



Department of Environmental Quality



To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Dave Freudenthal, Governor

John Corra, Director

February 4, 2008

Mr. Scott R. Surovchak
Site Manager, Shirley Basin South
U. S. Department of Energy
Office of Legacy Management
12101 Airport Way, Unit C
Broomfield, CO 80021-2583

RE: Shirley Basin South Site, August 2007 Groundwater Sampling Report

Dear Mr. Surovchak:

The Wyoming Department of Environmental Quality, Water Quality Division (WDEQ/WQD) has reviewed the *August 2007 Groundwater Sampling at the Shirley Basin South, Wyoming Disposal Site* dated October 2007, which we received from your consultant, S.M. Stoller Corporation, on January 7, 2008. This report provided the results of groundwater sampling and analysis that was performed in August 2007.

The data show that two wells, 5-DC and 54-SC, continue to have radium concentrations above the approved ACL for these point of compliance wells. The upward trend for radium concentrations in these wells has been confirmed by several years of sampling. The DOE has not responded to these exceedances, except, as stated in the March 10, 2006 letter to the NRC, to "... initiate development of an alternative monitoring plan." This monitoring plan is to continue annual sampling at the site and "... evaluate the results after the fifth year of sampling that will occur in 2009."

The WDEQ remains concerned about this approach. We do not understand how continuing to sample on an annual basis, as is already being performed, constitutes an "evaluative monitoring plan". Furthermore, our understanding is that when ACLs are exceeded, corrective action is to be evaluated, and if necessary, implemented. As we have repeatedly mentioned to the DOE and to the NRC, we do not see how further monitoring satisfies that requirement. The DOE still has not addressed our concern over these excursions, and in our mind, are not fulfilling the requirements of the Long Term Surveillance Plan that was completed and approved by the NRC in 2004. There must be an underlying cause for the trend of increasing contaminant concentration in these two wells. We believe that further evaluation needs to be performed to determine the scope of this problem, to initiate corrective action before the groundwater contamination begins to migrate off site.

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

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We are also concerned that "point of exposure" wells are not identified at this site. Without a point of exposure identified, how will the DOE and NRC determine when groundwater contamination is affecting receptors?

It appears that there is a problem with the groundwater modeling, or geohydraulic data used to make the decision to close out this site. We look forward to discussing these questions with you and hearing your response to our concerns. Please contact me at 307/335-6959 or at the address provided if you have any questions concerning our letter or the concerns we raised.

Sincerely,



Mark Thiesse
West District Supervisor
Groundwater Pollution Control Program

cc: Mr. Stephen J. Cohen, U.S. NRC, Fuel Cycle Facilities Branch, 11545 Rockville Pike, Rockville, MD 20852 (also via email)
Mr. Kevin Frederick, Groundwater Program Manager, WQD Cheyenne
Mr. John Wagner, WQD Administrator, Cheyenne
File (2): Petrotomics, Shirley Basin, Carbon Co. / Chron