

October 16, 2009

Jack W. Caswell Compliance Unit Program Manager **Energy Facilities Siting Division** 1516 Ninth Street, MS 2000

Subject:

Request for Air Emission Control Technology Change Black Rock 1, 2, and 3 Geothermal Power Project

Dear Jack:

RECD. OCT 20 2009 Sacramento, CA 95814-5512 Salton Sea Unit 6 (02-AFC-2C)

02-AFC-2C

DATE OCT 16 2009

The purpose of this letter is to request a change in the type of air emission control technology to be employed for Black Rock 1, 2, and 3 Project. The Amendment Petition submitted in March, 2009 specified a recuperative thermal oxidizer. This selection was based on research performed by CalEnergy's technology and engineering departments. Subsequent to submission of the Amendment Petition, a recuperative thermal oxidizer was test run as a pilot plant at one of CalEnergy's operating facilities. The device provided the required levels of destruction removal efficiency (DRE) for hydrogen sulfide (H₂S) and volatile organic compounds (VOCs) including benzene in the noncondensable gas (NCG) stream. The pilot test revealed that the device's thermal efficiency was significantly inferior to that associated with a regenerative thermal oxidizer.

The recuperative device required large amounts of propane to achieve the required DRE for acceptable operations. The thermal efficiency of the recuperative device was demonstrated to be in the mid 60 percent range. CalEnergy's experience testing a regenerative thermal oxidizer demonstrated the comparative thermal efficiency to be in the mid 80 percent range. While both devices provide the necessary DRE for operations, the experience at CalEnergy facilities indicates that the regenerative technology will provide for a more environmentally sustainable solution to NCG control over the life of the project. Also, this approach will avoid excessive propane usage requirements to obtain the desired results.

CalEnergy requests that CEC include approval within the Amendment Petition process to indicate the regenerative thermal oxidizer technology is part of the plant design. In anticipation of the Commission's approval of this request, CalEnergy has prepared an application for an Authority to Construct (ATC) for the CE Obsidian Energy Black Rock 1, 2, and 3 Project with the regenerative

thermal oxidizer technology. The ATC will be submitted soon, under a separate letter to the California Energy Commission and to the Imperial County Air Pollution Control District.

Thank you in advance for your prompt attention in this matter. If you have any questions regarding this subject, then please contact Doug Hackley at (760) 604-2792 or Michael P. Fawdry, P.E. at (518) 810-1395.

Best regards,

Doug Hackley

Project Manager

CC: Dale Rundquist, Compliance Project Manager

Matt Trask, Project Manager

Steve Larsen, President, CalEnergy

Mike, Fawdry, ICSUS