UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
Phone 800-227-8917
http://www.epa.gov/region08

SEP 8 2003

Ref: 8P-AR

David Crabtree
Vice President, General Counsel
Deseret Power Electric Cooperative
10714 South Jordan Parkway
South Jordan, UT 84095

Re: Response to your February 23, 2003 letter: PSD applicability determination for turbine rotor upgrade project at Bonanza power plant

Dear Mr. Crabtree:

This letter is in reply to your letter to me of February 26, 2003, which provided information relating to a turbine rotor upgrade project (the "rotor project") in May of 2000 at Bonanza power plant. The information was in the form of a spreadsheet, showing actual annual emissions of PM_{10}, SO_2, NO_x and CO at Bonanza plant, from May 1995 through December 2002.

We appreciate your cooperation in supplying the emission information; however, we must request some additional information (listed below). The purpose of our request is to obtain enough information to make a Federal Prevention of Significant Deterioration (PSD) applicability determination for the rotor project. As you're aware, the question of Federal PSD applicability for the rotor project was raised in September of 2002 by the National Park Service, as part of their comments on our draft Federal operating permit for Bonanza plant.

1. The following information is necessary for us to determine whether any "contemporaneous" plant changes (as defined in Federal PSD regulations) might affect PSD applicability for the rotor project:

   a. Please provide a description of all capital projects of greater than $100,000 actual expenditure, for which physical construction commenced at any time during the five-year period prior to the rotor upgrade (May 1, 1995 to May 1, 2000). The description should include: physical plant changes made, amount of actual expenditure, project completion date, and amount of emission changes resulting from the capital project.

Printed on Recycled Paper

b. Please provide a copy of any capital appropriation requests greater than $500,000 for any equipment and process changes that occurred during the same outage as the rotor upgrade project. By "capital appropriation request," we mean the documents used by Bonanza plant personnel that describe capital projects when seeking management approval for a planned expenditure. These documents are sometimes known as capital improvement requests, authorizations for expenditure, work order records, or other similar names.

2. The following information is necessary for us to better understand the relationship between certain key plant changes (coal handling and low-NO_x burners) and the rotor project. If the information below has been provided in response to question 1 above, it need not be repeated in response to this question 2.

   a. What changes were made to the coal handling system to increase feed rate during the general time frame of the rotor project, or as a result of the rotor project?

   b. When were the low-NO_x burners installed? What percent reduction of NO_x was achieved from such installation?

3. The following information is necessary for us to determine whether or not the rotor project yielded significant emission increases of any PSD-listed pollutants other than those addressed by your spreadsheet:

   What are the rotor pre-project and post-project actual annual emissions, for the following pollutants that have significance levels in PSD regulations at 40 CFR 52.21(b)(23)(i):

   lead, beryllium, mercury, fluorides, and sulfuric acid mist?

   Since AP-42 contains emission factors for all these pollutants from coal-fired boilers, we believe the emissions of these pollutants can be readily quantified.

4. The following information is necessary to enable us to validate the PM_{10} emission figures on your spreadsheet:

   a. What is the total boiler heat input for each month in MMBTU? This information was apparently used to calculate the PM_{10} (as well as CO) emissions on the spreadsheet for each month, from May 1995 through December 2002. Please also provide the monthly and annual capacity factors, for May 1995 through December 2002.

   b. Is spreadsheet footnote 5 intended to say the emission factor used for PM_{10} calculations is 0.028 lb/MMBTU (the sum of front-half catch and condensibles)? Also, why were stack test results for condensibles rejected as a basis for the emission factor, in favor of AP-42? Footnote 5 indicates an AP-42 emission factor of 0.02 lb/MMBTU was used as the emission factor in the spreadsheet; however, information

in our files indicates that test results for condensibles were 0.018 lb/MMBTU in 2001 and 0.0036 lb/MMBTU in 2002. If you consider the test results invalid, please explain why.

c. Spreadsheet footnote 5 indicates the test result for front-half catch for 1994 was 0.010 lb/MMBTU. Our file information indicates 0.0054 lb/MMBTU. Which figure is correct?

d. We do not believe the approach described in speadsheet footnotes 5 and 6, for calculating the emission factor for front-half catch, is justifiable. The approach involved calculation of two separate emission factors (one being the average of 1994 and 1999 stack tests, the other being the average of 2000-2002 stack tests). We are not aware of any plant changes over that period that would justify a change in the emission factor. We believe instead that a single emission factor should be calculated, to cover the entire period (1994-2002). The factor should be the average of all valid test results for that period. According to our file information, test results were: 0.0054 lb/MMBTU in 1994, 0.006 in 1999, 0.0056 in 2000, 0.0059 in 2001, and 0.0045 in 2002. The average is 0.0055 lb/MMBTU. Please recalculate the spreadsheet's PM_{10} emissions on this basis.

e. We do not believe the approach described in spreadsheet footnote 6, for treatment of PM_{10} malfunction emissions during June-December 2000, is justifiable. The approach was to exclude those emissions from the spreadsheet. We interpret PSD regulations at 40 CFR 52.21(b)(21)(v) to require <u>all</u> post-project actual annual emissions to be reported, including malfunction emissions. Please recalculate the June-December 2000 emissions on this basis (i.e., without excluding malfunction emissions).

If you have any questions, please feel free to contact me at (303) 312-6005, or Mike Owens of my staff at (303) 312-6440. We would appreciate a response within the next 30 days. Thank you for your cooperation.

Sincerely,

Richard R. Long, Director
Air and Radiation Program

cc: Howard Vickers, Deseret Power
John Bunyak, National Park Service
Don Shepherd, National Park Service
Elaine Willie, Ute Indian Tribe
Ed Kurip, Ute Indian Tribe