Overview of the Third Quarter 2017 Surveillance and Maintenance Report for the LM Rocky Flats Site

July to September 2017
Quarterly Monitoring and Reporting

- Quarterly reports are required under the *Rocky Flats Legacy Management Agreement* (RFLMA) to document that the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedy continues to provide effective protection.

- Components of the remedy for Rocky Flats include:
  - Maintain two landfill covers
  - Maintain three groundwater treatment systems
  - Monitor surface water and groundwater
  - Maintain physical controls
    - Signage
    - Access restriction
Quarterly Monitoring and Reporting

Components of the remedy for Rocky Flats include:
(continued)

- Enforce institutional controls
  - No occupied building construction
  - Excavation and soil-disturbance restrictions
  - No surface-water consumption or agricultural use
  - No groundwater wells, except for monitoring
  - Landfill covers and engineered remedy-components protection
Surface Water Monitoring

Third Quarter 2017
Select RFLMA Surface-Water Monitoring Locations
Original Landfill Performance Monitoring

- Original Landfill (OLF) (location GS59)
  - Routine surface water sampling in Woman Creek, downstream of the OLF (GS59) during the third quarter of 2017 showed mean concentrations for all analytes were below applicable RFLMA water quality standards.
Present Landfill Performance Monitoring

- Present Landfill (PLF) (location PLFSYSEFF)
  - Routine second-quarter sampling showed one analyte above the applicable RFLMA standard
    - Vinyl chloride concentration was 0.28 µg/L, exceeding the practical quantitation limit of 0.2 µg/L
    - Per RFLMA evaluation protocols, the result triggered a sampling frequency increase from quarterly to monthly
  - For the following monthly sample, vinyl chloride was not detected
    - Per RFLMA evaluation protocols, sampling frequency returned to quarterly
Point of Evaluation Monitoring

- No RFLMA point of evaluation (POE) analyte concentrations were reportable during the third quarter of 2017
Point of Compliance Monitoring

- No RFLMA point of compliance (POC) analyte concentrations were reportable during the third quarter of 2017
RFLMA Groundwater Monitoring Overview

- RFLMA monitoring network
  - Ten Resource Conservation and Recovery Act (RCRA) wells (quarterly)
    - Evaluate potential impacts from OLF and PLF
  - Nine Area of Concern (AOC) wells and one Surface Water Support location (semiannually)
    - Located in drainages downstream of contaminant plumes
    - Evaluate for plumes discharging to surface water
  - Twenty-seven Sentinel wells (semiannually)
    - Downgradient of treatment systems, edges of plumes, and in drainages
    - Look for plumes migrating to surface water and treatment system problems
RFLMA Groundwater Monitoring Overview

- RFLMA monitoring network (continued)
  - Forty-two Evaluation wells (biennially)
    - Within plumes, near source areas, and interior of Central Operable Unit (COU)
    - Evaluate whether monitoring of an area or plume can cease
  - Nine treatment system locations (seven semiannually, two quarterly)
Groundwater treatment system locations omitted for clarity
RFLMA Monitoring

- Light sampling period
  - Only RCRA wells (PLF, OLF)
- Results generally consistent with previous data
- Will be evaluated as part of the 2017 annual report
Treatment System Activities

- Routine maintenance at the Mound Site Plume Collection System and East Trenches Plume Treatment System
- Continued evaluating treatment at Solar Ponds Plume Treatment System
  - Influent nitrate continued to be treated to below detection limits in lagoon
  - Subcontracted treatment experts began work on improving uranium treatment
Questions?
Site Operations

Third Quarter 2017
Quarterly Sign Inspections

- RFLMA physical control
- Signs inspected on September 5, 2017
  - One sign east of the COU that had fallen off was replaced
Site Operations: OLF

- Performed three monthly inspections
  - July 27, August 8, and September 21, 2017
  - August 8 inspection was combined with weather related
- A weather-related inspection was conducted on September 25
- Maintenance to address slumping event was identified and completed
- Surveyed eight settlement monuments on September 5
  - Vertical settling at each monument was within limits
Site Operations: OLF (continued)
OLF Maintenance Activities

- East Subsurface Drain was inspected as part of the OLF monthly and weather-related inspections
- Temporary groundwater intercept system became operational on March 29 and operated throughout the third quarter
Site Operations: PLF

- Performed quarterly inspection on August 8, 2017
  - Combined with weather-related inspection
- Additional weather-related inspection on September 25
- Landfill in good condition; no maintenance required
Former Building Areas 371, 771, 881, 991

- Former building areas routinely inspected (quarterly and during weather-related inspections) for subsidence
- During third quarter 2017, two weather-related inspections were performed:
  - August 8
  - September 25
- No changes were identified
North Walnut Creek Slump

- Hillside maintenance grading was conducted during second quarter
- During third quarter, a crack developed along the slump scarp alignment
  - Maximum crack displacement was 3 to 4 inches in width and 2 feet in depth
  - Survey monitoring points installed and surveyed
  - Crack filling performed
North Walnut Creek Slump (continued)
Site Roads

- Access roads are in good shape with no major rutting
- Fall maintenance is scheduled for the fourth quarter
Ecology Activities

- Preble’s mouse mitigation monitoring
- Wetland mitigation monitoring
- Revegetation monitoring
- Prairie dog surveys
- Shrub/tree planting survival monitoring
- Photopoint monitoring
Questions?