

---

# **Overview of the First Quarter 2015 Surveillance and Maintenance Report for the LM Rocky Flats Site**

January–March 2015

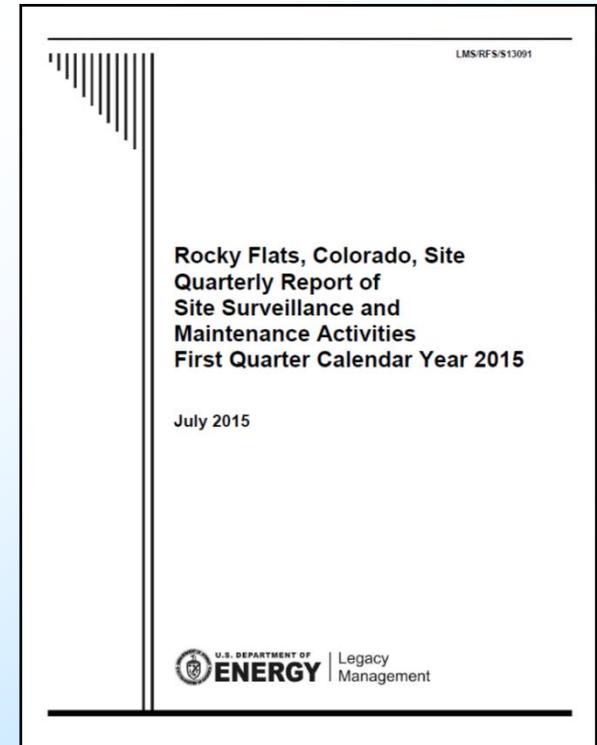


U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

# 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 surface water protection
- 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 surface water consumption or agricultural use
    - No groundwater wells except for monitoring
    - Landfill covers and engineered remedy components protection



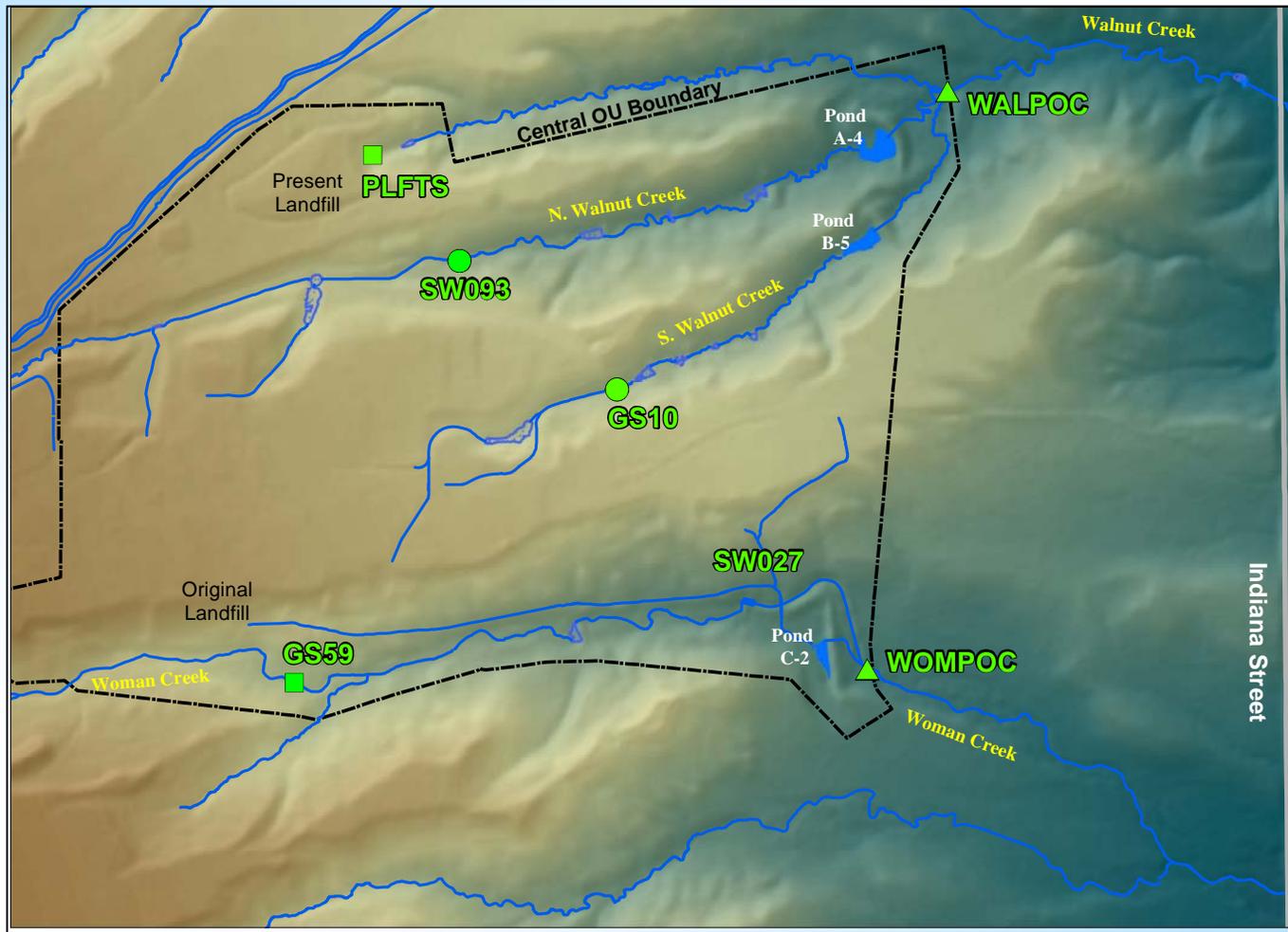
# Surface Water Monitoring



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

# Selected RFLMA Surface Water Monitoring Locations



# Performance Monitoring at Original Landfill (OLF) and Present Landfill (PLF)

- OLF (Woman Creek – location GS59)
  - All sampling results met water quality standards during the quarter
- PLF (System Effluent – location PLFSYSEFF)
  - Routine quarterly sampling result for vinyl chloride was 0.23  $\mu\text{g/L}$ 
    - Above RFLMA standard of 0.2  $\mu\text{g/L}$
    - Prompted increased sampling frequency (monthly) per RFLMA evaluation protocols
  - Three consecutive monthly sampling results above standard (0.24 – 0.26  $\mu\text{g/L}$ )
    - Prompted former PLF Pond outfall to No Name Gulch (location NNG01) sampling
  - Vinyl chloride not detected at NNG01; sampling frequency reverted to quarterly per RFLMA protocols



# Point of Evaluation (POE) Monitoring

- All RFLMA POE analyte concentrations were not reportable throughout the first quarter of calendar year (CY) 2015



# Point of Compliance (POC) Monitoring

- Reportable 12-month rolling average uranium concentrations were initially observed at WALPOC on October 31, 2014
- Uranium was no longer reportable at WALPOC as of January 31, 2015
- All other RFLMA POC analyte concentrations remained below reporting levels throughout the first quarter of CY 2015



# Questions?



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

# Groundwater Monitoring and Operations

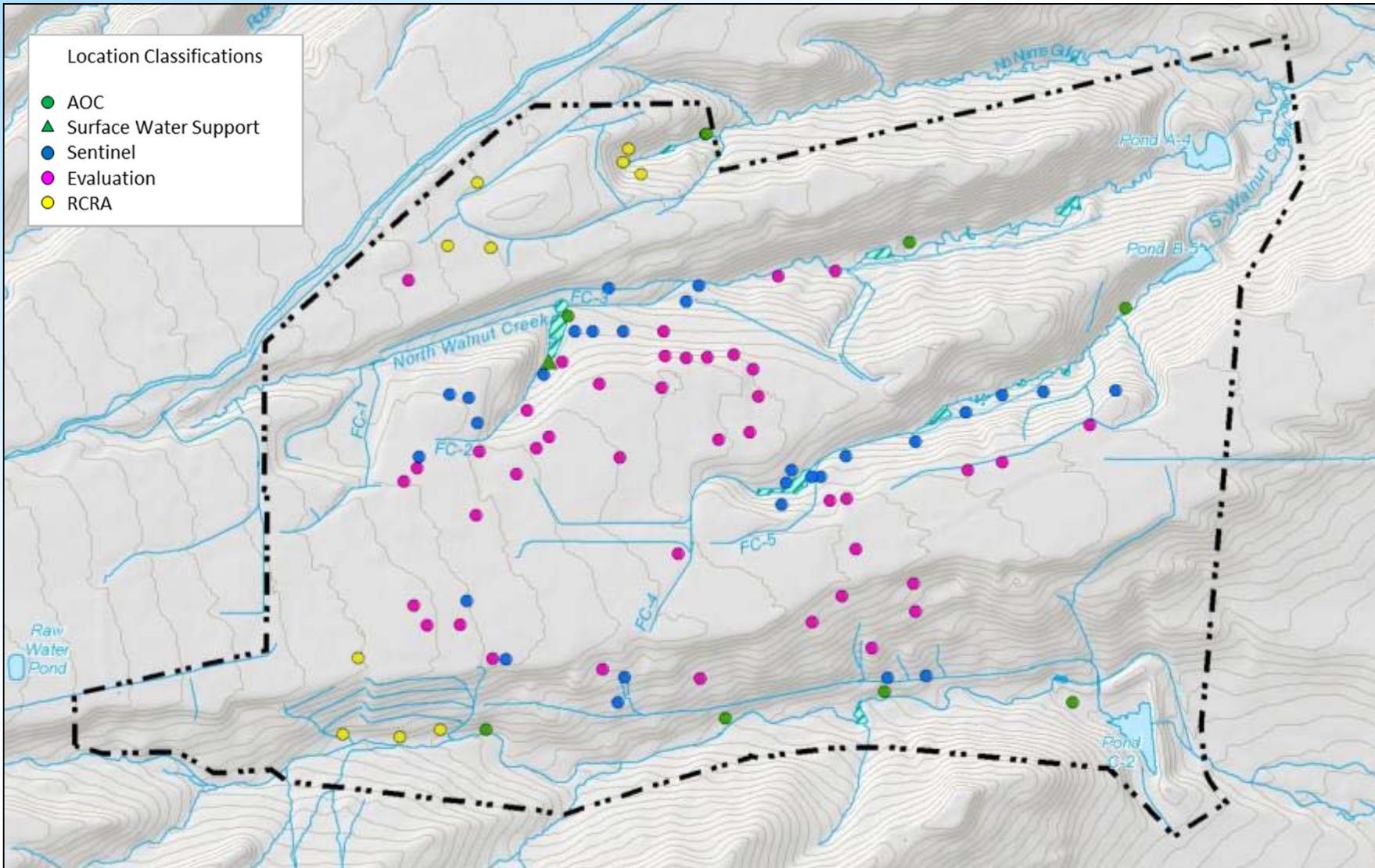


First Quarter 2015



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management



*NOTE: Groundwater treatment system locations omitted for clarity*



**U.S. DEPARTMENT OF ENERGY**

Legacy Management

# RFLMA Monitoring

- Light sampling quarter
  - 10 Resource Conservation and Recovery Act wells (quarterly)
- Statistical evaluation of results will be presented in annual report



# Non-RFLMA Monitoring

## ■ Treatment systems

- East Trenches Plume Treatment System (ETPTS): air stripper
  - Sampled to support reconfiguration project
- Solar Ponds Plume Treatment System (SPPTS): microcell and lagoon testing



# Treatment System Activities

- Mound Site Plume Treatment System (MSPTS)
  - Air stripper maintenance
- ETPTS
  - Completed reconfiguration project
- SPPTS
  - Continued microcell tests
  - Continued pilot-scale lagoon tests (including sampling)
    - Replaced blankets with insulated covers
  - Maintained pumps, solar/battery power facility



# ETPTS Reconfiguration Project

- Completed electrical work
- Completed air-stripper enclosure
- Activated air stripper January 16, 2015
  - Collected samples to confirm treatment effectiveness
    - Initial samples: Trichloroethene concentrations slightly above RFLMA target
  - Blower motor output increased
  - Subsequent samples met all applicable RFLMA standards
- Manufacturer cites this unit as the only fully off-grid, solar/battery air stripper known

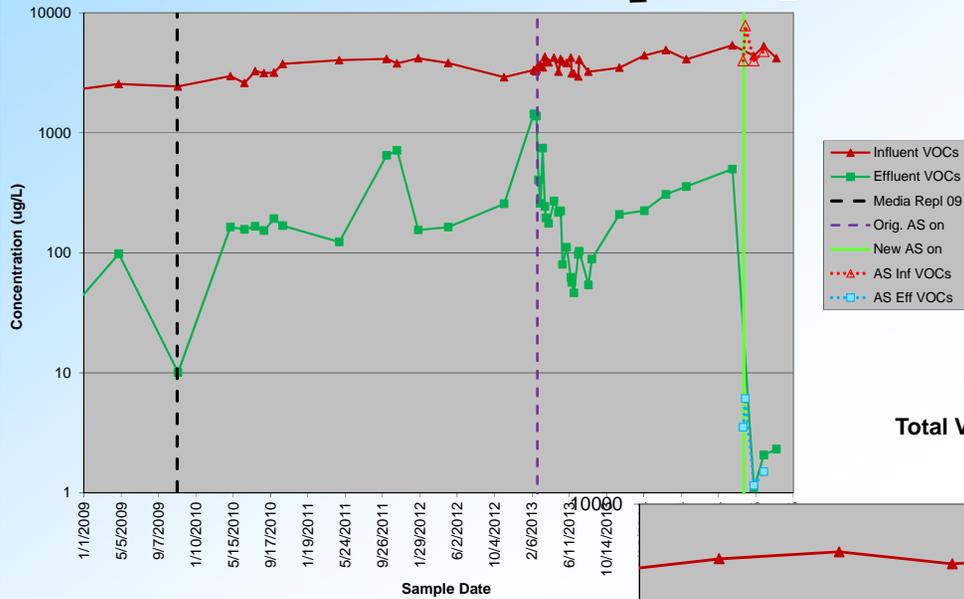




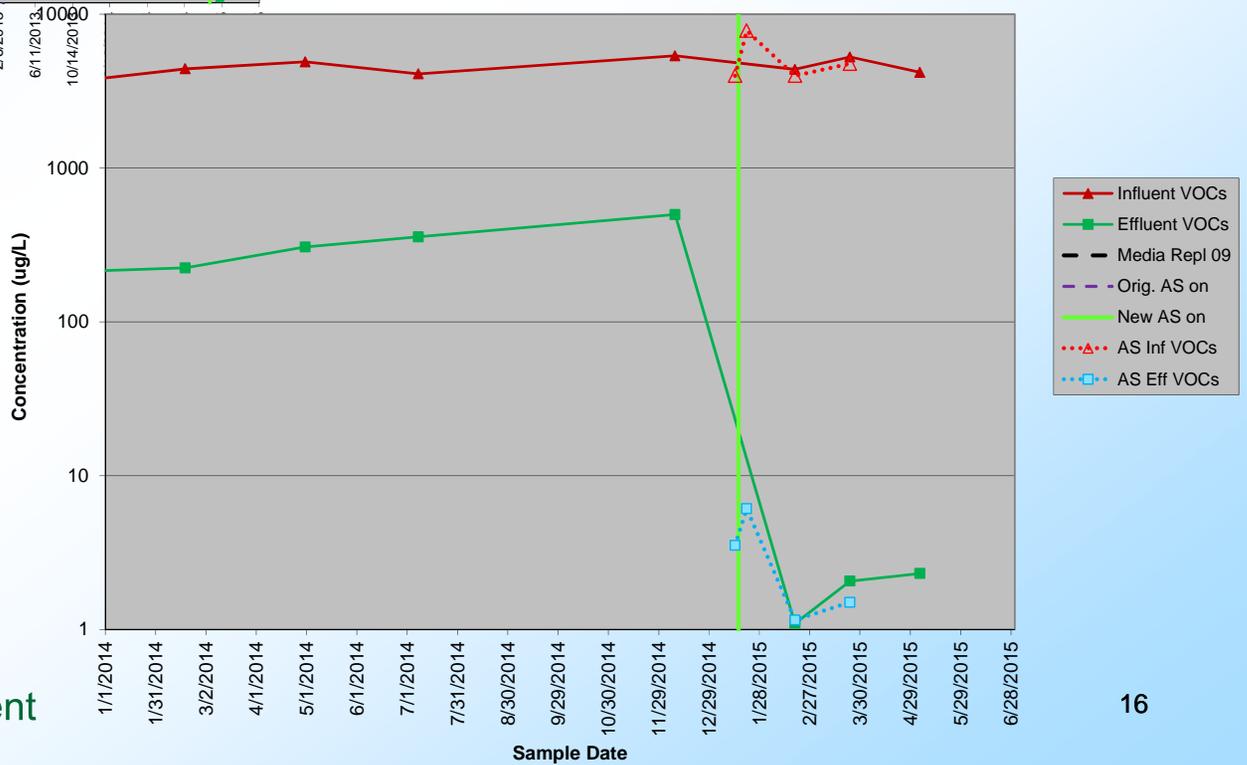
U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

# Questions?



Total VOCs Detected in ETPTS Influent vs. Effluent



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

# Site Operations



**First Quarter 2015**



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

# Quarterly Sign Inspections

- RFLMA physical control
- All signs are in good condition



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

# Site Operations – OLF

- Performed three monthly inspections – One special inspection due to more than 10 inches of snowmelt
- Monitored eight settlement monuments and seven inclinometers



# Site Operations – OLF (continued)

- Completed the project to reconfigure the East Perimeter Channel in mid-January
- Observed cracking and slumping in several locations on the east side of the OLF in March
- Filled cracks as feasible, based on soil conditions
- CDPHE and the U.S. Environmental Protection Agency inspected the landfill on March 17, 2015
- The geotechnical engineer inspected the landfill on March 19



# Site Operations – OLF (continued)



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management



# Site Operations – PLF

- Performed one quarterly inspection – One special inspection due to snowmelt of more than 10 inches



# Questions?



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management