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February 20, 2009

Anita Lee, PhD
US EPA, Region 9
Air Permits Office
75 Hawthorne Street (AIR-3)
San Francisco, CA 94105

Re: Russell City Energy Center PSD/ESA

Dear Dr. Lee:

This responds to your February 3, 2009 request for results from nutrient deposition modeling analyses, estimated nitrogen deposition rates from operation of the proposed Russell City Energy Center (RCEC), to assist the United States Environmental Protection Agency (US EPA), Region 9, in responding to questions on the potential impacts on federally listed species in certain regional parks located within the vicinity of the proposed project.

As you are aware, the Bay Area Air Quality Management District (BAAQMD) issued a draft amended Prevention of Significant Deterioration (PSD) permit for RCEC on December 8, 2008. In 2007, US EPA Region 9 has previously determined that issuance of the last draft of this PSD permit would not adversely affect the special status species that may occur within the project area.¹ The U.S. Fish and Wildlife Service (US FWS) concurred in this determination and found that, unless new information revealed effects of the proposed action that may affect listed species in a manner or to an extent not considered, no further action was required under the Endangered Species Act (ESA) of 1973.²

We understand that your request was precipitated by concerns raised in response to BAAQMD's issuance of the draft amended PSD permit. As reported in the attached technical memorandum from CH2MHill dated February 19, 2009, we evaluated the potential effects of nitrogen deposition from RCEC on federally listed species or serpentine-associated species that may be present in units of the East Bay Regional Park District near the RCEC project site in Hayward, California. This included the following listed or serpentine-associated species, which are known to or could potentially occur in or near these parks: California clapper rail, salt marsh harvest mouse, western snowy plover, and California least tern at Hayward Regional Shoreline; and

¹ Letter, Gerardo C. Rios, Chief, Permits Office, US EPA Region 9, to Ryan Olah, Chief, Endangered Species Division, U.S. Fish and Wildlife Service, "Request for Information Consultation under Section 7 of the Federal Endangered Species Act for the Proposed Russell City Energy Center – Hayward, California," June 11, 2007.

² Email, J. Browning, Senior Fish and Wildlife Biologist, US FWS, July 31, 2007 to G. Rios, Subject: Russell City Energy Center (FWS File No. 1-1-07-I-1363).

California red-legged frog, California tiger salamander, and serpentine-associated plants, including Presidio clarkia and most beautiful jewel-flower at Garin/Dry Creek Pioneer Regional Park, Redwood Regional Park and Lake Chabot Regional Park.

Nitrogen deposition was modeled using both the AERMIC Model (AERMOD) and CALPUFF air dispersion model. The maximum annual deposition rates calculated by AERMOD in areas potentially occupied by selected species range from 0.02 to 0.37 kilograms per hectare per year (kg/ha/yr), which is more than ten times below the levels where limited invasion of non-native species have been observed (4-5 kg/ha/yr). The maximum annual deposition rates calculated by CALPUFF are more than 100 times below such levels.

These results clearly demonstrate that nitrogen deposition from RCEC will not result in adverse effects to vegetation communities and sensitive species living in any of the studied East Bay Regional Parks. The modeled deposition rates reflect a number of conservative assumptions and therefore represent an over-estimation of the actual deposition expected to occur as a result of the project. Because they fall so far below the levels of concern identified by earlier studies, we are confident that, upon review of these results and the enclosed analyses, US EPA should be satisfied that it has fully discharged its consultation obligation under the ESA and that any concern raised regarding nitrogen deposition does not warrant reinitiation of informal consultation with US FWS.

We would ask that you please review the enclosed analyses at your earliest convenience. Should you have any questions or concerns, please do not hesitate to contact me at 925-570-0849. We would also be glad to meet with you and your staff to review and discuss the nature of our analyses and conclusions.

Sincerely,



Barbara McBride
Director, Environmental, Health and Safety
Calpine Corporation

cc: Carol Bohnenkamp (US EPA Region 9)
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Enc.