DOCKETED

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Appendix 5.1F
BACT

Evaluation of Best Available Control Technology

To evaluate BACT for the proposed turbines, the guidelines for large simple-cycle gas turbines (> 50 MW) as delineated in the District, state, and federal BACT listings were reviewed. The relevant BACT determinations for this analysis are shown in Tables 5.1F-1 and 5.1F-2.

Table 5.1F-1 BACT Data for SIMPLE Cycle Gas Turbines (CARB)

Pollutant	BACT	Typical Technology
Nitrogen oxides (NO_x)	2.5 - 5 ppm dry @ 15% O2, 1 or 3 hr avg	1. SCR + DLN, low NOx burners (HRSG) or, 2. SCR + water or steam injection, low NOx burners (HRSG)
Sulfur dioxide (SO_2)	Natural gas fuel	PUC regulated gas
Carbon monoxide (CO)	3 - 6 ppm dry @ 15% O2, 1 or 3 hr avg	Catalytic oxidation
VOC	2 ppm dry @ 15% O2	Catalytic oxidation
PM10/2.5	Natural gas fuel	PUC regulated gas

Ref: CARB Power Plant Guidance for BACT, July 1999.

Ref: CARB, Report to the Legislature-Gas-Fired Power Plant NOx Emission Controls and Related Environmental Impacts, Table II-3, May 2004

Table 5.1F-2 Air District BACT Data for simple Cycle Gas Turbines

Pollutant	BACT	Typical Technology
Nitrogen oxides (NO_x)	2.5-3.5 ppm dry @ 15% O2, 1 or 3 hr avg	1. SCR with dry low NOx combustors, or 2. SCR with water or steam injection
Sulfur dioxide (SO_2)	Natural gas fuel	PUC regulated gas
Carbon monoxide (CO)	4.0-6.0 ppm dry @ 15% O2, 1 or 3 hr avg	Catalytic oxidation
VOC(POC)	2.0 ppm dry @ 15% O2	Catalytic oxidation
PM10/2.5	Natural gas fuel	PUC regulated gas

Ref: Range of Recent BACT decisions by BAAQMD and SCAQMD (website).

Cooling Tower BACT

No cooling towers are proposed for the MREC facility.

Auxiliary Boiler

No Auxiliary boiler(s) are proposed for the MREC facility.

Fire Pump Engine

The fire pump engine will be fired exclusively on California certified ultra-low sulfur diesel fuel, and will meet all the emissions standards as specified in; (1) CARB ATCM, (2) EPA/CARB Tier III, and (3) NSPS Subpart IIII. Due to the low use rate of the engine for testing and maintenance, as well as its intended use for emergency fire protection, the engine meets the current BACT requirements of the VCAPCD.