

**PETITION FOR TO AMEND CONDITIONS OF
CERTIFICATION TO CONFORM TO CHANGES MADE
BY SAN JOAQUIN VALLEY AIR POLLUTION CONTROL
DISTRICT**

ELK HILLS POWER PLANT

(99-AFC-1C)

**By:
ELK HILLS POWER, LLC**

Submitted to:

CALIFORNIA ENERGY COMMISSION

November, 2007

**PETITION FOR TO AMEND CONDITIONS OF
CERTIFICATION TO CONFORM TO CHANGES MADE
BY SAN JOAQUIN VALLEY AIR POLLUTION CONTROL
DISTRICT**

ELK HILLS POWER PLANT

(99-AFC-1C)

1.0 INTRODUCTION

The California Energy Commission (CEC) Conditions of Certification currently in effect are those including the amendments/revisions approved as on March 16, 2005. Since that time a number of minor amendments have been made to the air quality conditions by the San Joaquin Valley Air Pollution Control District (SJVAPCD). These relate to SJVAPCD Rule 4703 as amended August 17, 2006, the Title V Permit to Operate issued on August 28, 2006 (which incorporates the revised PSD permit issued by EPA on January 12, 2006), the Authority to Construct issued by the San Joaquin Valley Air Pollution Control District (SJVAPCD) on January 9, 2007, and the Title V Operating Permit issued on July 24, 2007. The Rule and each of the permits are voluminous and will be provided to the Compliance Program Manager for reference upon request.

Elk Hills Power, LLC is submitting this request to make administrative changes to the Commission's Elk Hills Power Project Decision in order to ensure its conformity with these permit changes. None of the changes would relax any of the conditions previously adopted by the Commission. The aforementioned permits were compared to the CEC Conditions of Certification and the amendments/revisions approved as on March 16, 2005. Elk Hills requests changes to select CEC conditions to request deletion of obsolete conditions, and to correct some typographical errors made in the March 16, 2005 CEC amendment. In all cases, proposed new text is shown in underline font, and proposed deleted text is shown in ~~strikethrough~~ font. The reasons for the requested changes are set forth for each change or set of changes.

2.0 DESCRIPTION OF PROPOSED MODIFICATION (Sec. 1769(a)(1)(A))

Obsolete conditions which should be removed

Reason – The following conditions are relevant to construction operations and activities occurring during the initial start up and commissioning of the facility. As these activities have been completed and the facility is operating in a routine manner, these conditions are no longer applicable and, therefore, should be deleted.

~~**AQ-C1** Prior to breaking ground at the project site, the project owner shall prepare a Construction Fugitive Dust Mitigation Plan (CFDMP), which specifically:~~

- ~~identifies fugitive dust mitigation measures that will be employed for the construction of the Elk Hills Power Project and related facilities; and~~
- ~~identifies measures to limit fugitive dust emissions from construction of the project site and linear facilities. Measures that should be addressed include the following: the identification of the employee parking area(s) and surface of the parking area(s); the frequency of watering of unpaved roads and disturbed areas;~~
- ~~the application of chemical dust suppressants;~~
- ~~the use of gravel in high traffic areas;~~
- ~~the use of paved access aprons;~~
- ~~the use of posted speed limit signs;~~
- ~~the use of wheel washing areas prior to large trucks leaving the project site; and,~~
- ~~the methods that will be used to clean tracked out mud and dirt from the project site onto public roads.~~

~~**AQ-C2** The project owner shall do all of the following:~~

~~1. Ensure that all heavy earthmoving equipment has been properly maintained, including, but not limited to:~~

~~bulldozers,
backhoes,
compactors,
cranes
dump trucks
loaders,
motor graders
trenchers, and
other heavy duty construction related trucks.~~

~~2. Engines shall be:~~

~~(a) tuned to the engine manufacturer's specifications;~~

~~(b) provided with ignition retard equipment where feasible, to provide additional NOx emission reductions during construction. Feasibility shall be determined by an independent California Licensed Mechanical Engineer under the identical circumstances presented below.~~

~~3. Install oxidizing soot filters on all suitable construction equipment used either on the power plant construction site or on associated linear construction sites. Suitability is to be determined by an independent California Licensed Mechanical Engineer who will stamp and submit for approval an initial and all subsequent Suitability Reports as necessary containing at a minimum the following:~~

~~4. File an Initial Suitability Report. The initial suitability report shall be submitted to the CPM for approval sixty (60) days prior to breaking ground on the project site. It shall contain:~~

~~A list of all fuel burning, construction related equipment used;
a determination of the suitability of each piece of equipment to work appropriately with an oxidizing soot filter;~~

~~if a piece of equipment is determined to be suitable, a statement by the independent California Licensed Mechanical Engineer that the oxidizing soot filter has been installed and is functioning properly; and
if a piece of equipment is determined to be unsuitable, an explanation by the independent California Licensed Mechanical Engineer as to the cause of this determination.~~

~~5. File a Subsequent Suitability Reports as follows:~~

~~If a piece of construction related equipment is subsequently determined to be unsuitable for an oxidizing soot filter after such installation has occurred, the filter may be removed immediately.~~

~~In that event, notification must be sent to the CPM for approval containing an explanation for the change in suitability within ten (10) days.~~

~~Changes in suitability are restricted to three explanations, which must be identified in any subsequent suitability report, as shown below:~~

~~The oxidizing soot filter is reducing normal availability of the construction equipment due to increased downtime, and/or power output due to increased backpressure by 20% or more.~~

~~The oxidizing soot filter is causing or reasonably expected to cause significant damage to the construction equipment engine.~~

~~The oxidizing soot filter is causing or reasonably expected to cause a significant risk to nearby workers or the public.~~

~~**AQ-2** The project owner shall submit selective catalytic reduction, oxidation catalyst, and continuous emission monitor design details to the District at least 30 days prior to the construction of permanent foundations. [District Rule 2201]~~

~~**AQ-14** Commencing two hours after initial turbine firing, CTG exhaust emissions shall not exceed any of the following: NO_x (as NO₂) 12.2 ppmv @ 15% O₂ and CO 25 ppmv @ 15% O₂.~~

~~[District Rule 4703]~~

Reason – The SJVAPCD Rule 4703, as amended August 17, 2006, allows more than two hours for each start-up but requires an application to the SJVAPCD to grant a longer time period. The CEC Decision was already amended March 16, 2005, approving the extended cold start-up limits. Though the SJVAPCD had previously also granted Elk Hills an amendment of its ATC to allow a 6 hour period for cold starts, the amended rule nevertheless required a further application, which Elk Hills submitted. On January 17, 2007, SJVAPCD issued the final Authority to Construct / Certificate of Conformity granting the application and eliminating this condition AQ-14 since it was less stringent than the limit currently required under Rule 4703. On January 26, 2007, Elk Hills submitted an application for a conforming administrative amendment to the Title V permit. The amendment was granted on July 24, 2007. The applicable emission limits in AQ-14 are identified in AQ-15. Since the limits in AQ-15 are more stringent than AQ-14, deletion of AQ-14 for consistency with amended Rule 4703 does not relax the existing emissions limits.

~~AQ-24 At least thirty (30) days prior to the construction of permanent foundations, the project owner shall provide the District with:~~

- ~~written documentation that all necessary offsets have been acquired or~~
- ~~that~~
- ~~binding contracts to secure such offsets have been entered into.~~

~~[District Rule 2201]~~

~~AQ-32 The project owner shall notify District of the:~~

- ~~date of initiation of construction no later than 30 days after such date;~~
- ~~date of anticipated startup not more than 60 days nor less than 30 days~~
- ~~prior to such date; and~~

~~date of actual startup within fifteen (15) days after such date. [District Rule 4001]~~

~~**AQ-46** At least thirty (30) days prior to commencement of construction, the project owner shall submit to the District:~~

- ~~drift eliminator design details; and~~
- ~~vendor specific emission justification for the correction factor to be used to correlate blowdown TDS to drift TDS and the amount of drift that stays suspended in the atmosphere utilizing the equation in Condition **AQ-51**. [District Rule 2201]~~

~~**AQ-47** The project owner shall submit to the District cooling tower design details (including the cooling tower type and materials of construction) at least thirty (30) days prior to commencement of construction, and, at least ninety (90) days before the tower is to be operated. [District Rule 7012]~~

~~**AQ-65** During commissioning, emissions shall be limited to 400 lbs/hour of NO_x and 4,000 lbs/hour of CO.~~

Proposed new air quality conditions

The following conditions are in the Authority to Construct and Title V permit, but are not in the CEC Decision, and should be added to provide consistency between these documents.

AQ-TBD Duct burning must not be employed during startup or shutdown events. [SJ-99-02]

AQ-TBD Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner both on and off. [40 CFR 60 Subpart Da and District Rule 4703, 6.3.3]

Modifications to existing air quality conditions

The following conditions are in the Authority to Construct, Title V permit and CEC decision. However, the conditions in the CEC Decision need to be modified as shown below to provide consistency between these documents. The modifications as shown below do not relax the requirements and in some instances are more stringent than the existing CEC Conditions of Certification.

AQ-10 CTG and duct burner shall be fired on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compounds (as S) per 100 dry-scf of natural gas. [District Rule 2201]
Reason – The Authority to Construct and Title V permit requires the duct burner to also be fired on natural gas.

AQ-26 Compliance with the short term emission limits (lb/hr and ppmv @ 15% O₂) shall be demonstrated ~~for within 60 days of initial operation of each gas turbine engine and annually thereafter.~~ On site sampling of exhaust gasses at full load conditions by a qualified independent source test firm, in full view of District witnesses, as follows:

NO_x: ppmvd @ 15% O₂ and lb/hr;

CO: ppmvd @ 15% O₂ and lb/hr;

VOC: ppmvd @ 15% O₂ and lb/hr;

PM₁₀: lb/hr; and

ammonia: ppmvd @ 15% O₂.

Sample collection to demonstrate compliance with ammonia emission limit shall be based on three consecutive test runs of thirty minutes each. [District Rule 1081]

Reason – The project is now in operation, and the initial test has been completed. The modification shown above eliminates the portion of the condition that is irrelevant.

AQ-27 Compliance with the startup NO_x, CO, and VOC mass emission limits shall be demonstrated for one of the CTGs (S-3523-1, or -2) ~~upon initial operation and~~ at least every five ~~seven~~ years thereafter by District witnessed in situ sampling of exhaust gases by a qualified independent source test firm.

[District
Rule 1081]

Reason – The project is now in operation, the initial test has been completed, and the modification shown above eliminates the portion of the condition that is irrelevant. In addition, the change from seven to five years is more stringent and is consistent with the Authority to Construct and Title V permit that requires sampling every five years.

~~**AQ-30** Source test plans for initial and seven-year source tests shall include: a method for measuring the VOC/CO surrogate relationship that will be used to demonstrate compliance with VOC lb/hr, lb/day, and lb/twelve month rolling emission limits. [District Rule 2201]~~

*Reason – This condition is not required pursuant to District Rule 2201 and it is not in the Authority to Construct or the Title V permit. The initial compliance testing performed in 2003 and subsequent compliance testing reported non-detect for VOC and, therefore, a surrogate relationship could not be established. Due to the low VOC emissions from the subject equipment as based on multiple emission measurements, the VOC/CO surrogate relationship is not technically feasible. Annual source testing, as required under **AQ-26**, is the basis for determining compliance with the applicable VOC limits and is the method for compliance determination that is consistent with the Authority to Construct and the Title V permit.*

AQ-33 The project owner shall maintain hourly records of NO_x, CO, and ammonia emission concentrations (ppmv @ 15% O₂), and hourly, daily, and twelve month rolling average records of NO_x and CO emissions. ~~Compliance~~

~~with the hourly, daily, and twelve-month rolling average VOC emission limits shall be demonstrated by the CO CEM data and the VOC/CO relationship determined by annual CO and VOC source tests. [District Rule 2201]~~

Reason – The method for demonstrating compliance by a VOC/CO relationship is not required pursuant to District Rule 2201 and it is not in the Authority to Construct or the Title V permit. The initial compliance testing performed in 2003 and subsequent compliance testing reported non-detect for VOC and, therefore, a surrogate VOC/CO relationship could not be established. Annual source testing, as required under AQ-26, is the basis for determining compliance with the applicable VOC limits. AQ-29 states that the test results shall be submitted to the District and AQ-35 requires the owner to maintain records of emission measurements. Therefore, deleting the above text will not relax the existing requirements.

~~**AQ-44** The project owner shall submit an application to comply with Rule 2540 – Acid Rain Program twenty four (24) months before the unit commences operation. [District Rule 2540] The project owner shall operate in compliance with all requirements of the Acid Rain program, as specified in the Title V permit. [40 CFR 72]~~

Reason – The project is now in operation and the requirement to comply with the applicable Acid Rain program aspects is part of the Title V permit. The modification shown above eliminates the portion of the condition that is irrelevant.

AQ-58 NO_x emissions shall not exceed 7.24.4 g/hp-hr. [District Rule 2201].

Reason – This modification is more stringent and is consistent with the Authority to Construct and Title V permit.

AQ-61 The engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of