



DEPARTMENT OF AIR QUALITY & ENVIRONMENTAL MANAGEMENT

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**FINAL ACTION REPORT PART 70 OPERATING PERMIT
RENEWAL**

**Saguaro Power Company
Source: 393**

Public Notice: Review-Journal May 4, 2009
Public Comments: May 4, 2009 to June 2, 2009

Comments Received:
Saguaro Power Company, Inc.

Public Hearings: No public hearing was held.

Issuance date: August 10, 2009
Expiration date: August 09, 2014

Copies of comments received and responses to those comments are part of this final action report. All responders shall receive an electronic copy of this report, the final Part 70 OP (Title V), and the final TSD.

**COMMENTS RECEIVED FROM SAGUARO POWER COMPANY AND DAQEM
RESPONSE**

DAQEM received comments for the source on May 11, 2009 and the complete comments are provided. DAQEM incorporated the suggested changes as applicable. The responses are provided below:

1. All of the emission limits presented in table IV-B-1 of the draft permit were compared with corresponding limits in the Authority to Construct/Operating Permit (ATC/OP) Modification 7, Revision 2. Several values listed in the draft table are higher than the ATC/OP Modification 7, Revision 2 values. Sulfur oxide (SO_x) emissions for EUs: A01 and A02 have increased from 5.19 tons to 6.30 tons, while Hazardous Air Pollutants (HAPs) emissions for EU: A06 has increased, from 0.40 tons to 0.48 tons. Saguaro believes these changes in value may be typographical errors and wanted to point them out to the agency.

DAQEM Response:

The Authority to Construct (ATC), Modification 7, Revision 2, includes replacement of the 249 MMBtu/hr steam boiler (EU: A06) and installation of the new low-NO_x burners and CO oxidation catalyst. The replacement of the boiler is not finalized, and the source PTE for HAPs is based on ATC/OP Modification 6, Amendment 1. The SO_x emissions from turbines when burning fuel oil were calculated as follows:

$3,035 \text{ gallons/hour} * 7.13 \text{ pounds/gallon} * 0.05/100 (\% \text{ S}) * 64 \text{ pounds/pound-mol SO}_2 / 32 \text{ pounds/pound-mol S} = 21.64 \text{ pounds/hour SO}_2$
 $21.64 \text{ pounds/hour} * 480 \text{ hours/year} / 2,000 \text{ pounds/ton} = 5.19 \text{ tons/year}$

The SO_x PTE for turbines (EU: A01 and A02) did not account for SO_x emissions from the natural gas burning and these emissions are added to the annual PTE for the turbines. The corrected PTE is included in the Part 70 OP.

2. There appears to be a typographical mistake in the draft permit Section IV.B.2.p. The referenced table in this section should be Table IV-B-4, not Table IV-B-3. The fourth footnote in Table IV-B-4 states, "emission factors in the table will be used when CEMS data is not available". The same wording should be included in the Section B.2.p, since both areas (Table IV-B-4 and Section IV.B.2.p) are addressing emission factors for the Volcano boiler (EU A05). Once the language from the Table's IV-B-4 fourth footnote is incorporated into Section IV.B.2.p, BAI suggests that Section B.2.p should state the following, *The Permittee shall use emission factors presented in Table IV-B-4, for any clock hour in which a start-up/shut-down event occurs and valid CEMS data are not available.*

DAQEM Response:

The proposed language was included in the Part 70 OP.

3. Section IV.B.3.m in the draft permit requires an eight-hour rolling average be recorded for emissions from the Nebraska boiler (EU A06). CEMS monitoring is not required for the Nebraska boiler. Saguaro plans to show compliance with the emission limits for EU: A06 by performing periodic performance tests and complying with semi-annual burner efficiency tests (boiler tune-ups) as outlined in the Section IV.D, and requests that the eight-hour rolling average wording be removed from the permit.

DAQEM Response:

The proposed change was included in the Part 70 OP.

4. Table IV.B.4 changes the averaging time for determining compliance with the combustion turbine BACT limits from an 8-hour rolling average to a 4-hour rolling average. We believe that this change was made to make the averaging time consistent with the NSPS averaging time under Subpart GG for sources that choose to demonstrate compliance with the NSPS NO_x limit using a CEM. However, the NO_x limit under Subpart GG (there is no CO limit under Subpart GG) is considerably higher than the limit imposed in the permit. As you know, reducing the averaging time of the permit limit has the result of making the permit limit even more stringent. We do not believe that there is any basis for increasing the stringency of this limit at this time. As EPA stated when it issued the Subpart GG revisions in 2004, "nothing in the final rule is intended to impose new requirements for turbines constructed between 1977 and the effective date of the final rule amendments [July 8, 2004]." 69 Fed. Reg. 41351. In addition, there is also the clear statement in 40 CFR 60.334(c) that "if the owner or operator has previously submitted and received EPA, State, or local permitting authority approval of a procedure for monitoring compliance with the applicable NO_x emission limit under §60.332, that approved procedure may continue to be used." The Saguaro plant relies on its SCR to meet the NSPS limit. In addition, the DAQEM previously

approved Saguaro's use of NO_x CEMS with an 8-hour averaging period for demonstrating compliance with its NO_x limit. Because the permit NO_x limit is so much more stringent than the NSPS NO_x limit, this was also viewed as demonstrating compliance with the NSPS. Based on the language in the rule and the preamble, we do not believe that it is appropriate to increase the stringency of our NO_x and CO BACT limits based on Subpart GG. Nor do we believe that there is any other basis for doing so. Therefore, Saguaro requests that the DAQEM revise Table IV.B.4 and Section IV.C.1 to require that compliance be based on an 8-hour rolling average—i.e., return to the current permit language.

DAQEM Response:

DAQEM conducted review of 40 CFR Subpart GG and concluded that CEMS compliance demonstration with NO_x standard for turbines EU: A01 and A02 should be based on "4-hour rolling average NO_x concentration", as stated in 40 CFR 60.334(j)(iii)(A). Consequently, the permit conditions remain unchanged.

5. Section IV.C.2 in the draft permit stipulates that a CEMS system be installed on the Indeck/Volcano boiler. Saguaro would like to clarify that the CEMS for the Indeck/Volcano boiler (EU: A05) will be installed once the ATC/OP Modification 7 is implemented. Saguaro proposes the following to clarify the requirement: *Once ATC/OP Modification 7 is implemented the Permittee shall install, calibrate, maintain, operate, and certify CEMS for NO_x, CO and O₂ on the Indeck/Volcano boiler unit (EU: A05)...*

DAQEM Response:

The monitoring conditions in the Part 70 OP are derived from 393 ATC, Modification 7, Revision 2 and 393 ATC/OP Modification 6, Amendment 2. Both NSR permits have CEMS requirements for Indeck/Volcano boiler unit (EU: A05). DAQEM concludes that the present permit language is accurate.

6. Section IV.C.4 states: *The Permittee shall conduct annual relative accuracy test audits (RATA) of the CO, NO_x, NH₃ and O₂ CEMS.* The inclusion of NH₃ in this requirement is thought to be an oversight since the facility does not utilize a CEMS system for measurement of ammonia emissions. Section IV.C.6 outlines an ammonia parametric emission monitoring system (PEMS) for monitoring compliance with ammonia emission limits. Therefore, we suggest that the condition be revised to refer only to CO, NO_x, and O₂.

DAQEM Response:

The proposed language was included in the Part 70 OP.

7. Section IV.C.8 requires that: *The Permittee shall perform daily visual emissions observation by an individual trained in Method 9 to verify compliance with the opacity limit of 20 percent.* Since combustion turbines using natural gas produce no particulate matter and no discernable opacity, Saguaro would like to propose that the requirement outlined in Section IV.C.8 apply while burning diesel fuel only. Utilizing diesel fuel in combustion turbines has been known to generate emissions that are detectable during opacity observations. Saguaro believes that observing emissions during periods when

this fuel is being utilized achieves DAQEM's intent under the regulation and would require readings be taken during periods when the possibility of a high opacity could occur.

DAQEM Response:

The permit condition was revised to reflect DAQEM requirements for similar sources in Las Vegas Valley airshed. The following condition was included in the Part 70 OP (Condition IV-C-8):

The Permittee shall perform visual emissions checks each calendar quarter on a plant-wide level for each emission unit. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 19.4.1.3(a) and 40 CFR 70.6]

8. The performance testing requirements in Table IV-D-1 list methods 5 or 5A for PM₁₀ from the turbine exhaust stack. Methods 201/202 or 201A/202 were previously listed as requirements for the facility and provided essentially the same results. Saguario requests that the original test methods be listed in the table. If DAQEM requires the new method be listed, Saguario requests that a footnote be added to Table IV-D-1 that states: *An alternative method may be used if previously approved by the Control Officer.*

DAQEM Response:

The proposed change was included in the Part 70 OP.

9. Section IV.E.2.g states: *sulfur content of diesel fuel and natural gas as certified by the supplier with each fuel delivery, supplier name, and the method used to determine to sulfur of the diesel fuel.* The final "to" in the section should be replaced with "the". More substantively, since natural gas is supplied to the facility via a Southwest Gas pipeline on a continuous basis the requirement for certification per delivery is troublesome. Saguario requests that sulfur content of natural gas be verified quarterly as stated in Section IV.E.4.

DAQEM Response:

Sulfur content verification with each fuel delivery is required for diesel fuel only. The natural gas sulfur content should be verified quarterly. The permit language was revised to clarify these requirements:

Records and logs shall contain, at minimum, the following information [AQR 19.4.1.3]:

- a. *sulfur content of natural gas as certified by the supplier;*
- b. *supplier name of diesel fuel, sulfur content of diesel fuel and the method used to determine to sulfur content of the diesel fuel;*

10. It appears that the natural gas sulfur verification requirement listed in Section IV.E.3 is repeated in the second sentence of Section IV.E.4 and thus should be removed.

DAQEM Response:

Frequency of sulfur content verification for natural gas and diesel is specified in conditions IV-E-3 and IV-E-4. The permit language was revised to clarify these requirements:

- IV-E-3. Sulfur content of natural gas fuel shall be verified by the Permittee at least quarterly and verifications shall be based on reports or written data from the gas supplier, as required by 40 CFR 60. [AQR 19.4.1.3]
- IV-E-4. Sulfur content of diesel fuel shall be certified by the supplier with each fuel delivery. [AQR 19.4.1.3]

11. In the Section VII. Attachments, Saguario would like to request removal of item 1. (Nevada Revised Statutes (NRS) Chapter 445B) since Chapter 445B is not applicable, in its entirety, to the source. Saguario also requests the removal of item 3. (Clean Air Act) since the Act is not a specific applicable regulation and there are large sections of the Act that do not apply to the source. In addition, regarding Item 2. (Clark County Air Quality Regulations), Acid Rain Continuous Emissions Monitoring Section is listed as Section 20 and should be designated Section 22. Saguario also requests that the Section 20 Title: Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) have the following clarification added: "Area Source applicable regulations only".

DAQEM Response:

The regulations listed in the Section VII – Attachments of to the permit are mentioned as a reference and there is no implication that these regulations apply in their entirety to the source. Consequently, DAQEM will leave Section VII of the Part 70 OP unchanged.

12. The proposed draft permit requires that annual emissions be quantified on a rolling 12-month basis. Saguario would like the DAQEM to clarify how the rolling 12-month period is defined. Saguario proposes that a rolling block 12-month period be utilized that breaks the rolling annual average into monthly increments. New annual averages would be determined based on the previous 12 consecutive months with a new 12-month period beginning on the first day of each month. It is essential that Saguario know what the increments associated with the rolling totals are for record keeping and compliance purposes. Saguario requests that the DAQEM clarify how the rolling 12-month requirements are to be calculated so as to ensure compliance.

DAQEM Response:

DAQEM calculates a rolling 12-month total as sum of the emissions for the past 12 months calculated on the 1st of each month. This determination is consistent for other sources.

All the corrections/changes mentioned in the comments above have been incorporated in the final Part 70 OP.