

Automated Surface-Water Monitoring - Third Quarter FY03 (Apr. - Jun. 2003)

During the third quarter of FY03, 213 automated surface-water monitoring composite samples were collected and submitted for analysis.

Reportable 30-day average values for plutonium (Pu) were observed at Point of Evaluation (POE) GS10 for the period from March 9, 2003 through April 3, 2003 inclusive. The calculated 30-day moving average for americium (Am) was not reportable for the same period. GS10 is located in South Walnut Creek west of Pond B-1.

Water flowing through GS10 also passes through the lower B-series ponds (Ponds B-4 and B-5) and South Walnut Creek before leaving the Site. RFCA Points of Compliance (POCs) GS08 (Pond B-5 outlet) and GS03 (Walnut Cr. at Indiana St.) again monitor this water. GS10 analytical results and the reportable 30-day average values were compared with those for pre-discharge samples collected from Pond B-5 prior to the March – April 2003 direct discharge and from RFCA POC monitoring stations GS08 and GS03 for that discharge (3/24 – 4/10/03). Monitoring results from Pond B-5 (predischarge sample), all composite samples from POC GS08, and all composite samples from POC GS03 met stream standards and were below reporting thresholds for the same period.

This newest GS10 reportable event is consistent with seasonal water-quality observations made every spring/summer since 1997 at this location, following implementation of RFCA flow-paced monitoring. No new source evaluation is planned due of the repetitive nature of the event, the previously completed comprehensive investigation(s) of the sub drainage basins tributary to GS10, and the Site's commitment to investigate the area as part of the accelerated action evaluation of Pond B-1.

Kaiser-Hill Company, LLC (Kaiser-Hill) completed the latest of six special source investigation reports for the GS10 sub-drainage in August 2001. This investigation, the Final Source Evaluation Report for Point of Evaluation GS10: Water Years 2000 – 2001, was guided by the Sampling and Analysis Plan for Automated Synoptic Surface-Water and Sediment Sampling for the GS10 Source Investigation. This investigation was designed to identify location-specific subdrainage areas that may contain source areas or "hot-spots" and further define or resolve the location of discrete "americium-enriched" source areas.

The Colorado Department of Public Health and Environment (CDPHE) also conducted an independent investigation of the GS10 subdrainage. CDPHE's study is guided by their quality assurance project plan Reconnaissance Sampling Related to Source Location Investigation of Plutonium and Americium Action Level Exceedances at Point of Evaluation GS10.

The findings and conclusions of prior Walnut Creek and GS10 source evaluations suggest that one or more low-level distributed actinide source areas exist within the GS10 subdrainage. Additionally, Pu/Am activity ratios in the surface water during the reportable events suggest that the suspect low-level actinide source areas are relatively enriched in americium. These source evaluations also concluded that ongoing RFETS activities (i.e., Decontamination and Decommissioning and ER projects, excavations, or

other routine operations) did not contribute to increased contamination and reportable values. A further project review is not planned because of the repetitive and predictable nature of this event.

In consideration of past source evaluation findings and conclusions, the Site proposes the following in response to these reportable values at GS10:

(1) Routine monitoring as required by RFCA and the Site Integrated Monitoring Plan will continue.

(2) Routine data evaluation for GS10 will be included in the Water Year 2002 Automated Surface-Water Monitoring Report.

(3) Evaluation of the area by ER personnel as part of the evaluation of Pond B-1 during the second and third quarters of FY04.

(4) No additional source evaluation for this area due to this event.

Including all analytical data available for the Quarter as of 8/12/03, the 30-day moving average values for all other Points of Evaluation (POE) and Points of Compliance (POC) locations were below the RFCA action levels and standards for all monitored analytes.