

PROPOSED

COVERED SOURCE PERMIT (CSP) NO. 0240-01-C MINOR MOD REVIEW

Facility: Kahe Generating Station
Located at: Waianae, Oahu
UTM: Zone 4, 590.1 km east, 2362.3 km north

Applicant: Hawaiian Electric Company, Inc. (HECO)

Responsible Official: Mr. Thomas C. Simmons
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Background:

The permittee submitted a request on December 4, 2003 and July 2, 2004 to clarify certain permit conditions relating to the heat input rate and the hour limitation for NO_x (as NO₂) emissions during the start-up of boiler unit no. 6. The requested clarifications do not increase any air pollutant emissions. Since the request involved a change to an emission averaging period and revised monitoring of hours for NO_x emissions, a minor modification would be applicable. The minor modification application was submitted on August 25, 2004 with a \$200.00 fee. Revision to the application also was submitted on September 28, 2004.

The heat input rate of 433.5 MMBtu/hr would be monitored for compliance as a rolling three-hour average. Currently, the heat input rate limit is on an instantaneous basis and does not account for operational flexibility around the limit, so requiring a three-hour average would alleviate this problem. In addition, the NO_x emission rate is already a three-hour average and applying a heat input rate also with a three-hour average would be consistent; the heat input rate and NO_x emission limit are mathematically correlated so that emissions are below the significant level of NO_x (40 TPY).

Operating hours for NO_x emissions during start-up would be monitored once the boiler's ignitor/burner is lighted until the boiler operates at base load. The monitoring excludes the time when the boiler is not combusting fuel. The permittee requested clarification on a "NO_x start-up period" for monitoring hours of NO_x emissions so as not to confuse "start-up" of the boiler, which can be defined in Part 61, Subpart A - General Provisions. Conservatively, the existing condition limiting hours of operation for NO_x emissions includes *all* the hours of a start-up. The revised language would not restrict unit "start-up" hours, but clarify the monitoring to include *only* those hours of operation when the boiler is combusting fuel during a start-up. The emission limit for the NO_x start-up period is less than or equal to 0.30 lb/MMBtu (Note that NSPS Subpart D requires a limit of 0.30 lb/MMBtu). The 0.23 lb/MMBtu will still be maintained for normal operation. The of 0.30 lb/MMBtu is omitted from the revised language since Special Condition No. C.1.e already states the emission rate limit during start-up; in addition, should the emission rate of 0.30 lb/ MMBtu be exceeded during start-up, the "NO_x start-up hours" would still be counted.

PROPOSED

Equipment:

Unit No. 6, 142 MW Boiler, Babcock and Wilcox fired on Fuel Oil No. 6, started on Diesel No. 2 or propane

Air Pollution Controls:

Low NO_x burners.

Applicable Requirements:

Hawaii Administrative Rules (HAR) Chapter 11-59 and Chapter 11-60.1
PSD, NSPS Subpart D, CDS, BACT

See Covered Source Permit Review dated July 26, 2002 for more detailed description.

Consolidated Emissions Reporting Rule (CERR) replaces NED
MACT for boilers pending promulgation

Non-Applicable Requirements:

NESHAP, CAM

See Covered Source Permit Review dated July 26, 2002 for more detailed description.

Insignificant Activities:

No new insignificant activities for this permit amendment. See Covered Source Permit Review dated July 26, 2002 for list of insignificant activities.

Alternate Operating Scenarios:

No new alternating operating scenarios proposed for this permit amendment. See Covered Source Permit Review dated July 26, 2002 for further information.

Project Emissions:

Since there were no physical/operational changes to boiler unit no. 6 or to the facility, and no proposed emission increases of any pertinent air pollutant, projects emissions remain the same. See Covered Source Permit Review dated July 26, 2002 for complete tables showing emissions for criteria and hazardous air pollutants.

Air Quality Assessment:

No significant modification are proposed for the facility. As such, no air quality assessment is necessary.

PROPOSED

Other Issues/Conditions:

1. The permittee will be submitting a monitoring plan.
2. Special Condition C.1.b.i. defines a "NO_x start-up period" and does not supersede the federal definition of "start-up." CFR Part 61, Subpart A - General provisions, define "start-up" as the setting in operation of an affected facility for any purpose.
3. Revisions to conditions in Ramseyer format is attached.

Conclusion and Recommendation:

Request for amending the permit only involves clarification of permit conditions relating to heat input rate and hours of operation of NO_x emissions during start-up. There are no physical or operational changes to the facility that would trigger a significant modification. As such, issuance of the administrative permit amendment is recommended after EPA review. No public comment is required for a minor modification.

Reviewer: Carl Ibaan
Date: September 29, 2004