Overview of the Third Quarter 2013 Surveillance and Maintenance Report for the LM Rocky Flats Site

July–September 2013
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 be protective
  - Primary goal is protection of surface water
- Response action under the final remedy for Rocky Flats
  - Maintain two landfill covers
  - Maintain four groundwater treatment systems
  - Surface water and groundwater monitoring
  - Physical controls
    - Signage
    - Restricted access
  - Institutional controls
    - No building construction or occupation
    - Restrictions on excavation and soil disturbance
    - No consumption or agricultural use of surface water
    - No groundwater wells except for monitoring
    - Protection of landfill covers and engineered remedy components
Surface Water Monitoring

Third Quarter 2013
Selected RFLMA Surface Water Monitoring Locations
Performance Monitoring at OLF and PLF

- **OLF**
  - All sampling results met water quality standards during the quarter

- **PLF**
  - For the routine sample collected from the system effluent on August 15, 2013, arsenic (As) was measured at 11 µg/L (the standard is 10 µg/L)
  - The result prompted As sampling to be done on a more frequent, monthly basis
  - Arsenic continued to be detected above the standard in the first two monthly samples; results for the third monthly sample are pending
Point of Evaluation Monitoring – GS10

- Reportable 12-month rolling average values for americium, plutonium, and uranium at GS10 were observed during the quarter.
- Additional sampling is being conducted both upstream and downstream of GS10.
- As of September 30, 2013, uranium is no longer reportable.
GS10 Investigation Monitoring

Sampling Locations
- Point of Evaluation GS10
- Surface Water
- Well

- Pond A-4
- Pond B-5
- No Name Gulch
- South Walnut Creek
- North Walnut Creek
- MSPTS
- B5 INFLOW
- B3 OUTFLOW
- GS10
- B5 POND
- WALPOC
- COU Boundary

- SEEP988
- SEEP995A
- SEEP995B
- SEEP995C
- FC4988
- FC4995
- FC4997
- 15699
- 79502
- 00203
- 79605
- 45608
- 91203
- 91305
- 00203
- FC4750
- FC4991
- FC4997
- FC4988

- McKay Bypass Can
Questions?
RFLMA Monitoring

- Light quarter
  - Third quarter (same as first quarter)
  - Only sampled RCRA wells
    - PLF
    - OLF

- Statistical evaluation of results will be included in annual report for 2013
Non-RFLMA Monitoring

- Treatment systems
  - MSPTS: air stripper evaluations and optimization
  - ETPTS: air stripper evaluations and optimization
  - SPPTS: microcells and lagoons
Treatment System Activities

- **MSPTS and ETPTS**
  - MSPTS air stripper: cleaned pump (biofouled)
  - ETPTS air stripper
    - Replaced 10 small nozzles with single larger nozzle
    - Pump malfunctioned in September (clogged with scale)
      - Reconfigured and replaced with two pumps of a different design
- **SPPTS**
  - Completed several microcell tests
    - ZVI, steel wool, mixtures
  - Continued to increase flow through pilot-scale lagoons
    - At end of quarter, testing residence times of 3-4 days in Cell B
  - Heavy September rains affected the system
    - Vaults flooded, affecting electronics and dosing
    - Several phases of repairs and modifications; back online October 1
Questions?
SITE OPERATIONS

Third Quarter 2013
Quarterly Sign Inspections

- RFLMA physical control
- All signs are in good condition
Site Operations – OLF

- Three monthly inspections performed; weekly inspections of slumping areas
- Eight settlement monuments and seven inclinometers monitored
OLF Cracking/Settling
OLF Reportable Condition Evaluation

- Contact Record 2013-02 posted to public website on October 24
- Geotechnical engineer observed conditions September 24
  - Technical memorandum of evaluation and recommendations provided in Contact Record 2013-02
- Similar localized cracking and movement on west side of OLF noted in 2007; geotechnical investigation completed in 2008
  - Distress generally includes small-scale, localized slump features originating in comparatively weak clay layer underlying OLF
  - Heavy precipitation can result in moisture penetrating this layer and reduce stability; large-scale slope failure unlikely
- Filling the East Perimeter Channel steep headwall and grading to improve runoff will help stabilize the area
Planned OLF East Perimeter Channel Filling and Grading

- Design drawings for filling and grading approved by CDPHE
- Contact Record 2013-03, with approved *Soil Disturbance Review Plan*, posted to public website on November 27
  - Soil disturbance cannot occur earlier than 10 days after posting the Contact Record
- Severe cold spells and snow in December and early January; planning for early spring start
- Continue weekly monitoring of area and also after significant storm events
- Routine maintenance to fill/tamp cracks if any occur
- Snow removal if major snow drifting occurs above distress area
Site Operations – PLF

- One quarterly inspection performed
- Annual surveys of nine settlement monuments completed in December
Site Road Repairs – Flood Response

- Repaired damaged roads sitewide
- Project duration, November 4 through 14
Questions?
Third Quarter 2013 Ecological Monitoring Summary

- Weed mapping
- Nest box surveys
- Prairie dog surveys
- Revegetation monitoring
- PMJM mitigation monitoring
- Wetland mitigation monitoring
- Photopoint monitoring
- Herbicide applications
  (approximately 62 acres treated)
- Erosion control surveys
Questions?