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
Selected RFLMA Surface Water Monitoring Locations
Performance Monitoring at OLF and PLF

- OLF (Woman Creek)
  - All sampling results met water quality standards during the quarter

- PLF (System Effluent)
  - All sampling results met water quality standards during the quarter
Point of Evaluation Monitoring – GS10

- Reportable 12-month rolling average values for americium and plutonium at GS10 continued to be observed during the quarter.
- All plutonium and americium results since August 2013 have been below the 0.15 pCi/L standard.
- Additional sampling continues to be conducted downstream of GS10.
- As of June 30, 2014, there were no reportable conditions at GS10.
Point of Compliance Monitoring – WALPOC

- Reportable, 30-day average values for uranium at WALPOC were first observed during December 2013.
- As of May 18, 2014 the 30-day average for uranium was no longer reportable.
- The 12-month rolling average remains below 16.8 µg/L.
- Additional sampling is being conducted upstream of WALPOC.
Questions?
RFLMA Monitoring

- **Heavy sampling quarter**
  - Second quarter of even-numbered years is heaviest
    - Includes all RFLMA groundwater monitoring locations
      - 10 RCRA wells (quarterly)
      - 9 AOC wells (semiannually, 2\(^{nd}\) and 4\(^{th}\) quarters)
      - 28 Sentinel wells (semiannually, 2\(^{nd}\) and 4\(^{th}\) quarters)
      - 42 Evaluation wells (biennially, 2\(^{nd}\) quarter; by convention, all in even-numbered years)
      - Treatment system locations (semiannually, 2\(^{nd}\) and 4\(^{th}\) quarters)
      - 1 Surface Water Support location (semiannually, 2\(^{nd}\) and 4\(^{th}\) quarters)
  - 1 Sentinel well was dry (as expected for that location)
NOTE: Groundwater treatment system locations omitted for clarity
RFLMA Monitoring

- MSPTS: VOC above RFLMA level detected at surface water performance location GS10
  - TCE (reported at 2.8 ug/L; RFLMA level is 2.5 ug/L)
  - Re-sampled, concentrations back below RFLMA levels
  - Caused by 2013 flood-related groundwater recharge
    - More groundwater means higher flow rates
    - Higher flow rate means shorter residence time in treatment system
    - Shorter residence time limits treatment

- Statistical evaluations and discussion of 2nd quarter results will be included in annual report for 2014
Non-RFLMA Monitoring

- Treatment systems
  - MSPTS: air stripper, including data to evaluate adjacent French drain
  - ETPTS: air stripper
  - SPPTS: microcell and lagoon testing
Treatment System Activities

- **MSPTS**
  - Air stripper
    - Cleaned pump, nozzles, plumbing
    - Maintained ventilation fans
    - Sampled

- **ETPTS**
  - Air stripper
    - Cleaned
    - Sampled

- **SPPTS**
  - Continued microcell tests
  - Continued pilot-scale lagoon tests
  - Sampled
ETPTS Reconfiguration Project

- Solicited bids, issued Notice of Award June 18
- Converts system from treatment using ZVI to treatment using a commercial air stripper
- Will treat water in batches (not run continuously)
- Will use existing solar/battery power, with minor additions and revisions
- Air stripper will be housed in small enclosure next to tanks (former treatment cells)
- Scheduled to be completed late CY 2014
Questions?
Site Operations

Second Quarter 2014
Quarterly Sign Inspections

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

- Three monthly inspections performed; weekly inspections of areas where recent slumping or cracking had been noted
- Eight settlement monuments and seven inclinometers monitored
Site Operations – OLF (continued)

- No significant cracking was noted within the landfill boundaries during the second quarter
- Cracking and slumping were noted on the east side of the East Perimeter Channel, outside of the landfill boundary
- Cracks were filled as required by the M&M Plan
Site Operations – PLF

- One quarterly inspection performed
2nd Quarter Ecology Activities

- Weed Mapping
- Prairie Dog Surveys
- Wetland Water-level Surveys
- Wetland Weed Surveys
- Herbicide Applications (~58 acres treated)
- Planted 130 trees/shrubs for habitat enhancement.
  (Rocky Mountain Juniper [30], 4-Wing Saltbush [50], and Skunkbush [50])
- Set up irrigation system for plantings and watered weekly.
- Preparations made for revegetation, Preble’s mouse, and wetland monitoring that will occur in the 3rd quarter.