ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Boron and Uranium in Groundwater Downgradient of the Original Landfill

Contact Record Approval Date: July 3, 2008

Site Contact(s) / Affiliation(s): Scott Surovchak, DOE; John Boylan, S.M. Stoller

Regulatory Contact(s) / Affiliation(s):
Carl Spreng / CDPHE

Discussion:
Analysis of groundwater samples collected from the three RCRA monitoring wells downgradient of the Original Landfill (OLF) indicate statistically higher concentrations of boron (B) and, at one location, uranium (U) than is evident in upgradient groundwater. Per the RFLMA (Attachment 2, Figure 10), consultation is required in cases where concentrations of analytes of interest (i.e., listed in RFLMA Attachment 2, Table 1) are statistically higher in downgradient OLF RCRA wells than in upgradient OLF RCRA wells.

Concentrations of B in all three downgradient RCRA wells (80005, 80105, and 80205) are well under the applicable standard of 750 ug/L (RFLMA, Attachment 2, Table 1). Concentrations of U in downgradient well 80205 are under the U threshold of 120 ug/L (RFLMA, Attachment 2, Figure 8). Insufficient data are available for trending using the Seasonal-Kendall trending method. Refer to the graph below for more information on relative concentrations.

Both of these conditions were recognized and reported in the Rocky Flats Site Annual Report of Site Surveillance and Maintenance Activities, Calendar Year 2006, and in the same report for calendar year 2007. In response to a recommendation made in the 2006 report as well as in the CERCLA Five-Year Review Report (2007), a sample was collected from well 80205 and analyzed using high-resolution methods to determine the extent to which the groundwater might be impacted by anthropogenic (man-made) U. Results indicated the sample contained 100% natural U.

Surface water downgradient of the OLF, as monitored at location GS59, shows no adverse impact from the OLF due to elevated concentrations of B or U in groundwater.

DOE, CDPHE and S.M. Stoller staff consulted regarding these monitoring results at a meeting on May 6, 2008.

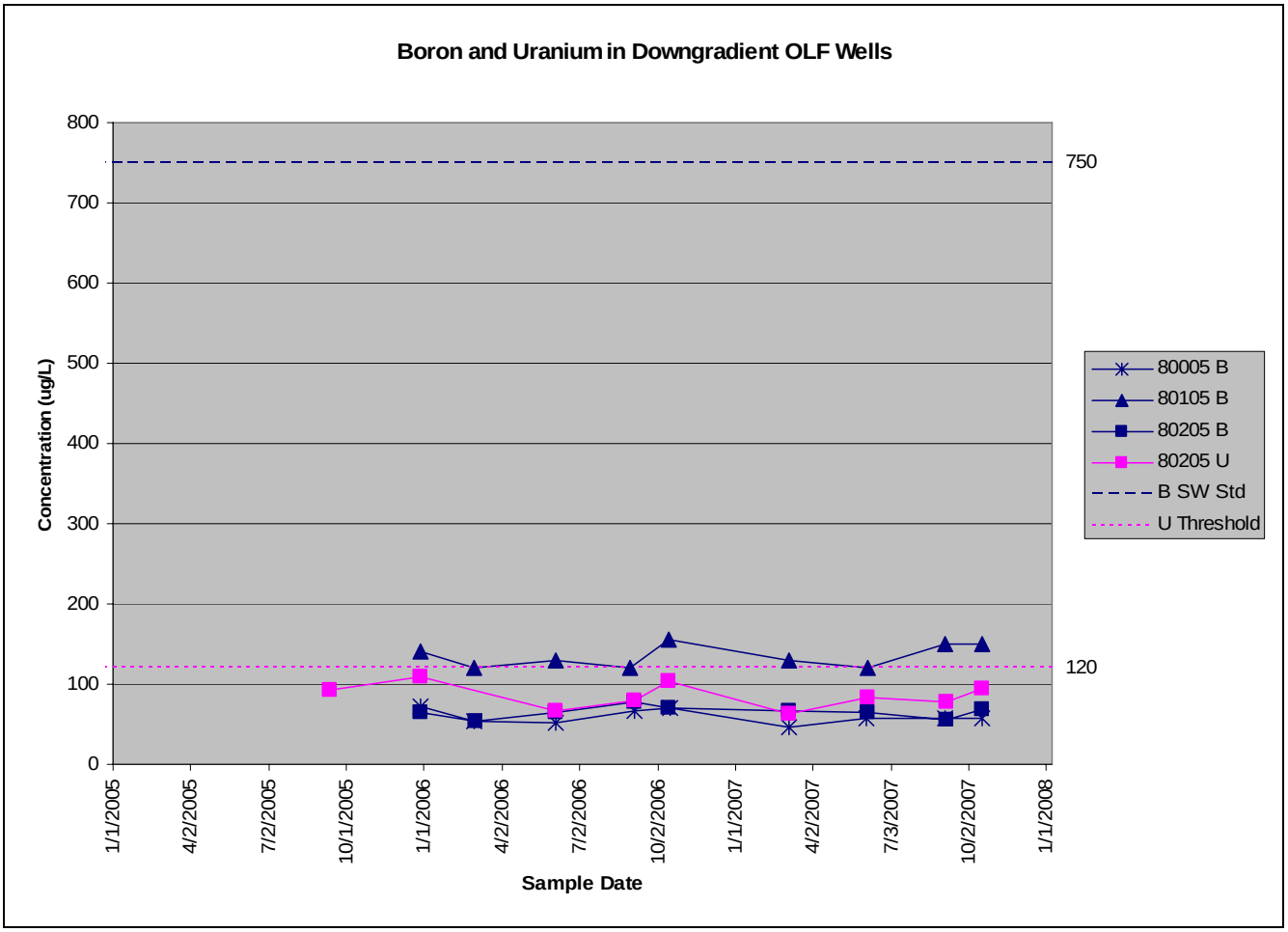
Resolution:
RCRA wells monitoring the OLF will continue to be monitored and the data will continue to be assessed statistically. The monitoring data will be included in RFLMA quarterly and annual surveillance and maintenance reports, and the assessment discussed in the RFLMA annual surveillance and maintenance reports in accordance with RFLMA,. If all scheduled samples are successfully collected (i.e., dry conditions do not prevent sampling), it is anticipated that

trend calculations will be feasible following collection of all scheduled quarterly samples in calendar year 2009. If increasing trends are indicated, additional consultation will be initiated. If the trends are indeterminate or decreasing, additional consultation will not be necessary.

Close Out of Contact Record: This Contact Record will be closed out when the trend calculations are completed and a determination of increasing, indeterminate, or decreasing trends is made. A new Contact Record will document any additional consultation required for a determined increasing trend.

Contact Record Prepared by: **John Boylan**

Distribution:
Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, Stoller
Rocky Flats Contact Record
File



NOTES: B = boron, U = uranium. Numbers along the right side of the graph refer to the adjacent B surface water standard (SW Std in legend) or U threshold, also in units of ug/L.