

November 6, 2009

Attn: Document Control Desk
Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Mail Stop T8F5
Washington, D.C. 20555

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11545 Rockville Pike
Mail Stop T8F5
Washington, D.C. 20555

RE: Request for Additional Information – Groundwater Monitoring Report – Radioactive Materials License SUA-56, Western Nuclear, Inc., Split Rock Site, Jeffrey City, Wyoming (TAC J00577); Docket No. 40-01162

Dear Deputy Director:

The following letter was prepared in response to your letter dated October 9, 2009 in which you requested additional information regarding groundwater monitoring results. Specifically your letter stated:

NRC staff also noted that concentrations of natural uranium at well WN-39B have been increasing steadily since October 2007. Based on monitoring data, it could be indicative of a contaminant pulse traveling through well WN-39B. Please demonstrate that the natural uranium values at the POE will remain below values requested in your license amendment submittals dated December 1, 2008 and June 16, 2009, as well as for the limits currently specified in the license for the Sweetwater River.

Surface and groundwater monitoring at the current locations has been occurring since September 2005. The location of the monitoring wells and the surface water sampling points is shown on Figure 1. Figure 1 also shows the direction of flow out the northwest valley.

As can be seen on Figure 1, wells that monitor the plume from the northwest valley are wells 5, WN-42A, WN 39B and WN-41B. Well 5 is the POC well and is closest to the reclaimed tailings impoundment and the other wells are down-gradient of the POC. Uranium values from each of the wells, starting in September 2005, are plotted on Figure 2. When all the data from the wells are reviewed, it can be concluded that contrary to the assertion in your October 9 letter, the uranium values in all the wells, including well WN-39B, appear to be relatively constant with only minor fluctuations that are well below the ACL for uranium.

Figure 3 presents the uranium values for the down-gradient surface water sampling points and for well JJ-1R which is the point of exposure (POE) well for the northwest valley flow. As can be seen, concentrations at these sample

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points are also relatively constant, are well below the MCL for uranium and are representative of background conditions.

Based on the data from all the wells in the northwest valley plume and the water quality from the down-gradient surface water and the POE well, several conclusions can be made:

1. Concentrations in the monitoring wells at the POC and down-gradient of the POC in the northwest valley are well below the ACL for uranium.
2. Concentrations in the monitoring wells at the POC and down-gradient of the POC in the northwest valley are relatively constant since September 2005.
3. Concentrations of uranium in the down-gradient POE well and in the surface water remain relatively constant since 2005.
4. Concentrations in the surface water and in the POE well are all well below the MCL for uranium and are representative of background conditions.

Based on a review of all the data from well WN-39B, the other wells in the northwest valley, the POE well and the down-gradient surface water data, it can be concluded that concentrations of uranium in WN-39 B and in the other wells and surface water down-gradient of the northwest valley are not changing and all values remain below standards and are consistent with previous predictions and the overall groundwater model.

I trust this information addresses your concerns. Should you have any further questions, please feel free to contact me.

Sincerely,

Miller Geotechnical Consultants, Inc.



Louis Miller
Project Manager

Attachment

cc. Larry Corte, WNI
Harley Shaver, Esq.
Scott Surovchek, DOE
Anne Thomas, WNI

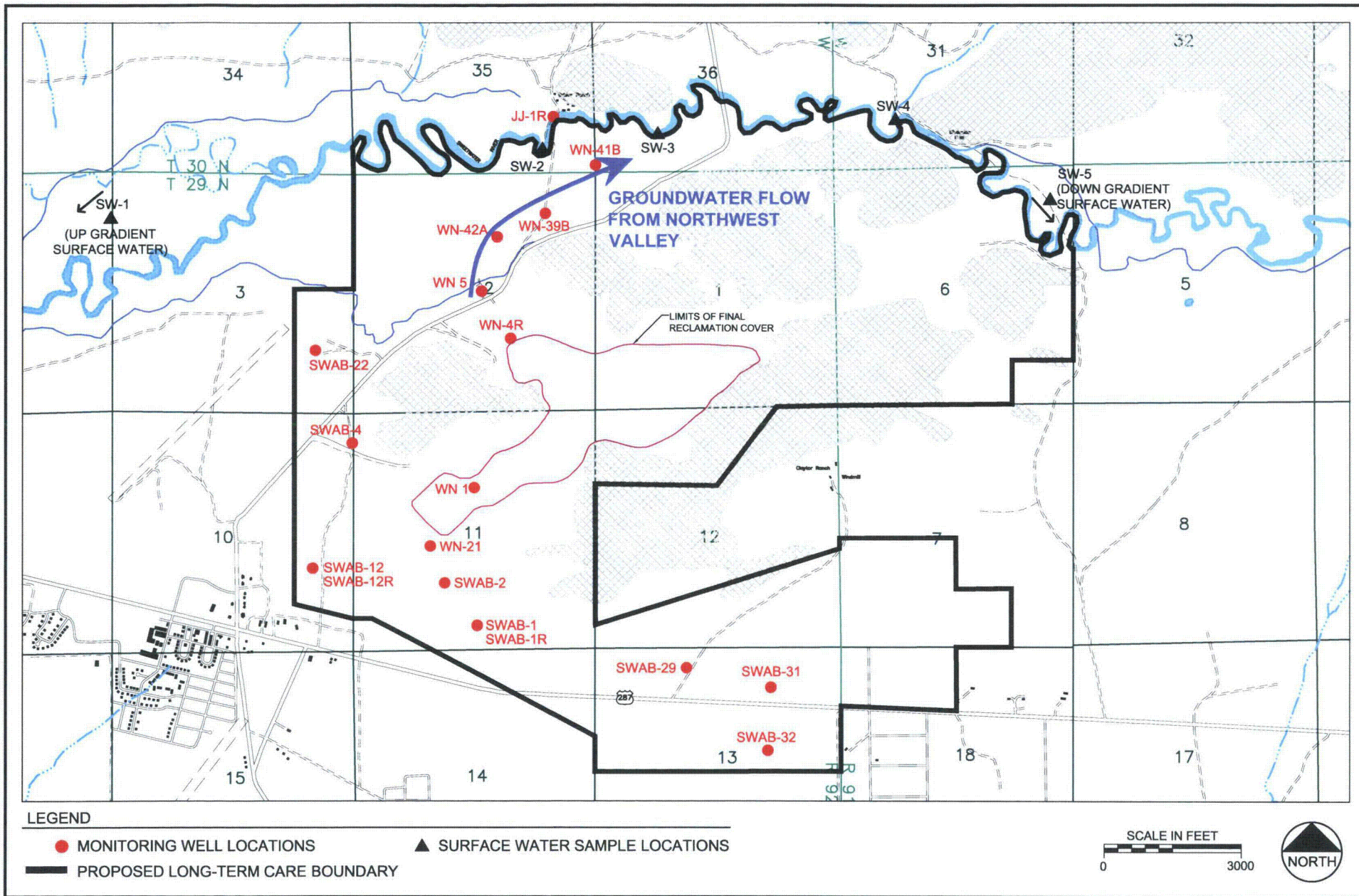


FIGURE 1
SURFACE WATER AND GROUND WATER MONITORING LOCATIONS



Date: OCTOBER 2009

Project: 180888

File: GW-WELLS-09-3

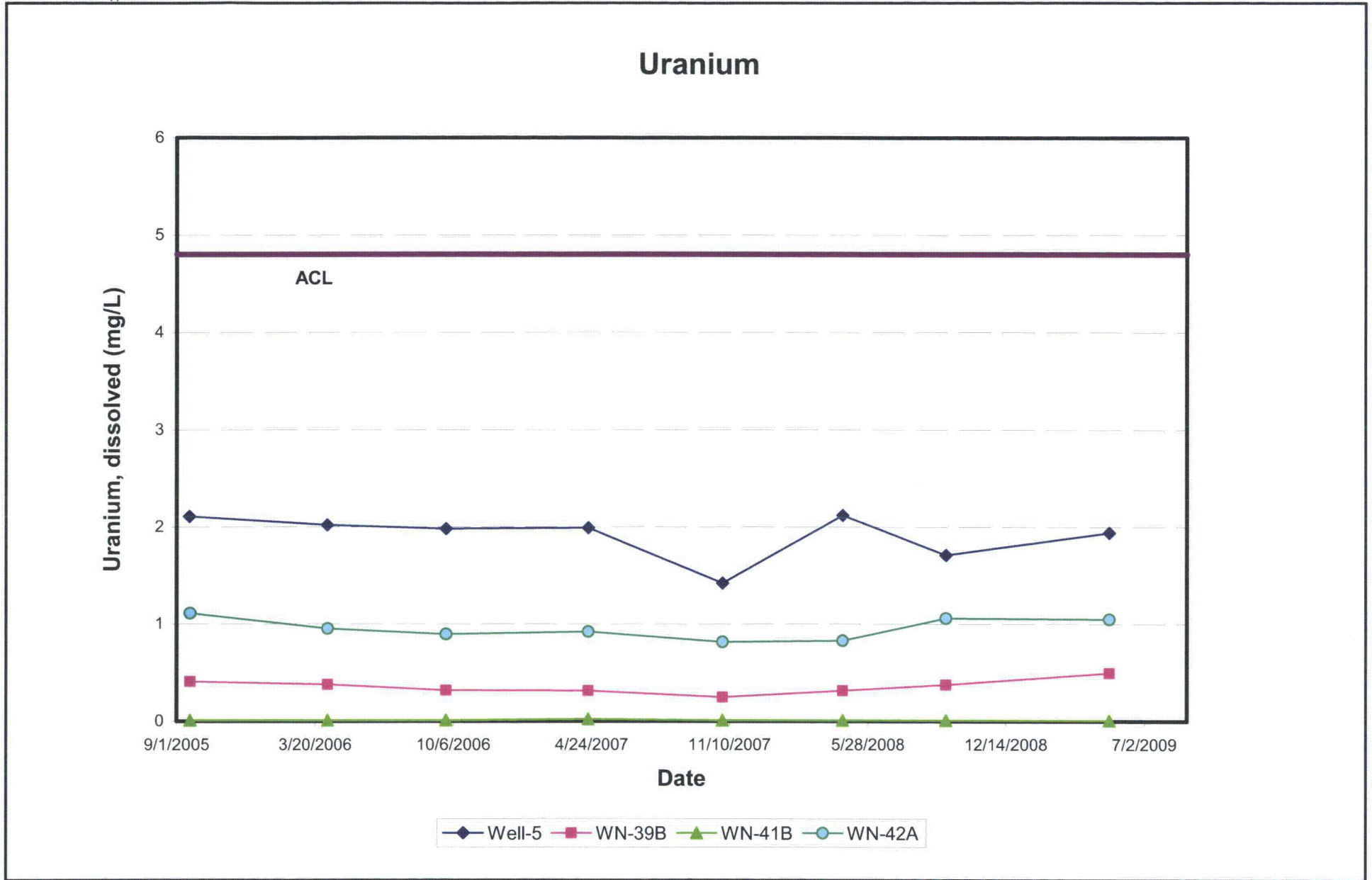


Figure 2

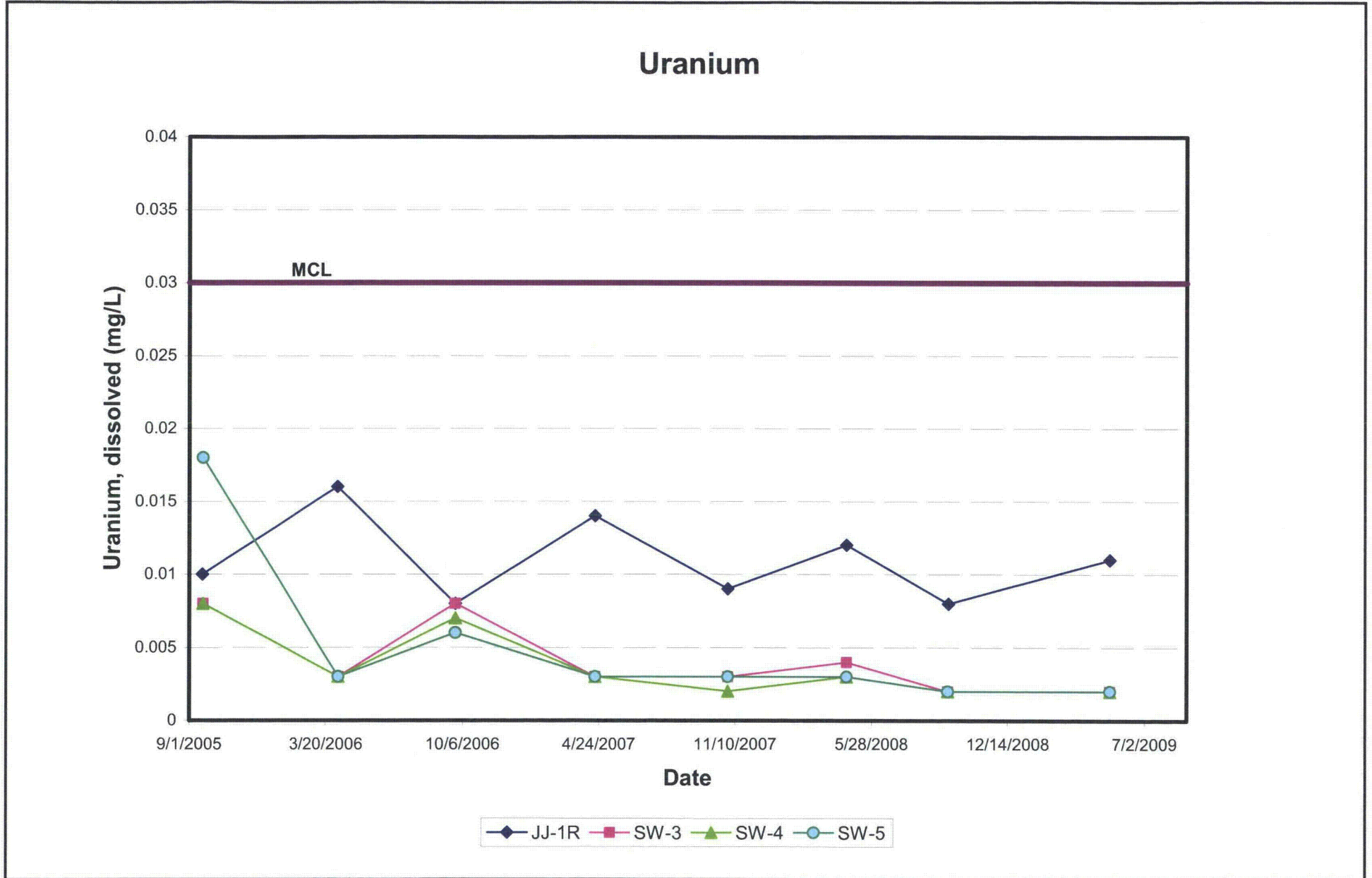


Figure 3