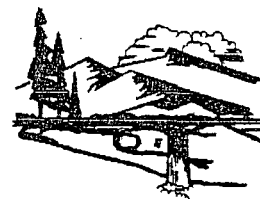




Dave Freudenthal, Governor

# Department of Environmental Quality

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



John Corra, Director

February 3, 2010

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, July 2009 Groundwater Sampling Report

Dear Mr. Surovchak:

The Wyoming Department of Environmental Quality, Water Quality Division (WDEQ/WQD) reviewed the *July 2009 Groundwater Sampling at the Shirley Basin South, Wyoming Disposal Site* dated October 2009, received from your consultant, S.M. Stoller Corporation, on December 4, 2009. This report provides the results of groundwater sampling and monitoring performed in July 2009.

As early as 2006, the WDEQ noted that exceedances of the approved ACL for radium-228 for 5-DC and 54-SC were occurring; this report for the July 2009 event indicates that this is still the case. In addition, data for the July 2009 sampling and monitoring event for 110-DC, a more recently installed well located downgradient and immediately adjacent to the property boundary, indicate that 110-DC is impacted by radium-226 at a level in excess of the approved ACL. The report states "the cause for this result is not known; confirmatory sampling is scheduled for fall 2009".

As the WDEQ remains concerned about the exceedances in both radium-228 and radium-226 in groundwater and how existing approach/es intend to address these exceedances, the WDEQ will look forward to the next report submittal. Depending on sampling and monitoring results for the fall 2009 event, this submittal may need to include discussion for determining/defining the scope of the groundwater problem and plans for evaluating corrective action (CA), whether CA is needed and, if needed, how CA is to be implemented.

I look forward to working with you on this site. You may contact me at 307/335-6980 if you have any questions regarding this letter or the concerns identified in the letter.

Sincerely,

Deborah Harris, PG  
West District Supervisor  
Groundwater Pollution Control Program



Shirley Basin, South  
Review of July 2009 Event Report  
February 3, 2010

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