

**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR PROGRAM**

**33 North. Stone Avenue, Suite 730 • Tucson, AZ 85701 • Phone: (520) 740-3340**

**AIR QUALITY PERMIT**

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

**ISSUED TO**

**CITY OF TUCSON, WATER DEPARTMENT**

**CENTRAL AVRA VALLEY STORAGE AND  
RECOVERY PROJECT (CAVSARP)**

**13800 W. MILE WIDE ROAD  
TUCSON, AZ 85735**

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

**THIS PERMIT ISSUED SUBJECT TO THE SPECIFIC CONDITIONS AND  
ATTACHMENTS 1 2 AND 3 IDENTIFIED IN THIS PERMIT.**

PDEQ PERMIT NUMBER **1530**

PERMIT CLASS **II**

ISSUED: **September 22, 2015**

REVISED : **August 25, 2017**

EXPIRES: **September 21, 2020**



SIGNATURE

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

TITLE

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## INTRODUCTION

This air quality permit is issued to The City of Tucson, Water Department. The air quality permit applies to the facility referred to as “Central Avra Valley Storage and Recovery Project (CAVSARP).

The CAVSARP facility operates twenty-five large-capacity well pumps and fourteen boosters that are used to recover naturally treated Central Arizona Project water from the regional aquifer. Seven of the boosters and thirteen of the well pumps are fired by pipeline quality natural gas; the remainder of the engines, twelve well pumps and seven boosters are electric powered. The electric powered well pumps and boosters are not considered stationary sources under this air quality operating permit. A complete list of applicable equipment is listed in Attachment B of this permit and an equipment location plan in Attachment C of this permit.

The CAVSARP facility is located in an area that is in attainment for all criteria pollutants. The table below summarizes the potential to emit of the facility. These emission values were derived using the information contained in the renewal application dated November 7, 2014 and from standard emission factors supplied by EPA in Section 3.2 of AP-42.

The emission values are for informational purposes only and are not intended to be enforceable limits.

<b>Emissions</b>	<b>Nitrogen Oxides (NO<sub>x</sub>)</b>	<b>Carbon Monoxide (CO)</b>	<b>Volatile Organic Compounds (VOC)</b>	<b>Hazardous Air Pollutants (Combined) (HAPs)</b>	<b>Sulfur Dioxide (SO<sub>2</sub>)</b>	<b>Particulate Matter (PM)</b>
Controlled Emissions with operation of air/fuel ratio regulator and installation of catalytic oxidation unit (tons/yr)	71.8	12.2	28.0	8.40	0.14	0.018

The CAVSARP facility is an ‘area source’ of Hazardous Air Pollutants. Emissions are controlled with the operation of an air/fuel ratio regulator and the installation of a catalytic oxidation unit on each engine.

The terms and conditions of this permit are federally enforceable unless otherwise indicated.

**SPECIFIC CONDITIONS**

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

**SECTION 1**

**NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) FOR  
RECIPROCATING INTERNAL COMBUSTION ENGINES ‘RICE’  
(40 CFR PART 63, SUBPART ZZZZ)**

**I. Applicability**

- A. The provisions of this Section apply to stationary reciprocating internal combustion engines (RICE) at an area source of HAP emissions. [40 CFR 63.6585(c)]
- B. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006. [40 CFR 63.6590(a)(1)(iii)]
- C. The Permittee must comply with the applicable emission limitations and operating limitations identified in this Section no later than October 19, 2013. [40 CFR 63.6595(a)(1)]
- D. The Permittee must comply with the requirements in Table 2d of Subpart ZZZZ for the existing stationary RICE located at an area source of HAP emissions. [40 CFR 63.6603(a)]
- E. For each new or reconstructed stationary SI, the Permittee must meet the requirements by meeting the requirements of 40 CFR Part 60, Subpart JJJJ as provided in Section 2 of this permit for spark ignition engines. No further requirements apply for such engines. [40 CFR 63.6590]

**II. Emission Limitations and Standards**

- A. The Permittee must comply with the following requirements, except during periods of startup: [40 CFR 63.6603 and Table 2d to Subpart ZZZZ of Part 63]
  - 1. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; [7.a of Table 2d to Subpart ZZZZ of Part 63]
  - 2. Inspect air cleaner every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and [7.b of Table 2d to Subpart ZZZZ of Part 63]
  - 3. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. [7.c of Table 2d to Subpart ZZZZ of Part 63]
- B. The Permittee has the option to utilize an oil analysis program as described in IV.C of this Section in order to extend the specified oil change requirement in II.A.1 of this Section. [Footnote 1, Table 2d to Subpart ZZZZ of Part 63 & 40 CFR 63.6625(i)]
- C. The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than ten consecutive seconds that exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [PCC 17.12.185.A & PCC 17.16.340.E]

**[Locally Enforceable Condition]**

- D. The Permittee shall burn only natural gas for each engine listed in Attachment 2. For the purpose of this specific condition, pipeline quality natural gas shall mean natural gas that contains less than 5 grains of total sulfur per 100 scf of natural gas and a lower heating value greater than or equal to 967 Btu/ft<sup>3</sup>. [PCC 17.12.190.B]

**[Material Permit Condition]**

### III. General Compliance Requirements

- A. The Permittee must be in compliance with the emission limitations, operating limitations and other requirements in this Section at all times. [40 CFR 63.6605(a)]
- B. The Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, at all times, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this Section have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

### IV. Monitoring, Installation, Collection, Operation, and Maintenance Requirements

- A. The Permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e) & 40 CFR 63.6625(e)(3)]
- B. The Permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in II.A of this Section apply. [40 CFR 63.6625(h)]
- C. If the Permittee decides to utilize an oil analysis program in order to extend the specified oil change requirement in II.A.1 of this Section, the oil analysis must be performed at the same frequency specified for changing the oil in II.A.1 of this Section. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. [40 CFR 63.6625(j) & Table 2d to Subpart ZZZZ of Part 63]
- D. In order to demonstrate compliance with the opacity limitation in II.C of this Section, the Permittee shall conduct a visible emissions check on the exhaust stack of the engine at least quarterly if the engine is run during the quarter. For the purposes of this permit, a visible emissions check is verification that abnormal emissions are not present at the engine stack. [PCC 17.12.185.A.3.c]  
**[Locally Enforceable Condition]**
- E. If the observer sees visible emissions from the engine that, on an instantaneous basis, appears to exceed 40 percent then the Permittee shall, if practicable, take an EPA Reference Method 9 observation of the plume. If the emissions are more than the referenced limitation and standard in II.C of this Section, then this occurrence shall be recorded and reported as an excess emission and a permit deviation. [PCC 17.12.185.A.3.c]  
**[Locally Enforceable Condition]**

- F. When requested by the Control Officer, the Permittee shall perform visible emissions observations in accordance with EPA Reference Method 9, on the engine to demonstrate compliance with the opacity standard in II.C of this Section. [PCC 17.16.040]

**[Locally Enforceable Condition]**

- G. The Permittee shall be considered in compliance with the fuel limitation required in II.D of this Section by demonstrating that only the specified fuel allowed was fired in the subject stationary RICE. Such a demonstration may be made by making available to the Control Officer for his inspection, documentation, such as invoices or statements from the fuel supplier which verify the sulfur content of the fuel being piped and/or delivered. [PCC 17.12.185.A.3.c]

**[Locally Enforceable Condition]**

## V. Demonstration of Continuous Compliance with the Emission Limitations and Operating Limitations

- A. The Permittee must demonstrate continuous compliance with each emission and operating limitation and work or management practice as required in this Section according to the following specified method: [40 CFR 63.6640(a) & Table 6 to Subpart ZZZZ of Part 63]

- 1. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or [Row 9 of Table 6 to Subpart ZZZZ of Part 63]
- 2. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [Row 9 of Table 6 to Subpart ZZZZ of Part 63]

- B. The Permittee must also report each instance in which the Permittee did not meet the requirements in 40 CFR 63 general provisions to subpart ZZZZ except per 63.6645(a)(5), the following do not apply: 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b)-(e), (g) and (h). [40 CFR 63.6640(e).40 CFR 63.6645(a)(5)]

- C. For driving well pump CA-016A (new stationary RICE), deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. [40 CFR 60.6640(d)]

## VI. Reporting Requirements

- A. The Permittee must report any failure to perform the management practice on the schedule required in II.A of this Section, and the Federal, State or local law under which the risk was deemed unacceptable. [Footnote 2, Table 2d to Subpart ZZZZ of Part 63]

- B. The Permittee shall promptly notify and submit written reports to the Control Officer of any instances of excess emissions or deviations from the permit requirements in accordance with the requirements of Additional Permit Conditions of this Permit. [PCC 17.12.040 & PCC 17.12.185.A.5]

**[Locally Enforceable Condition]**

- C. The Permittee shall report to the Control Officer any daily period during which the sulfur content of the fuel being fired in the natural gas-fired engines exceeds 0.8 percent. [PCC 17.16.340.J, PCC 17.04.340.A.228 & PCC 17.12.185.A.5]

**[Locally Enforceable Condition]**

## VII. Recordkeeping Requirements

- A. The Permittee must keep the records described in paragraphs VII.A.1 through A.3 of this Section. [40 CFR 63.6655(a)]
1. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
  2. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
  3. Records of actions taken during periods of malfunction to minimize emissions in accordance with III.B of this Section, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5) & 40 CFR 63.6605(b)]
- B. The Permittee must keep the records required in V.A of this Section to show continuous compliance with each applicable emission or operating limitation. [40 CFR 63.6655(d)]
- C. The Permittee must keep records of the maintenance conducted on the existing stationary emergency RICE in order to demonstrate that the Permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the Permittee's own maintenance plan. [40 CFR 63.6655(e), 40 CFR 63.6655(e)(2) & 40 CFR 63.6655(e)(3)]
- D. The Permittee's records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a)]
- E. As specified in 40 CFR 63.10(b)(1), the Permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.6660(b)]
- F. The Permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(c)]
- G. The Permittee shall retain records of visible emissions checks/observations. 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). All records shall be maintained for five years. [PCC 17.12.185.A.4]  
**[Locally Enforceable Condition]**
- H. In order to demonstrate compliance with the fuel limitation required in II.D 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. All records shall be maintained for five years. [PCC 17.12.185.A.4]  
**[Locally Enforceable Condition]**

[The Permittee shall be considered in compliance with this recordkeeping requirement by demonstrating that each engine was fired only by natural gas. Such a demonstration may be achieved by making available for the Control Officer's inspection, documentation, such as invoices or statements from the fuel supplier, showing that only the specified fuel was purchased for use in the equipment. Alternatively, the demonstration may be made by actual inspection of the equipment showing that the specified fuel is the only fuel supply plumbed to the equipment for firing.]

**VIII. Testing Requirements**

[PCC 17.20.010]

**[Locally Enforceable Conditions]**

A. Opacity

When required by the Control Officer, the Permittee shall perform EPA Method 9 visible emissions observations on the engines identified in this Section to demonstrate compliance with the opacity standard in II.C. of this Section.

[PCC 17.12.045.B]

B. Alternative Test Method

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.

[PCC 17.12.045.D]

**SECTION 2****STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (NSPS) FOR STATIONARY SPARK IGNITION (SI) INTERNAL COMBUSTION ENGINES (ICE)****I. Applicability**

The provisions of this Section apply to manufacturers, owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in conditions I.A through D. as stated below.

- A. Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by liquefied petroleum gas (LPG), where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is: [40 CFR 4230(a)(3)]
1. On or after July 1, 2007, for engines with a maximum engine power (HP)  $\geq$  to 500 (except lean burn engines with  $500 \leq \text{HP} < 1350$ );
  2. On or after January 1, 2008, for lean burn engines with a maximum engine power,  $500 \leq (\text{HP}) < 1350$ ; or
  3. On or after July 1, 2008, for engines with a maximum engine power (HP)  $< 500$ .
- B. Owners or operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured: [40 CFR 4230(a)(4)]
1. On or after July 1, 2007, for engines with a maximum engine power (HP)  $\geq 500$  (except lean burn engines with a maximum engine power  $500 \leq (\text{HP}) < 1350$ );
  2. On or after January 1, 2008, for lean burn engines with a maximum engine power,  $500 \leq (\text{HP}) < 1350$ ; or
  3. On or after July 1, 2008, for engines with a maximum engine power (HP)  $< 500$ .
- C. Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006. [40 CFR 4230(a)(5)]
- D. The installation restrictions in conditions II.B are applicable to all owners and operators of stationary CI ICE that commence construction after June 12, 2006. [40 CFR 4230(a)(6)]

**II. Emission Limitations and Standards**

- A. *Emission Standards:* The Permittee of SI ICE that commenced construction after June 12, 2006 (date engine was ordered), or were modified or reconstructed, with the following dates of manufacture and the applicable engine class and maximum engine power, shall comply with the applicable emission limitations in NSPS, Subpart JJJJ, §60.4231 and §60.4233 as provided in the tables below:  
[40 CFR 60.4231, 40 CFR 60.4233 & Table 1 to NSPS Subpart JJJJ]

Engine Class / Fuel Type	Max. Power	On or After MFR Date	Applicable Regulations [Emission Standards]
Natural Gas or Lean Burn - LPG	HP < 500	7/1/2008	40 CFR 60.4231(d),(e) - 40 CFR 60.4233 (d),(e) [40 CFR Parts 90, 1048, 1054] [See Table 1 Below]
Natural Gas or Lean Burn - LPG	HP ≥ 500	7/1/2007	40 CFR 60.4231(d),(e) - 40 CFR 60.4233(d),(e) [40 CFR Parts 90, 1048, 1054] [See Table 1 Below]
Lean Burn Natural Gas and LPG	500 ≤ HP < 1350	1/1/2008	40 CFR 60.4231(d),(e) - 40 CFR 60.4233(d),(e) [40 CFR Parts 90, 1048, 1054] [See Table 1 Below]
Modified or Reconstructed (See Categories Below)	See above Engine Class & Power Categories	Prior to above dates	40 CFR 60.4233(f)(1-4) [See Table 1 below]

Summary of Table 1, to NSPS, Subpart JJJJ - NO <sub>x</sub> , CO, and VOC Standards (for Non-Emergency Engines, Except Gasoline and Rich Burn LPG <sup>a</sup> )					
Engine Class/ Fuel Type	Max. Power	On or After MFR Date	Emission Standards g/bhp-hr or (ppmvd @ 15%O <sub>2</sub> )		
			NO <sub>x</sub>	CO	VOC
Natural Gas; and Lean Burn - LPG	100 ≤ HP < 500	7/1/2008	2.0 (160)	4.0 (540)	1.0 (86)
		1/1/2011	1.0 (82)	2.0 (270)	0.7 (60)
Natural Gas; and Lean Burn - LPG (except lean burn 500 ≤ HP < 1350)	HP ≥ 500	7/1/2007	2.0 (160)	4.0 (540)	1.0 (86)
		7/1/2010	1.0 (82)	2.0 (270)	0.7 (60)
Lean Burn Natural Gas and LPG	500 ≤ HP < 1350	1/1/2008	2.0 (160)	4.0 (540)	1.0 (86)
		7/1/2010	1.0 (82)	2.0 (270)	0.7 (60)
Modified or Reconstructed SI ICE	See reference to applicable standards				

B. *Installation Restrictions:* The Permittee may not install stationary SI ICE that do not meet the applicable requirements in 40 CFR §60.4233 after the specified dates as follows: [40 CFR 60.4236(a)-(c)]

1. For stationary SI ICE with a maximum engine power (HP) < 500, after July 1, 2010.
2. For stationary SI ICE with a maximum engine power (HP) ≥ 500, after July 1, 2009.
3. For lean burn stationary SI ICE with a maximum power, 500 ≤ (HP) < 1350, after January 1, 2010.
4. In addition to the requirements specified in 40 CFR §60.4231 and §60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in condition II.B.1-3, after the dates specified in condition II.B.1. [40 CFR 60.4236(d)]

5. The requirements in condition II.B.1-3 do not apply to stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location. [40 CFR 60.4236(e)]

C. *Opacity:* The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than ten consecutive seconds that exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [PCC 17.12.185.A & PCC 17.16.340.E]

**[Locally Enforceable Condition]**

D. *Fuel Limitation:* The Permittee shall burn only natural gas for each engine listed in Attachment 2. For the purpose of this specific condition, pipeline quality natural gas shall mean natural gas that contains less than 5 grains of total sulfur per 100 scf of natural gas and a lower heating value greater than or equal to 967 Btu/ft<sup>3</sup>.

[PCC 17.12.190.B]

**[Material Permit Condition]**

### III. Compliance Determination

A. *Emission Standards:* If the Permittee's SI ICE must comply with the emission standards in 40 CFR 60.4233 (d) or (e), as provided in condition II.A, the Permittee must demonstrate compliance according to one of the methods specified in conditions III.A.1 and 2, as stated below: [40 CFR 60.4343(b)&(c)]

1. Purchasing an engine certified according to procedures in NSPS, Subpart JJJJ for the same model year and demonstrating compliance according to the following:

Operate and maintain the certified stationary SI ICE and control device according to the manufacturer's emission-related written instructions, the Permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The Permittee must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If the Permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the SI ICE will not be considered out of compliance. [40 CFR 60.4243(a)(1)&(b)(1)]

2. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the testing requirements in conditions IV.A and B, as applicable, and according to conditions III.A.2.a and b, as stated below: [40 CFR 60.4243(b)(2)]

a. If the SI ICE  $25 < HP \leq 500$ , or is a Modified or Reconstructed SI ICE:

The Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee must conduct an initial performance test to demonstrate compliance. [40 CFR 60.4243(b)(2)(i)]

b. If the SI ICE  $HP > 500$ :

The Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance. [40 CFR 60.4243(b)(2)(ii)]

- B. *Requirements for Modified or Reconstructed SI ICE:* If the Permittee must comply with the emission standards specified in §60.4233(f), as provided in condition II.A, the Permittee must demonstrate compliance according condition III.A.2, except that if complying according to condition III.A.2.a, the Permittee demonstrates that the non-certified engine complies with the emission standards. [40 CFR 60.4243(c)]
- C. *Allowance for Temporary use of Propane in Natural Gas SI ICE during Emergency Operations:* The Permittee may operate their stationary SI natural gas fired engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the Permittee is required to conduct a performance test to demonstrate compliance with the emission standards in condition II.A. [40 CFR 60.4243(e) & 40 CFR 60.4233]
- D. *AFR Controller Operation and Maintenance:* It is expected that air-to-fuel ratio (AFR) controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40 CFR 60.4243(e)]
- E. *Opacity:* In order to demonstrate compliance with the opacity limitation in II.C of this Section, the Permittee shall conduct a visible emissions check on the exhaust stack of the engine at least quarterly if the engine is run during the quarter. For the purposes of this permit, a visible emissions check is verification that abnormal emissions are not present at the engine stack. [PCC 17.12.185.A.3.c]  
**[Locally Enforceable Condition]**
- F. *Fuel Requirements:* The Permittee shall be considered in compliance with this recordkeeping requirement by demonstrating that each engine was fired only by natural gas. Such a demonstration may be achieved by making available for the Control Officer’s inspection, documentation, such as invoices or statements from the fuel supplier, showing that only the specified fuel was purchased for use in the equipment. Alternatively, the demonstration may be made by actual inspection of the equipment showing that the specified fuel is the only fuel supply plumbed to the equipment for firing. [PCC 17.12.185.A.3.c]  
**[Locally Enforceable Condition]**
- G. *Records of Notifications, Maintenance, and Emissions Information:* The Permittee must keep the following records: [40 CFR 60.4245(a)]
1. All notifications submitted to comply with this Section and all documentation supporting any notification.
  2. Maintenance conducted on the engine.
  3. If the stationary SI ICE is a *Certified Engine*, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060 as applicable.
  4. If the stationary SI ICE is a *Non-Certified* engine or is a certified engine operating in a non-certified manner documentation that the engine meets the emission standards. [40 CFR 60.4245(a)(4) & 40 CFR 60.4243(a)(2)]
  5. The Permittee shall retain records of visible emissions checks/observations. 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). All records shall be maintained for five years. [PCC 17.12.185.A.4]  
**[Locally Enforceable Condition]**

6. In order to demonstrate compliance with the fuel limitation required in II.D 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. All records shall be maintained for five years. [PCC 17.12.185.A.4]  
**[Locally Enforceable Condition]**

#### IV. Testing Requirements

[PCC 17.20.010]

- A. If required to conduct performance testing, the Permittee must follow the procedures in paragraphs (a) through (f) of 40 CFR 60.4244. [40 CFR 60.4244(a)]
- B. The Permittee must submit a copy of each performance test conducted in accordance with this Section within 60 days after the test has been conducted. [40 CFR 60.4245(d)]
- C. When required by the Control Officer, the Permittee shall perform EPA Method 9 visible emissions observations on the engines identified in this Section to demonstrate compliance with the opacity standard in II.C. of this Section. [PCC 17.12.045.B]  
**[Locally Enforceable Condition]**
- D. Alternative Test Method: 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. [PCC 17.12.045.D]

**SECTION 3****SUBPART ZZZZ OF PART 63**  
**APPLICABILITY OF GENERAL PROVISIONS TO SUBPART ZZZZ.**

The Permittee must comply with the following applicable general provisions:

[40 CFR 63.6665]

<b>General provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable Continuous monitoring system (CMS)	No	
§63.8(c)(1)(ii)	CMS not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

**SECTION 4****SUBPART JJJJ OF PART 60**  
**APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJJ**

The Permittee must comply with the following General Provisions in 40 CFR Part 60, Subpart JJJJ:

[40 CFR 60.4246]

<b>General provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§60.1	General applicability of the General Provisions	Yes.	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes.	
§60.4	Address	Yes.	
§60.5	Determination of construction or modification	Yes.	
§60.6	Review of Plans	Yes.	
§60.7	Notification and Recordkeeping	Yes.	Except that 60.7 only applies as specified in §60.4245.
§60.8	Performance Tests	Yes.	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

## ADDITIONAL PERMIT 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 pursuant to PCC 17.12.040.B. To report excess emissions call **520-724-7400** or fax to **520-243-7340**.
  - 2. Detailed written notification by submission of an excess emissions report within 72 hours of the notification in I.B.1 above. **Send to PDEQ 33 N. Stone Ave, Suite 730, 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 17.12.510. [PCC 17.12.185.A.9 & PCC 17.12.510]

### 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**

**Code of Federal Regulations Title 40:**

Part 60 Subpart A	Standards of Performance for New Stationary Sources (NSPS)
Part 60 Subpart JJJJ	NSPS for Stationary Spark Ignition Internal Combustion Engines
Part 63 Subpart A	National Emissions Standards for Hazardous Air Pollutants (NESHAP) General Provisions
Part 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

**Pima County Code (PCC) Title 17, Chapters:**

17.12.190	Permits containing voluntarily accepted emission limitations and standards
17.16.040	Standards and applicability (Includes NESHAP)
17.16.050	Visibility limiting standard
17.16.340	Standards of Performance for Stationary Rotating Machinery
17.20.010	Source Sampling, Monitoring, and Testing

**ATTACHMENT 2**

**NATURAL GAS FIRED EQUIPMENT LIST**

Description	Manufacturer and Model Number	Engine Serial Number	Site Location Number	Date of Manufacture	Engine Maximum Rated Horsepower <sup>1</sup>
Driving Well Pumps Subject to NESHAP - Sections 1 and 3 of Permit	Waukesha F18GLD  4 Stroke/Cycle Lean Combustion	C-14229/2	AF-031B	June 2002	298
		C-14007/1	AF-032B	Oct 2001	298
		C-14690/1	AF-034B	Sept 2003	298
		C-14134/2	AF-037B	Feb 2002	298
		C-14032/1	AF-038B	Oct 2001	298
		C-14032/3	AF-039B	April 2001	298
		C-62015/5	CA-012A	Jun 2004	384
		C-62015/6	CA-014A	Jun 2004	384
		C-62015/7	CA-015A	Jun 2004	384
		C-14560/2	CA-016A	Jan 2007	296
		C-13596/2	CA-017A	Feb 2001	296
Driving Booster Pumps Subject to NESHAP - Sections 1 and 3 of Permit	Caterpillar 3412LE  4 Stroke/Cycle Lean Combustion	6ZM00219	B-8	Jun 1999	460
		<del>6ZM00220</del>	B-9	Jun 1999	460
		6ZM00221	B-10	Jun 1999	460
		6ZM00222	B-11	Jun 1999	460
		6ZM00223	B-12	Jun 1999	460
		6ZM00224	B-13	Jun 1999	460
		6ZM00225	B-14	Jun 1999	460
Driving Well Pumps Subject to NSPS – Sections 2 and 4 of Permit	Caterpillar CG137-8  4 Stroke/Cycle Lean Combustion	WWF00290	CA-009A	April 2015	400
		WWF00289	AF040B	April 2015	400

<sup>1</sup> Maximum Horsepower as indicated on the engine name plate.

<sup>2</sup> The Engines are required to be operated (at all times) with a catalytic oxidizer that control formaldehyde emissions by at least 70%.

**ATTACHMENT 3**

**CAVSARP EQUIPMENT LOCATION PLAN**

