee shall demonstrate compliance with the emission standards specified in Table 3a of Attachment 2 by purchasing an engine certified to those standards of the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications. [40 CFR 60.4211(c)]

## II. MONITORING REQUIREMENTS

[PCC 17.12.185.A.3.d]

### A. Hour limitation

For each generator identified as having an hour limitation in Table 3 of Attachment 2, the Permittee shall record the monthly operating hours and recalculate a rolling twelve (12) month total within 10 calendar days of the end of the month. [PCC 17.12.185.A.3.d]

### B. Hour Meter Installation

The Permittee of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines must install a non-resettable hour meter on each applicable stationary CI ICE prior to startup of each engine. [40 CFR 60.4209(a)]

### C. Diesel Particulate Filter

If the Permittee owns or operates a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]

### D. Opacity

1. Opacity levels in I.B.2.a of this Section are to be measured and calculated as set forth in 40 CFR part 86, subpart I. Notwithstanding the provisions of 40 CFR Part 86, subpart I, two-cylinder nonroad engines may be tested using an exhaust muffler that is representative of exhaust mufflers used with the engines in use. [40 CFR 89.113(b)]
2. The following engines are exempt from the requirements in II.D.1 above of this Section: [40 CFR 89.113 (c)(1) & (3)]
  - a. Single-cylinder engines;
  - b. Constant-speed engines.
3. The Permittee shall conduct a visible emissions check on the exhaust stack of each generator at least monthly if run during the month. For the purposes of this Section, a visible emission check is verification that abnormal emissions are not present at the generator stack. The Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required). [PCC 17.12.185.A.3.d]

**[Locally Enforceable Condition]**

### III. RECORDKEEPING REQUIREMENTS

[PCC 17.12.185.A.4]

#### A. Operating Hours

The Permittee shall maintain a record of the rolling twelve (12) month operating hour total for each engine with an operating hour limitation identified in the equipment list.

#### B. Emergency and Non-Emergency Service - Times of Operation

[40 CFR 60.4214(b)]

Starting with the model years in the following table, if the emergency stationary ICE does not meet the standards applicable to a non-emergency unit for the same model year and horsepower, the Permittee 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 Permittee must also record the time of operation of the engine and the reason the engine was in operation during that time.

Engine Power	Model Year
$25 \leq \text{HP} < 75$	2013
$75 \leq \text{HP} < 175$	2012
$\text{HP} \geq 175$	2011

#### C. Opacity

1. The Permittee shall keep all records generated to show compliance with the opacity level measurement requirements in II.D.1 of this Section (if required).
2. The Permittee shall retain records of visible emissions checks/observations in II.D.3 of this Section. The Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required).

[PCC 17.12.185.A.3.d]

**[Locally Enforceable Condition]**

#### D. Diesel Particulate Filter

If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the Permittee must keep records of any corrective action taken after the backpressure monitor has notified the operator that the high backpressure limit of the engine is approached.

[40 CFR 60.4214(c)]

#### E. Diesel Fuel Recordkeeping

The Permittee shall maintain records that verify compliance with the diesel fuel requirements in I.C of this Section.

[PCC 17.12.185.4]

### IV. REPORTING REQUIREMENTS

[40 CFR 60.4214(a)(1) & PCC 17.12.185.A.5]

The Permittee shall report to the Control Officer any emissions in excess of the limits established by this Section in accordance with I.B of the General Conditions of this Permit.

[PCC 17.12.185.A.5 & PCC 17.12.040]

## V. TESTING REQUIREMENTS

[PCC 17.12.045, PCC 17.12.050 & PCC 17.20.010]

- A. Comply with the testing requirements in VI of Section 2 of this permit.
- B. Engine Performance Testing

Should the Permittee elect to or be required to conduct performance testing to demonstrate compliance with the applicable standards in this Section, the Permittee shall do so in accordance with 40 CFR 60.4212.

## SECTION 6

### SPECIFIC APPLICABILITY PROVISIONS

#### I. Permitted Facility Sources

The Specific Conditions in this permit apply to the following source categories, affected facilities, equipment, emission sources, installations, activities and operations at the facility.

##### A. Facility-Wide Operations

Except as provided in subsection III of this Section, the provisions in Section 2 of this permit apply to facility-wide operations and to all sources of air contaminants operating at the facility, to include the following: Operating Restrictions, general control standards, materials handling standards, odor limiting standard, opacity limit, and visibility limiting standards. In addition to the General Conditions of this permit, Section 2 of this permit contains specific monitoring, recordkeeping, reporting, facility change, and testing requirements that apply to all sources covered by this permit.

[PCC 17.16.010., PCC 17.16.020 thru 050, 17.16.400.A, & PCC 17.16.430.F]

**[Locally Enforceable Conditions]**

##### B. Fossil-Fuel Fired Industrial and Commercial Equipment (Boilers and Heaters)

1. The specific conditions in Section 3 of this permit apply to industrial and commercial installations which are less than seventy-three megawatts capacity (two hundred fifty million British thermal units per hour); but in the aggregate on any premises are rated at greater than five hundred thousand British thermal units per hour (0.146 megawatts); and in which fuel is burned for the primary purpose of producing steam, hot water, hot air or other liquids, gases or solids and in the course of doing so the products of combustion do not come into direct contact with process materials.

2. Operating Restrictions

[PCC 17.12.350.A.3.a]

**[Material Permit Conditions]**

a. Applicable steam generating units (boilers) covered by this permit and identified in Table 1 of Attachment 2 that comply with Section 3 of this permit shall be considered to be compliant with the applicable requirements in 40 CFR 60, Subpart Dc and PCC 17.16.165.

[40 CFR 60.42c(d), 60.43c(e)(4), & 40 CFR 60.48(g) & PCC 17.16.165]

b. Should the Permittee desire to fire fuels in a boiler covered by this permit that do not meet the fuel limitations in Section 3 of this permit, the Permittee shall submit a significant revision in accordance with V.A of Section 2 of this permit.

[40 CFR 60.43c(e)(1), 40 CFR 63.1194(d), 40 CFR 63.11201(a), & Table 2, to NESHAP Subpart JJJJJJ]

##### C. NSPS for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60, Subpart Dc – New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units

[PCC 17.16.490.A.5]

**[Federally Enforceable Conditions]**

1. Except as provided in 40 CFR 60.40c(d), (e), (f), and (g), NSPS Subpart Dc applies to each to each steam generating unit (boiler) for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than 2.9 MW (10 MMBtu/h).

[40 CFR 60.40c(a)]

**D. Non-NSPS / Non-NESHAP Generators**

The specific conditions in Section 4 of this permit apply to generators that are not subject to the NSPS standards in 40 CFR Part 60, Subpart IIII or the NESHAP standards in 40 CFR Part 63, Subpart ZZZZ. [PCC 17.16.340]

**E. New Source Performance Standards (NSPS) for Stationary Internal Combustion Engines ‘ICE’**

40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE) [PCC 17.16.490.A.81]  
**[Federally Enforceable Conditions]**

- 1. Applicable to manufacturers, owners and operators of stationary CI ICE and other persons as specified below. For the purpose of I.E of this Section, the date that construction commences is the date the engine is ordered by the owner or operator. [40 CFR 60.4200(a)]
  - a. Manufacturers of stationary CI ICE with a displacement less than 30 liters per cylinder, where the model year is: [40 CFR 60.4200(a)(1)]
    - i. 2007 or later, for engines that are not fire pump engines.
  - b. Owners and Operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are: [40 CFR 60.4200(a)(2)]
    - i. Manufactured after April 1, 2006, and are not fire pump engines.
  - c. Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005. [40 CFR 60.4200(a)(3)]
  - d. The provisions of I.D of Section 5 of this permit are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005. [40 CFR 60.4200(a)(4)]

**II. Local (New and Existing) Stationary Source Performance Standards**

Local performance standards apply to the following facilities or operations: Fossil fuel fired industrial and commercial equipment, each stationary internal combustion engine, and each unclassified source. [PCC 17.12.185.A.2, PCC 17.16.165, PCC 17.16.340, & PCC 17.16.430]  
**[Locally Enforceable Conditions]**

**III. Exempt Sources**

The Specific Conditions contained in this air quality permit shall not apply to motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations, unless their operation without a permit would result in a violation of the Act. [PCC 17.12.140.C.3]

## GENERAL CONDITIONS

### I. COMPLIANCE WITH PERMIT CONDITIONS

[PCC 17.12.185.A.7.a & b]

- A. The Permittee shall comply with all conditions of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B. The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. The report shall be in 2 parts as specified below: [PCC 17.12.185.A.5 & PCC 17.12.040]
  - 1. Notification by telephone or facsimile within 24 hours of the time the Permittee first learned of the occurrence of excess emission that includes all available information from 17.12.040.B. The number to report excess emissions is **520-724-7400**. The facsimile number is **520-838-7432**.
  - 2. Detailed written notification by submission of an excess emissions report within 72 hours of the notification under I.B.1 above. **Send to PDEQ 33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701.**
- C. 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 this permit.
- D. The permit does not convey any property rights of any sort, or any exclusive privilege to the permit holder.
- E. The Permittee shall pay fees to the Control Officer pursuant to PCC 17.12.520. [PCC 17.12.185.A.9 & PCC 17.12.520]

### II. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[PCC 17.12.185.A.7.c]

The permit may be revised, reopened, revoked and reissued, or terminated for cause pursuant to PCC 17.12.270. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

### III. DUTY TO PROVIDE INFORMATION

[PCC 17.12.165.G & PCC 17.12.185.A.7.e]

- A. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records to the Control Officer along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

### IV. SEVERABILITY CLAUSE

[PCC 17.12.185.A.6]

The provisions of this permit are severable. If any provision of this permit is held invalid, the remainder of this permit shall not be affected thereby.

## ATTACHMENT 1

### APPLICABLE REGULATIONS

#### **40 CFR, Part 60 Standards of Performance for New Stationary Sources**

Subpart A	General Provisions
Subpart Dc	NSPS for Small Industrial-Commercial-Institutional Steam Generating Units
Subpart IIII	NSPS for Stationary Compression Ignition Internal Combustion Engines
Appendix A	Test Methods

#### **Pima County Code Title 17, Chapter 17.12 – Permits and Permit Revisions**

##### **Article I – General Provisions**

17.12.010	Statutory Authority
17.12.020	Planning, Constructing, or Operating Without a Permit
17.12.040	Reporting requirements
17.12.045	Test methods and procedures
17.12.050	Performance tests
17.12.080	Permit Display or Posting

##### **Article II – Individual Source Permits**

17.12.165	Permit application processing procedures for Class II and Class III permits
17.12.185	Permit contents for Class II and Class III permits
17.12.235	Facility Changes that require a permit revision
17.12.240	Procedures for certain changes that do not require a permit revision Class II or Class III
17.12.255	Minor Permit Revision
17.12.260	Significant Permit Revision
17.12.270	Permit Reopenings – Revocation and reissuance – Termination
17.12.350	Material permit condition

##### **Article VI – Individual Source Permits**

17.12.520	Fees related to Class II and Class III permits
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#### **Pima County Code Title 17, Chapter 17.16 – Emission Limiting Standards**

##### **Article I – General Provisions**

17.16.010	Local rules and standards; Applicability of more than one standard
17.16.020	Noncompliance with applicable standards
17.16.030	Odor limiting standards

##### **Article II – Visible Emission Standards**

17.16.040	Standards and applicability (includes NESHAP)
17.16.050	Visibility limiting standard



**Article IV – New and Existing Stationary Source Performance Standards**

- 17.16.130            Applicability
- 17.16.165           Standards of performance for fossil-fuel fired industrial commercial equipment
- 17.16.340           Standards of performance for stationary rotating machinery
- 17.16.430           Standards of performance for unclassified sources

**Pima County Code Title 17, Chapter 17.20 – Emissions Source Testing and Monitoring**

- 17.20.010           Source sampling, monitoring and testing
- 17.20.040           Concealment of emissions

**Pima County Code Title 17, Chapter 17.24:**

- 17.24.020           Recordkeeping for compliance determination

**ATTACHMENT 2**

**EQUIPMENT LIST**

**Table 1 – Boilers & Heaters (ref. Sections 3)**

Equipment Number	Description	MFR/Model Model	Serial Number/ Unique ID	Maximum Rated Capacity	Date of MFR	Date Installed	Allowable Fuels and Limits		Applicability <sup>1</sup>	
							Natural Gas	Fuel Oil (incl. Diesel)	NSPS Subpart Dc	NESHAP Subpart JJJJJ
							(MMcf, hrs, CF)	(Gal; hrs; CF; % S)		
01	Boiler Dual Fired	Warga W2-4000P	NB 001	22.5 MMBtu/hr	1999	2000	Unlimited	837,591 gal/yr.; or 5100 hrs; or CF < 0.58; and S ≤ 0.5% wt.	Yes	Existing Gas Fired
02	Boiler Dual Fired	Warga W2-4000P	NB 002	22.5 MMBtu/hr	2000	2000	Unlimited	837,591 gal/yr.; or 5100 hrs; or CF < 0.58; and S ≤ 0.5% wt.	Yes	Existing Gas Fired
03	Boiler Dual Fired	Warga W2-4000P	NB 003	22.5 MMBtu/hr	2000	2000	Unlimited	837,591 gal/yr.; or 5100 hrs; or CF < 0.58; and S ≤ 0.5% wt.	Yes	Existing Gas Fired

MMcf – million cubic feet of Natural Gas (approximately equivalent to 1030 MMBtu for natural gas, 2500 MMBtu for Propane, 3200 MMBtu for Butane)

CF – Capacity Factor = the ratio of the actual heat input to a boiler to the potential amount if operated at the maximum capacity over an equivalent period of time (12 consecutive months or 8760 hours for annual limit).

For example: If boiler 01 fired 300,000 gallons of fuel oil in 12 months.  $CF_{\text{Fuel Oil}} = \frac{300,000 \text{ gallons} \times 0.137 \text{ MMBtu per gallon of fuel oil}}{22.5 \text{ MMBtu/hr} \times 8760 \text{ hours}} = \frac{41100 \text{ MMBtu}}{197100 \text{ MMBtu}} = 0.209$

With hours operated and no fuel metering.  $CF_{\text{Fuel Oil}} = \frac{1827 \text{ hours}}{8760 \text{ hours}} = 0.209$

<sup>1</sup> The Permittee must submit a significant permit revision and meet applicable NESHAP subpart JJJJJ work practices (tune-ups), notification, and reporting requirements for boilers that switch to fuel oil use and become subject to the Subpart JJJJJ in the oil firing subcategory as defined in 40 CFR 63.11237.

**Table 2 – Generators / Non-NSPS / Non-NESHAP (ref. Section 3):**

Equipment Number	Description	MFR	Model	Serial Number/ Unique ID	Maximum Rated Capacity	Run Hour Limitation <sup>1</sup>	Fuels Used	Date of MFR	Date Installed
04	Emergency Generator Peppi's	Cummins	6CTA8.3-G2	46659543	235 hp	100 hours	Diesel	2005	2006
05	Emergency Generator #5 TOI	Caterpillar	92A04373-5	5YF01389	201 hp	100 hours	Diesel	1991	1992
06	Emergency Generator #6 PV	John Deer	UV549	1738	101 hp	100 hours	Propane	1969	1983
07	Emergency Generator #7 SW	Kohler	T04039	T411721	80 hp	100 hours	Diesel	1991	1992
08	Emergency Generator #8 NE	JD/Kohler	T04039D	4039DF001	20 hp	100 hours	Diesel	1992	1993
09	Emergency Generatory #2 Surgery North	Caterpillar	3412PC	38S2306 AR# 6N3757	755 hp	100 hours	Diesel	1978	1979
10	Emergency Generator #3 Surgery South	Caterpillar	3412PC	38S2304 AR# 6N3757	755 hp	100 hours	Diesel	1978	1979

<sup>1</sup>The run hours are limited to maintenance testing and readiness checks. There is no limit on hours of operation during true emergencies. Should the generators operate or become contractually obligated for more than 15 hours a year for the purposes of emergency demand response and to stabilize voltage deviations of 5 percent or greater below standard voltage, or should the above generators operate for non-emergency purposes to supply power as part of financial arrangement with another entity, the generators will be subject to NESHAP Subpart ZZZZ and the Permittee is required to submit a significant revision in accordance with V.A of Section 2 of the permit.

**Table 3 – Generators / ICE subject to NSPS (ref. Section 4):**

Equipment Number	Description	MFR	Model	Serial Number/ Unique ID	Maximum Rated Capacity	Run Hour Limitation <sup>1</sup>	Fuels Used	Date of MFR	Date Installed
11	Emergency Generator P-1	Caterpillar	3516B TA	PBR00539	3286 hp	100 hours	Diesel	2008	2009
12	Emergency Generator P-2	Caterpillar	3516 CHD	SBK 01227	3634 hp	100 hours	Diesel	Late 2012	March 2013
13	Emergency Generator P-3	Caterpillar	3516B TA	TBD	3634 hp	100 hours	Diesel	TBD	2013 <sup>2</sup>
14	Emergency Generator 4-1 ED	Caterpillar	3516B TA	PBR00495	3286 hp	100 hours	Diesel	2007	March 2008
15	Emergency Generator #9 CCRS	Cummins	QSB7-G3-NR3	H080204492	134 hp	100 hours	Diesel	2008	2008

<sup>1</sup> The emergency generator run hour limitations are subject to the requirements in I.E of Section 5 of the permit. <sup>2</sup> Planned for installation.

**Table 3a - Supplemental Requirements for ICE subject to NSPS (ref. Section 4):**

Equipment Number	Applicable NSPS Emission Standards	NO <sub>x</sub> (g/hp-hr)	NMHC (g/hp-hr)	NMHC+NO <sub>x</sub> (g/hp-hr)	CO (g/hp-hr)	PM (g/hp-hr)	Useful Life (term, date)
11	Post Model 2007	--	--	4.8	2.6	0.15	8,000 hours or 10 years, whichever comes first.
12	Post Model 2007	--	--	4.8	2.6	0.15	8,000 hours or 10 years, whichever comes first.
13	Post Model 2007	--	--	4.8	2.6	0.15	8,000 hours or 10 years, whichever comes first.
14	Post Model 2007	--	--	4.8	2.6	0.15	8,000 hours or 10 years, whichever comes first.
15	Post Model 2007	--	--	3.0	3.7	0.22	8,000 hours or 10 years, whichever comes first.

### ATTACHMENT 3

#### INSIGNIFICANT ACTIVITIES

The following equipment or operations have been determined by the control officer, because of their size or production rate, to be de minimus emission sources and insignificant or trivial activities in accordance with PCC 17.04.340.A.(114)

Description	Maximum Rated Capacity	Fuels Used
Landscaping, building maintenance, or janitorial services.	-	-
Gasoline storage tanks; provided such storage tanks are equipped with a submerged filling device, or acceptable equivalent, for the control of hydrocarbon emissions in accordance with PCC 17.16.230.B.	≤ 10,000 gallons	Gasoline
Diesel or Fuel Oil Storage Tanks.	≤ 40,000 gallons each	Diesel
Batch mixers.	≤ 5 cubic feet	-
Wet sand and gravel production facilities whose permanent in-plant roads are paved and cleaned to control dust. This does not include activities in emissions units which are used to crush or grind any nonmetallic minerals.	≤ 200 tons/hour	-
Hand-held or manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning of ceramic art work, precision parts, leather, metals, plastics, fiberboard, masonry, carbon, glass or wood.	-	-
Powder Coating Operations	-	-
Internal combustion (IC) engine-driven compressors, IC engine-driven electrical generator sets, and IC engine-driven water pumps used only for emergency replacement or standby service.  <i>Note: Portable or temporary IC engines or other non-road engines that operate, or are planned for operation, at a fixed location for more than 12 months are subject to stationary source permitting requirements. Portable or temporary IC located at a facility, may be required to keep records showing when the sources are transferred to or from the facility, or moved to alternate locations at the facility in order to establish that the sources are not stationary IC engines.</i>	-	-
Lab equipment used exclusively for chemical and physical analyses.	-	-
Trivial activities as provided in PCC 17.04.340.A.237 a through xx.	-	-

**ATTACHMENT 4**

**EMISSIONS DISCHARGE OPACITY LIMITING STANDARDS**

**PCC 17.16.040**

Type of Source	Instantaneous Opacity Measurements			Maximum Allowable Average Opacity, %
	Required No. (For a Set)	Excluded No. (Highest Values)	N. to Use For Averaging	
Asbestos-Containing Operation <sup>1</sup>	25	0	25	0
Cold Diesel Engines <sup>2</sup>	25	0	25	60
Loaded Diesel Engines <sup>3</sup>	26	1	25	60
Incinerators	27	2	25	20
Portland Cement Plants <sup>4</sup>	25	0	25	20
Other Sources <sup>5</sup>	25	0	25	20

<sup>1</sup> An asbestos mill, manufacturing or fabrication operation which uses asbestos as a raw material, or spraying operation which sprays materials containing more than 1% asbestos by weight.

<sup>2</sup> Applicable to the first 10 consecutive minutes after starting up a diesel engine.

<sup>3</sup> Applicable to a diesel engine being accelerated under load.

<sup>4</sup> Applicable to kiln, clinker cooler, and other process equipment.

<sup>5</sup> Any source not otherwise specifically covered within this table, unless otherwise specifically covered in this permit.