ROCKY FLATS SITE
REGULATORY CONTACT RECORD 2025-01

Purpose: Reportable condition for uranium at Point of Evaluation (POE) GS10

Contact Record Approval Date: November 4, 2025

Site Contacts and Affiliations: Michelle Franke and Joyce Chavez, U.S. Department of Energy (DOE); Jon Vail and Ryan Wisniewski, RSI EnTech, LLC (RSI)

Regulatory Contacts and Affiliations: Brian Walker, Colorado Department of Public Health and Environment (CDPHE); Brandon Nichalson, U.S. Environmental Protection Agency (EPA)

Date of Consultation Meeting: July 10, 2025

Consultation Meeting Participants: Brian Walker, CDPHE; Brandon Nichalson, EPA; Michelle Franke and Joyce Chavez, DOE; Jon Vail, Ryan Wisniewski, John Boylan, Eric Matynowski, George Squibb, and Caleb Artz, RSI

Related Contact Records: Contact Record (CR) 2021-02, CR 2022-03, CR 2023-01

Discussion:
DOE identified a reportable condition at POE GS10 (Figure 1) upon receipt of validated analytical results for uranium from the composite sample collected during the period from April 2, 2025, to April 30, 2025, at the Rocky Flats Site, Colorado. Validated results arrived on May 21, 2025; the uranium concentration in the sample was 24.8 micrograms per liter (µg/L).

DOE performed the evaluation in accordance with *Rocky Flats Legacy Management Agreement* (RFLMA), Attachment 2, Figure 6, "Points of Evaluation," and calculated the 12-month rolling average concentration for uranium on April 30, 2025, at 17.8 µg/L. This concentration exceeds the applicable RFLMA, Attachment 2, Table 1 standard of 16.8 µg/L. This 12-month rolling average includes sample results for the period from May 1, 2024, through April 30, 2025.[1]

Subsequent uranium sample results for composite samples collected in May 2025 are below the Table 1 standard. As of May 31, 2025, the 12-month rolling average uranium concentration at POE GS10 is 16.4 µg/L, ending the reportable condition discussed herein.

[1] This method entails calculating the 12-month rolling average for the last day of each month, using daily flow and concentration values from the previous 12 months. DOE calculates and evaluates 12 average values each year.

The RFLMA Parties considered the following information in developing a path forward, as outlined in this CR:

- Recent uranium results for composite samples collected at WALPOC, the Walnut Creek Point of Compliance, have remained below the 16.8 µg/L standard through June 8, 2025.[2] As of May 31, 2025, the 12-month rolling average uranium concentration at WALPOC is 7.3 µg/L.
- The most recent uranium concentrations at GS10 are consistent with concentrations observed during the 19 years since closure.
- Uranium in groundwater in the GS10 area is variable, and some monitoring wells have higher concentrations of naturally occurring uranium. Since closure, DOE has sent numerous samples from GS10 to Los Alamos National Laboratory (LANL) or Lawrence Berkeley National Laboratory (LBNL) for isotopic analysis to determine the percentages of natural and anthropogenic uranium. Historically, naturally occurring uranium has made up a much greater proportion of the concentration at GS10, averaging about 70%.[3]
- The elevated uranium concentrations at GS10 observed since closure are primarily the result of proportionally increased groundwater contributions to surface water base flow due to reduced surface runoff resulting from the removal of impervious surfaces (e.g., pavement, buildings) that were present before closure.
- The RFLMA Parties expect uranium concentrations in surface water to fluctuate due to the natural variability in environmental conditions, such as precipitation runoff and groundwater recharge. Uranium concentrations at GS10 have periodically exceeded the RFLMA standard since Site closure. In more recent years, uranium concentrations have decreased.
- A study conducted by geochemistry experts details the variability of the uranium concentrations. The results of the study are published in the *Evaluation of Water Quality Variability for Uranium and Other Selected Parameters in Walnut Creek at the Rocky Flats Site* (September 2015). The authors have updated this report three times, most recently in 2024. The 2021 report is available at https://lmpublicsearch.lm.doe.gov/lmsites/rfs_evaluation_of_water_quality_variability_walnut_creek_dec_2021.pdf ; the 2024 update is in final review and will be posted soon.

Proposed Plan and Path Forward:
The following actions are consistent with the response to previous reportable conditions for uranium at GS10 and serve as the plan and schedule for the evaluation:

- DOE will continue sampling in accordance with RFLMA, Attachment 2, Table 2
- DOE will routinely analyze flow-paced composite samples from GS10 on an accelerated 2-week turnaround
- DOE will make available, upon CDPHE's request, a split sample from an upcoming composite sample collected at GS10
- DOE will report the results of continued monitoring and of the subsequent evaluation in RFLMA quarterly and annual reports of surveillance and maintenance activities

[2] The WALPOC composite sample started on June 9, 2025, is still in progress. Seasonal flow at WALPOC ceased on June 15, 2025.

[3] The Rocky Flats Site annual reports include LANL and LBNL data as appendixes for the years when the laboratories have completed these isotopic analyses.

Resolution:
CDPHE, after consultation with EPA, approves this CR.

Action Complete:
The actions approved in this CR will continue as part of routine surface water monitoring and reporting, as identified in the sections above and documented within the RFLMA. The RFLMA Parties will document any future changes to these steps separately.

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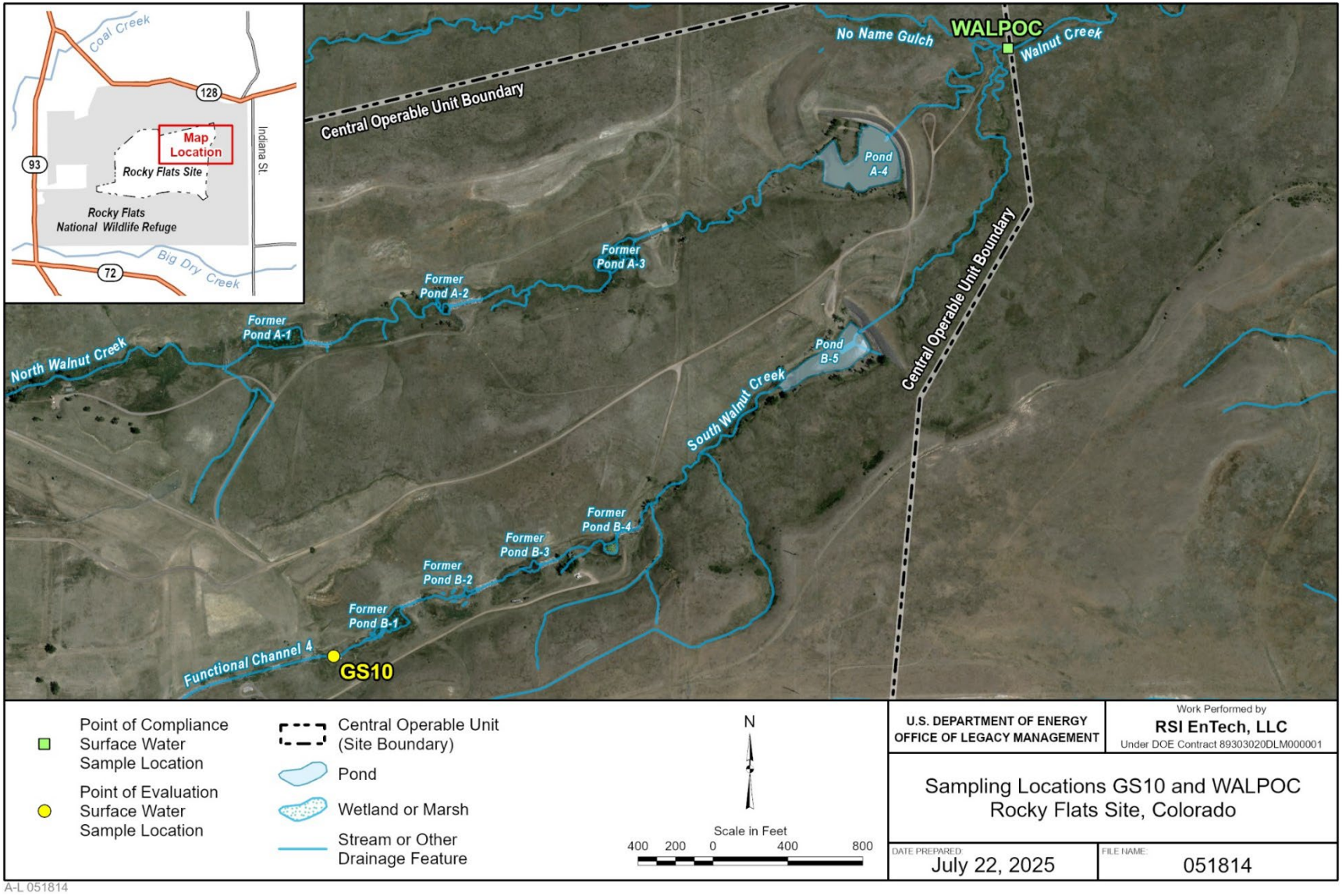

Figure 1. POE GS10 and WALPOC Locations