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From: DOE Office of Legacy Management
Sent: Monday, December 05, 2011 11:52 AM
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Subject: U.S. Department of Energy, Office of Legacy Management Rocky Flats Site notification of a reportable condition under RFLMA Attachment 2
Attachments: GS10 PuAm Eval 111205.pdf

NOTIFICATION OF A REPORTABLE CONDITION UNDER RFLMA ATTACHMENT 2, SECTION 6.0, ACTION DETERMINATIONS

This notification is to inform you of a reportable condition under RFLMA Attachment 2, Section 6.0, Action Determinations, at the RFLMA Point of Evaluation, GS10. RFLMA Attachment 2 Section 6 and Figure 6 require informing regulators and the listed stakeholders within 15 days of receipt of validated data and providing evaluation plan to CDPHE and EPA within 30 days. Although informal notification has already been made, this e-mail serves as the formal notification. Attached to this e-mail is a map of the Pu and Am sampling locations for the GS10 evaluation.

A reportable condition was determined based on evaluation of recently available validated analytical results for americium (Am-241) from the composite samples collected during the period 7/21/11 - 10/25/11. Following is a synopsis of the data:

Composite 7/21-8/24/11 (initial analysis; results validated 11/2/11) Pu = 0.938 pCi/L, Am = 2.97 pCi/L

Composite 7/21-8/24/11 (laboratory re-analysis completed 11/15/11; results validated 11/22/11) Pu = 4.07 pCi/L, Am = 4.01 pCi/L

Composite 8/24-9/29/11 (results validated 11/30/11) Pu = 0.020 pCi/L Am = 0.044 pCi/L

Composite 9/29-10/25/11 (results validated 11/22/11) Pu = 0.658 pCi/L, Am = 0.877 pCi/L

Under routine data validation protocols, the relative error ratio (RER) is used to evaluate data pairs (i.e., an initial analysis and a duplicate analysis). If the RER for a data pair is >3 and ≤ 5 , then the results are "J" qualified (estimated). If the RER for a data pair is >5 , then the results are "R" qualified (unusable result). During validation of the 7/21-8/24/11 analytical results, the Am results were determined to be "J" qualified, while the Pu results were determined to be "R" qualified. Therefore, the arithmetic average of the Am results is used in the calculation of the 12-month rolling average for Am; the Pu results were rejected and not included in calculation of the 12-month rolling average for Pu.

The evaluation was performed in accordance with RFLMA Attachment 2, Figure 6, Points of Evaluation, which resulted in 12-month rolling average values for Am of 0.21 pCi/L on 8/31/11 and 0.22 pCi/L on 9/30/11. The applicable RFLMA Table 1 Standard for Am and Pu is 0.15 pCi/L.

Flow-through operations at Pond B-5 were initiated on 9/12/11 (the previous discharge was in March 2011). Pu and Am results from downstream locations GS08 (Pond B-5 outlet), WALPOC (Walnut Cr. at COU boundary), and GS03 (Walnut Cr. at Indiana St.) have been received through 9/26/11; all results were below 0.01 pCi/L.

While the 12-month rolling average for Pu is not reportable, the evaluation of the reportable Am values will include consideration of the Pu results.

Pursuant to RFLMA Attachment 2, Section 6.0, Action Determinations, for a reportable condition:

- * DOE must submit a plan and schedule for an evaluation to address the condition within 30 days of receiving the validated data for the reportable condition.
- * DOE will consult with CDPHE and EPA to determine if mitigating actions are necessary.
- * The objective of consultation will be to determine a course of action (if determined necessary) to address the reportable condition and to ensure the remedy remains protective.
- * Results of consultation will be documented in contact records and/or written correspondence.

Although further evaluation and consultation is required, some preliminary steps are being or have been taken that will inform the evaluation.

* Rocky Flats staff walked down the GS10 drainage on 11/16/11 to see if there were any obvious conditions promoting potential soil erosion. Some thin vegetation spots were noted on the north side of the rip-rap upstream of GS10. Some reseeded/erosion matting could be applied in spots, and a map of the areas to be addressed will be prepared. A closer examination of the drainage to focus on seeps and former utility corridors was conducted on 11/22/11; representatives from DOE and EPA were in attendance.

* Several of the sampling locations already designated for the evaluation of the reportable condition for uranium at GS10 (FC4991, GS10, and B3OUTFLOW) were grab sampled on 11/25/11. These samples are being analyzed for Pu and Am on 2-week turnaround.

* Several seep sampling locations (SEEP995, SEEP995A, SEEP995B, and SEEP995C) were also grab sampled on 11/25/11. These samples are being analyzed for Pu and Am on 2-week turnaround.

* An aliquot from each flow-paced composite sample routinely being collected at B5INFLOW (supporting the GS10 uranium evaluation) will also be obtained and held for Pu and Am analysis if upstream samples results suggest analysis would inform the evaluation.

* Flow-paced composite samples routinely being collected at WALPOC will continue to be analyzed on 2-week turnaround. Analyses for flow-paced composite samples routinely being collected at GS10 and GS08 will be accelerated to 2-week turnaround.

* Historical Pu and Am well data from wells in the drainage have been reviewed. The review gave no indication that any additional well sampling would be informative at this stage.

* The previous GS10 evaluation reports are being reviewed for information that may aid this current evaluation.

If you have any questions, please contact:

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