From:	Ward, David (CONTR)
To:	Carl.Spreng@state.co.us
Cc:	Moritz.Vera@epa.gov; Surovchak, Scott; Kaiser, Linda (CONTR)
Subject:	corrected CR 2014-05
Date:	Tuesday, April 29, 2014 12:44:00 PM
Attachments:	corrected Final RFLMA CR 2014-05 ile - MH.pdf

Carl,

Attached is the corrected CR 2014-05 for your files. The following editorial corrections were made: "Figure 6, 'Points of Evaluation'" was edited to read "Figure 5, 'Points of Compliance'" and all references to Figure 6 were changed to Figure 5; The Approval date was also corrected, from March 8 to April 8.

This Contact Record will be submitted for posting on the Rocky Flats website on May 5,2014 unless directed otherwise by the Parties.

David Ward
The S.M. Stoller Corporation
A subsidiary of Huntington Ingalls Industries, Inc.
Contractor to the U.S. Department of Energy
Office of Legacy Management
11025 Dover Street, Unit 1000, Westiminster, CO 80021,
303-410-4825
David.ward@lm.doe.gov

ROCKY FLATS SITE
REGULATORY CONTACT RECORD 2014-05

Purpose: Reportable condition for evaluation purposes for uranium at Point of Compliance WALPOC.

Contact Record Approval Date: April 8, 2014

Site Contact(s)/Affiliation(s): Scott Surovchak, U.S. Department of Energy (DOE); George Squibb, Linda Kaiser, David Ward, S.M. Stoller Corporation (Stoller)

Regulatory Contact(s)/Affiliation(s): Carl Spreng, Colorado Department of Public Health and Environment (CDPHE); Vera Moritz, U.S. Environmental Protection Agency (EPA)

Date of Consultation Meeting: February 18, 2014

Consultation Meeting Participants: Carl Spreng, CDPHE; Vera Moritz, EPA; Scott Surovchak, DOE; George Squibb, Linda Kaiser, David Ward, Stoller

---

Discussion: A reportable condition that occurred at surface water Point of Compliance (POC) WALPOC at the Rocky Flats Site was based on an evaluation of validated analytical results for uranium from the composite sample collected during the period from 11:39 a.m. on December 18, 2013, to 1:27 p.m. on January 16, 2014.

The evaluation was performed in accordance with *Rocky Flats Legacy Management Agreement* (RFLMA) Attachment 2, Figure 5, "Points of Compliance," and resulted in a calculated 30-day average concentration for uranium of 16.9 micrograms per liter (µg/L) on December 18, 2013. This amount exceeds the RFLMA-applicable Table 1 standard of 16.8 µg/L. Validated results were received on February 3, 2014 and notification to the regulatory agencies and the public—in accordance with RFLMA Attachment 2, Figure 5—was made by e-mail on February 13, 2014. Representatives of the regulatory agencies and DOE met on February 18, 2014, to discuss this result and develop a path forward.

Pursuant to RFLMA Attachment 2, Section 6.0, "Action Determinations," a reportable condition necessitates the following actions:

- 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 the consultation will be to determine a course of action (if necessary) to address the reportable condition and to ensure that the remedy remains protective.
- The results of the consultation will be documented in contact records, in written correspondence, or both.

This contact record documents DOE's consultation with CDPHE and EPA on February 18, 2014.

The RFLMA Parties agreed on the evaluation steps described below and agreed that no mitigating actions are necessary at this time, for the following reasons:

- The remedy remains protective. The remedy standard for total uranium at the WALPOC sampling location is the calculated 12-month rolling average. Using the most recent validated data, the calculated 12-month rolling average at WALPOC for total uranium on December 31, 2013, is 6.1 µg/L, well below the remedy performance standard of 16.8 µg/L.
- WALPOC has been a RFLMA monitoring location for roughly 2.5 years. During that period, the Site experienced one of its driest years (2012) and its wettest month (September 2013) according to precipitation data collected since 1990. Because uranium concentrations are influenced by changing environmental conditions, varying uranium concentrations at WALPOC are anticipated. While significant uranium concentration variability can be seen in both individual sample results and in the 30-day averages, the observed variability is not outside of anticipated ranges nor do these levels suggest the existence of a new source term.
- Although the recent result was above the Site standard of 16.8 µg/L, it remains well below the drinking water standard (i.e., the maximum contaminant level [MCL]) of 30 µg/L. While the MCL is not applied at the Site, the fact that the uranium concentration triggering this reportable condition was well below that level indicates that the remedy remains protective of human health and the environment.

However, the RFLMA Parties also agreed that further evaluation should be completed to help confirm the foregoing conclusions and to aid in developing future mitigating actions if they become necessary.

Plan and Schedule to Address the Reportable Condition: The RFLMA Parties agreed that steps described in this Contact Record shall serve as the plan and schedule for the evaluation.

The following steps have been or are being taken and will inform the evaluation.

- Measured concentrations of total uranium at WALPOC include both naturally occurring and anthropogenic uranium. Previous high-resolution isotopic uranium analyses for WALPOC show signatures that are between 76 and 80 percent naturally occurring uranium. Additional high-resolution isotopic uranium analysis on the most recent WALPOC samples is being conducted to determine the percentages of natural and anthropogenic uranium for comparison to the historical data. These samples include a split from the December 18, 2013, composite sample that triggered the reportable condition. Additional grab samples were collected on February 13, 2014, from WALPOC, Pond A-4, GS11 (Pond A-4 outlet), Pond B-5, and GS08 (Pond B-5 outlet). These samples will also be evaluated using high-resolution uranium analysis techniques.
- Split samples will continue to be collected from each flow-paced composite collected at WALPOC and held for possible high-resolution isotopic uranium analysis.
- Flow-paced composite samples routinely being collected at WALPOC will continue to be analyzed on a 2-week turnaround.
- A qualified geochemistry subcontractor with direct and applicable experience at the Rocky Flats Site is currently conducting an extensive evaluation of the fate and transport of

uranium at the Site. The data collected throughout the Walnut Creek drainage for the fate and transport study will also be utilized in this WALPOC reportable condition evaluation.

The purpose of the study, as it relates to this reportable condition, is to evaluate variability in uranium concentrations—due to seasonal, hydrologic, geochemical, and geographic effects—through the collection of targeted analytical and field data. The study also incorporates the ongoing calculation of the percentages of natural uranium versus anthropogenic uranium in Walnut Creek.

The methods used for the study include assessing historical and current data, identifying patterns or correlations, and evaluating potential geochemical mechanisms that may contribute to the noted results. The study has also identified additional data needs; collection of these data is ongoing.

The study is scheduled to be completed in CY 2014.

- On February 26, 2014, DOE provided a split sample from the sample collected on January 16, 2014, to CDPHE for analysis of uranium at the State's Radiochemistry Laboratory.

DOE will report the results of this monitoring and of the subsequent evaluation in RFLMA quarterly and annual reports of surveillance and monitoring activities. This plan and schedule may be modified based on the outcome of RFLMA Party consultation related to the evaluation.

To keep the public informed, the outcome of continuing RFLMA Party consultation regarding the evaluation will be reported in RFLMA quarterly and annual reports of surveillance and monitoring activities or in subsequent contact records.

Resolution: Carl Spreng, CDPHE, approved this contact record.

Closeout of Contact Record: This contact record will be closed when the results from the evaluation have been transmitted to CDPHE or as the RFLMA Party consultation related to this evaluation directs.

Contact Record Prepared by: George Squibb and David Ward, Stoller

---

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