

November 30, 2010

Mr. Ernest Y. Scott
Manager Mining Operations
Anadarko Petroleum Corporation
2515 Foothill Boulevard, Suite 300
Rock Springs, WY 82901

SUBJECT: REQUEST TO RECALCULATE ALTERNATE CONCENTRATION LIMITS FOR
THE BEAR CREEK URANIUM FACILITY

Dear Mr. Scott:

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the ground water data for the Bear Creek Uranium Facility (BCUF) in preparation for the transfer of the site to the Department of Energy for Long-Term Care including surveillance and maintenance. As part of the NRC evaluation, the staff reviewed the Alternate Concentration Limit (ACL) application submitted for the BCUF on February 28, 1997. This ACL application, which was approved on June 30, 1997, contained predictive modeling results that indicated that the maximum concentration of nickel, radium, and uranium, at the Point of Compliance locations (wells MW-12 and MW-74) would be 3.8 mg/l, 46 pCi/l, and 2038 pCi/l, respectively. Similarly, maximum concentrations of nickel, radium, and uranium at the Point of Exposure (POE) locations (wells MW-14 and MW-43) would be 0.55 mg/l, 13 pCi/l, and 45 pCi/l, respectively.

As part of its current evaluation, NRC staff tabulated the ground water data from the date of the ACL application until the present and found that the uranium concentration in well MW-14 exceeded the predicted concentration of 45 pCi/l on several occasions and reached 520 pCi/l in 2008, more than 10 times the predicted value. This indicates that the assumptions used in the original 1997 predictive model to calculate the ACLs are not valid. NRC requests that a new risk-based ACL application be submitted incorporating the ground water data collected over the 13 years since the original ACL application. NRC requests the submittal of a new ACL application within 6 months of the receipt of this letter.

NRC staff recognizes that the POE boundary has been extended to the north and that four new wells have been installed. The two new POE wells would therefore be wells MW-109 and MW-111.

If you have any questions regarding this action, please contact Tom McLaughlin at (301) 415-5869 or by Email at Thomas.McLaughlin@nrc.gov.

E. Scott

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

/RA/

Paul Michalak, Branch Chief
Materials Decommissioning Branch
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 40-8452
License No.: SUA-1310

cc:
D. Bergman-Tabbert, DOE GRJ
Scott Surovchak, DOE GRJ
M. Moxley, DEQ, WY

E. Scott

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Sincerely,

/RA/

Paul Michalak, Branch Chief
Materials Decommissioning Branch
Division of Waste Management
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Office of Federal and State Materials
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cc:
D. Bergman-Tabbert, DOE GRJ
Scott Surovchak, DOE GRJ
M. Moxley, DEQ, WY

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