

# ROCKY FLATS SITE

## REGULATORY CONTACT RECORD 2022-04

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**Purpose:** Reportable condition for plutonium at Point of Evaluation (POE) SW027

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**Contact Record Approval Date:** February 2, 2023

**Site Contacts and Affiliations:** Andy Keim and Shawn Eichelberger, U.S. Department of Energy (DOE); Dana Santi and Ryan Wisniewski, RSI EnTech, LLC (RSI)

**Regulatory Contacts and Affiliations:** Lindsay Murl, Colorado Department of Public Health and Environment (CDPHE); Rob Stites, U.S. Environmental Protection Agency (EPA)

**Date of Consultation Meeting:** September 27, 2022

**Consultation Meeting Participants:** Lindsay Murl, CDPHE; Rob Stites, EPA; Andy Keim and Shawn Eichelberger, DOE; Dana Santi, Ryan Wisniewski, John Boylan, George Squibb, and Karin McShea, RSI

**Related Contact Records:** Contact Record (CR) 2021-03

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**Discussion:** Surface water POE SW027 has remained dry throughout 2022. There has been no flow at POE SW027 since July 5, 2021, and the most recent analytical results are from the composite sample collected from May 20, 2021, to July 2, 2021. Even so, DOE determined a reportable condition at surface water POE SW027 during routine data evaluation for plutonium. DOE performed this evaluation in accordance with the *Rocky Flats Legacy Management Agreement* (RFLMA), Attachment 2, Figure 6, “Points of Evaluation.” The calculated average plutonium concentration for the 12 months ending May 31, 2022, and June 30, 2022, was 0.18 picocuries per liter (pCi/L), which is above the RFLMA site-specific standard for plutonium of 0.15 pCi/L.

It has been a relatively dry year at the Rocky Flats Site, Colorado, and 2022 is on track to have some of the lowest surface water flows since closure in 2005. The unusually low spring runoff and the extended dry periods (no streamflow) have resulted in 12-month rolling average concentrations that are more influenced by the dry conditions than by measured water quality variation.

Plutonium at POE SW027 was previously reportable in 2021, when four composite samples were collected and analyzed. The consultation and response to the 2021 reportable condition are documented in RFLMA CR 2021-03 and the July 1, 2022, RFLMA Dispute Resolution Committee determination, entitled *Tri-party Dispute Resolution on Contact Record 2021-03 for Reportable Condition at POE SW027*. DOE implemented actions in response to the 2021 reportable condition, some of which are ongoing for a five-year period.

The final 2021 composite sample, which had a plutonium concentration of 0.18 pCi/L, is the only sample included in the calculation of the May and June 2022 12-month rolling plutonium averages for POE SW027. When DOE received validated results for this final 2021 composite

sample on July 27, 2021, it sent notification of this individual sample result to the agencies and public as identified within the RFLMA flowchart for points of evaluation. DOE also previously presented all the 2021 analytical data from POE SW027 in the corresponding quarterly and annual RFLMA reports. This 2022 reportable condition for plutonium at POE SW027 is not due to new data or recently changed conditions at POE SW027 but is essentially a continuation of the 2021 reportable condition. Therefore, this condition does not warrant any new mitigating actions in addition to those identified within the July 2021 and September 2021 consultations and the *Tri-Party Dispute Resolution on Contact Record 2021-03 for Reportable Condition at POE SW027*, dated July 1, 2022.

The following information was considered in developing the path forward outlined in this CR:

- There has been no flow at POE SW027 since July 5, 2021. Therefore, the current reportable condition includes no new data for 2022; only data from 2021 are included in the average. This 2022 reportable condition for plutonium at POE SW027 is essentially a continuation of the 2021 reportable condition. DOE has implemented response actions described in CR 2021-03 and the *Tri-party Dispute Resolution on Contact Record 2021-03 for Reportable Condition at POE SW027*, which are ongoing. Those response actions are intended to address the same conditions that led to this 2022 reportable condition.
- Monitoring shows no RFLMA reportable condition at the downstream Woman Creek Point of Compliance (POC), WOMPOC. Using the most recent validated data, the calculated 12-month rolling average at WOMPOC for plutonium on June 30, 2022, is 0.014 pCi/L, which is well below the RFLMA Table 1 standard of 0.15 pCi/L.
- DOE has implemented and continues to implement additional erosion control measures. Based on the most recent inspections of the POE SW027 drainage area, existing erosion control measures continue to function and protect the hillside.
- Although plutonium concentrations at POE SW027 can be highly variable based on the frequency and intensity of individual precipitation events, average annual concentrations do not indicate an increasing trend.

**Proposed Plan and Path Forward:** The actions described below are consistent with the response to previous reportable conditions for plutonium at POE SW027:

- Sampling will continue in accordance with RFLMA Table 2 when surface water runoff is available.
- DOE will continue to conduct source evaluation monitoring at surface water location GS51.
- DOE will continue to monitor the vegetation within the best management practice (BMP) vegetation monitoring area as part of the normal revegetation monitoring that DOE conducts each July. DOE will continue to evaluate the erosion controls annually as a BMP in the spring and fall, although it may also evaluate them at other times during the year (e.g., after heavy precipitation events). DOE will repair or replace existing erosion control measures and revegetate the areas as necessary.
- DOE will make available upon CDPHE's request a split sample from an upcoming composite sample collected at POE SW027.
- DOE will report the results of continued monitoring and of the subsequent evaluation in RFLMA quarterly and annual reports of surveillance and monitoring activities.

- DOE will continue to implement the actions required by the *Tri-Party Dispute Resolution on Contact Record 2021-03 for Reportable Condition at POE SW027*, dated July 1, 2022. This Contact Record does not modify or amend the requirements in the Dispute Resolution Committee determination.

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

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

**Contact Record Prepared by:** Ryan Wisniewski, RSI

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Rocky Flats Contact Record File

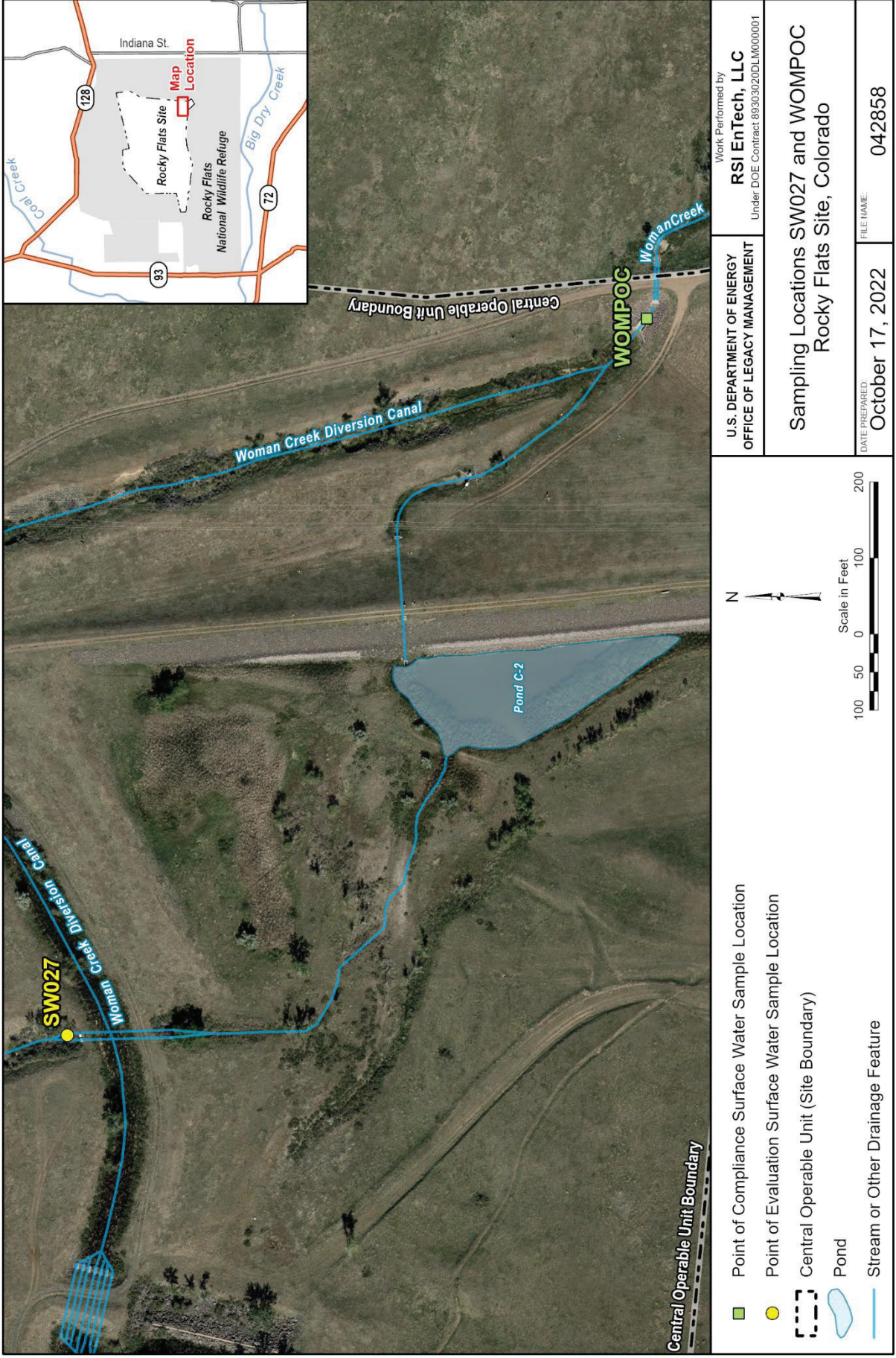


Figure 1. POE SW027 Location