

ROCKY FLATS STEWARDSHIP COUNCIL

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City of Golden ~ City of Northglenn ~ City of Thornton ~ City of Westminster ~ Town of Superior
League of Women Voters ~ Rocky Flats Cold War Museum ~ Rocky Flats Homesteaders

Monthly Status Report – February 2017

Board meeting summary

Election of Stewardship Council Officers for 2017

The Board elected the following officers. The terms run until the February 2018 meeting.

Chairman – Joyce Downing (Northglenn)
Vice Chairman – Chris Hanson (Superior)
Secretary/Treasurer – Lisa Morzel (Boulder)

Approval of 2017 Meeting Dates

The 2017 meeting dates are as follows:

February 6
April 3 (note: this meeting was subsequently changed to April 17)
June 5
September 11
October 30

DOE Quarterly Update – 3rd Quarter 2016 (June-September)

Highlights included:

- Surface water monitoring
 - The mean concentrations downstream from the Original Landfill (OLF) were below the applicable standards.
 - At the Present Landfill, arsenic exceeded the standard of 10 µg/L. Concentration was 14 µg/L. In the following sample, arsenic was not detected.
 - At WALPOC, uranium exceeded the 30-day average. (see DOE's notice below)
 - At SW027, the 12-month rolling average for plutonium remained reportable. Standard is 0.15 pCi/L; sample was 0.18 pCi/L.
- Groundwater monitoring
 - Work continued at the Solar Ponds treatment system and Mound Site treatment system.

DOE's report can be found at: https://www.lm.doe.gov/Rocky_Flats/Documents.aspx

Original Landfill Update

See the discussion of Contact record 2017-01 (below) for a summary of the groundwater intercept system.

Legacy Management monthly site inspection summary

DOE reports site personnel conducted the following activities in January.

Water Quality

- Conducted routine surface water monitoring and maintenance.

Groundwater Treatment Systems

- East Trenches Plume Treatment System (ETPTS): DOE reports the system is working as designed.
- Mound Site Plume Treatment System (MSPTS): DOE reports the system is working as designed.
- Solar Ponds Plume Treatment System (SPPTS): DOE reports the full-scale test lagoon continued to treat nitrate to concentrations that were below the detection limit. Uranium treatment tests using microcells continued through the month.

Ecology

- Site personnel conducted erosion control surveys and repaired erosion controls, as needed.

Landfills

- Construction of the OLF east subsurface drain upgrade project was completed.
- The Original Landfill path forward plan was posted on the DOE-Rocky Flats website (https://www.lm.doe.gov/Rocky_Flats/Documents.aspx)

DOE Notification of a Reportable Condition for Uranium

On February 3, 2017, DOE issued the following notice:

This notification is to inform you of a reportable condition at the Rocky Flats Site, under the Rocky Flats Legacy Management Agreement (RFLMA), Attachment 2, Section 6.0, “Action Determinations,” at the RFLMA Point of Compliance WALPOC (sampling location identification). The Colorado Department of Public Health and Environment was notified on January 31, 2017.

The validated analytical result received on 1/30/2017 for the sample retrieved on 1/3/2017 from the WALPOC composite sampler was 16.9 ug/L (microgram per liter) total uranium. This composite sample result is representative of water flowing during the time period 6/16/2016 9:29 to 1/3/2017 11:40. During this time period, water was flowing at WALPOC for 48 days; there was no flow for 145 days. An evaluation was performed in accordance with RFLMA, Attachment 2, Figure 5, “Points of Compliance,” which resulted in a calculated 30-day average concentration for uranium on 12/8/2016 of 16.9 µg/L. This result exceeds the RFLMA Attachment 2, applicable Table 1 Standard for total uranium of 16.8 ug/L.

In accordance with RFLMA Attachment 2, Figure 5, “Points of Compliance,” the method to determine compliance with the remedy performance standard is the 12-

month rolling average. In this case, the calculated 12-month rolling average for 1/31/2016 cannot be calculated until analytical results are received for the composite sample collected for the period 1/3/2017 11:40 to 1/30/2017 14:35 (preliminary results are expected the week of February 14). The 12-month rolling average uranium concentration for 12/31/2016 is 11.5 µg/L. Previous high-resolution isotopic uranium analyses for this location show signatures that are between 68 and 87 percent natural uranium.

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

- DOE must submit a plan and schedule to the regulators for an evaluation to address the condition within 30 days (on or before March 1, 2017) 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 determining a course of action (if necessary) to address the reportable condition and ensure the remedy remains protective.
- Results of consultation will be documented in contact records and/or written correspondence.

If you have any questions, please contact:

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Contact Record – 2017-01

Original Landfill Temporary Groundwater Intercept System

This record address the ongoing investigation into instability on the eastern side of the Original Landfill (OLF), and steps DOE is taking to reduce groundwater flows into the landfill. (See prior Stewardship Council updates and CR 2015-03 from May 2015.)

As provided in the record,

The purpose of the proposed project is to install wells to intercept what appear to be preferential groundwater flows into the OLF that follow abandoned storm-drain lines and bedding corridors for these lines from former Buildings 460 and 440/444 (see attached Figure 1)...This project is designed and will be constructed as a temporary measure for 2 years of operation during the high groundwater season (spring), to allow for groundwater data collection and to evaluate its potential effectiveness in enhancing hillside stability. The goal is to develop a long-term, sustainable maintenance solution for peak groundwater elevation reduction at the OLF during periods of extended precipitation to enhance hillside stability”

As background, and as further provided in the record:

Two separate geotechnical engineering subcontractors (CD & E and Tetra Tech) confirmed that the instability of the OLF hillside observed over the past several years is due to saturated conditions in the subsurface during periods of extended precipitation as reported in the Original Landfill Path Forward, Rocky Flats Site, Colorado (DOE 2017) (Appendices F and G). This saturation further weakens the inherently weak geologic features such as the underlying organic rich unit and the contact between low-permeability claystone bedrock material and the overlying hillslope colluvium. (As illustrated by visible slump features, this mechanism also drives hillside instability in other areas with similar geologic settings along the Front Range.) Reducing the inflow of groundwater to this hillside, particularly in the less-stable eastern portion of the constructed OLF hillside, is therefore a primary objective. This was the intent of the ESSD reconstruction maintenance action. A network of storm drains associated with the former 400 Area north of the OLF included storm drains that transect the OLF. The Kaiser-Hill Company, LLC closure report Utilities and Infrastructure Closure Report, Sector 8A (440 and 460 Area) (August 2005) documents disruption of these components; however, a large area of saturation and instability generally coincides with what is mapped as the southern extent of the remnant of the drain network. The Geoprobe activities in August and September 2016 targeted components of this network upgradient of the OLF. The results of that work have not confirmed that this drain network routes groundwater into the OLF, but it is likely.

The record can be found here -- https://www.lm.doe.gov/Rocky_Flats/ContactRecords.aspx

Stewardship Council Update

Upcoming 2017 Board meetings

April 17
June 5
September 11
October 30