
Overview of the Third Quarter 2015 Surveillance and Maintenance Report for the LM Rocky Flats Site

July–September 2015

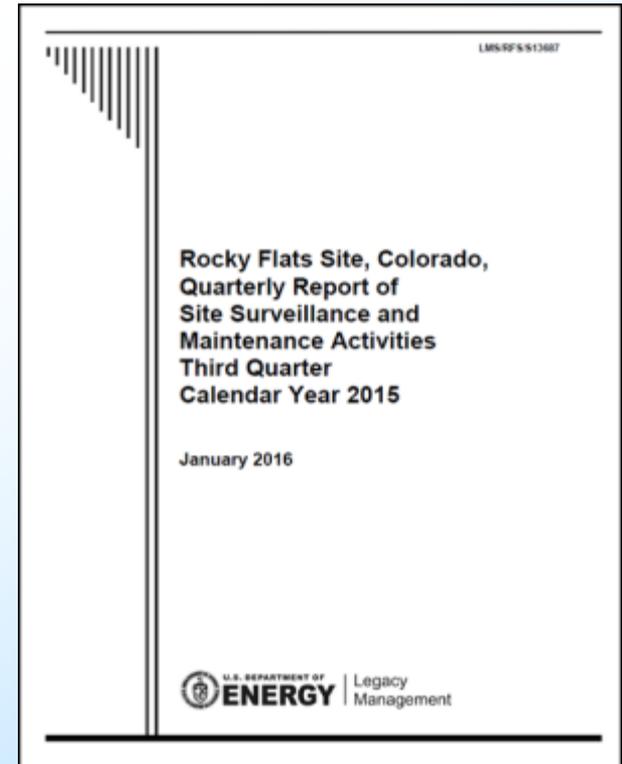


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Quarterly Monitoring and Reporting

- Quarterly reports are required under the *Rocky Flats Legacy Management Agreement* (RFLMA) to document that the CERCLA remedy continues to be protective
 - Primary goal: Surface water protection
- Response action under the final remedy for Rocky Flats
 - Maintain two landfill covers
 - Maintain four groundwater treatment systems
 - Monitor surface water and groundwater
 - Maintain physical controls
 - Signage
 - Access restriction
 - Enforce institutional controls
 - No building construction or occupation
 - 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



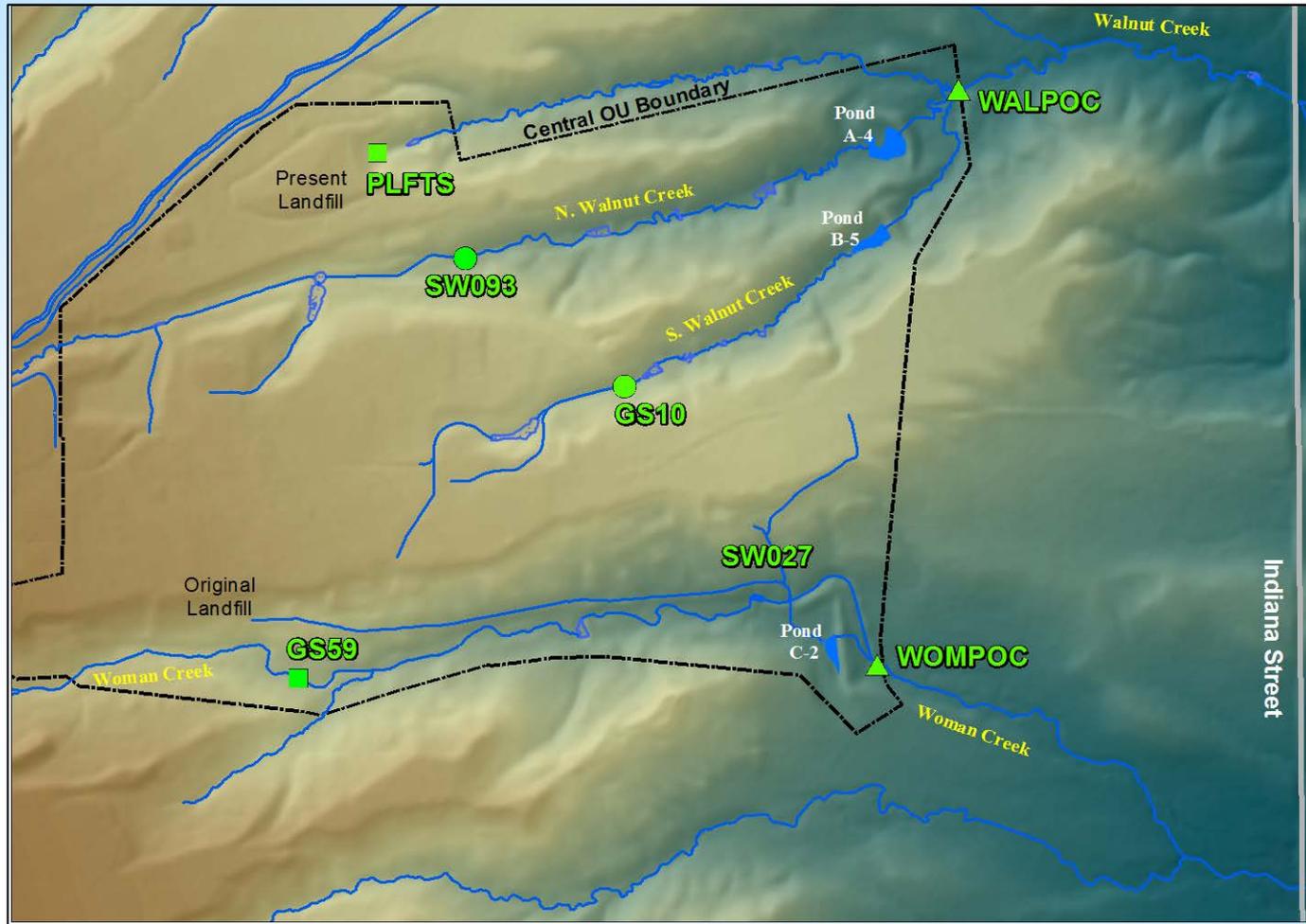
Surface Water Monitoring



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Select RFLMA Surface-Water Monitoring Locations



Original Landfill (OLF) Performance Monitoring

- OLF (Woman Creek – location GS59)
 - Composite sampling results for arsenic and selenium above RFLMA standards
 - Mean arsenic concentration 10.6 $\mu\text{g/L}$ for the quarter (RFLMA standard is 10 $\mu\text{g/L}$)
 - Mean selenium concentration 6.7 $\mu\text{g/L}$ for the quarter (RFLMA standard is 4.6 $\mu\text{g/L}$)
 - Prompted increased sampling frequency (monthly) for the fourth quarter, per RFLMA evaluation protocols
 - Similar concentrations detected at upstream location GS05



Present Landfill (PLF) Performance Monitoring

- PLF (System effluent – location PLFSYSEFF)
 - Routine third quarter sampling showed three analytes above the applicable RFLMA standard
 - Vinyl chloride concentration was 0.28 µg/L, exceeding the practical quantitation limit of 0.2 µg/L
 - Arsenic concentration was 18 µg/L, exceeding the standard of 10 µg/L
 - Selenium concentration was 14 µg/L, exceeding the standard of 4.6 µg/L
 - Per RFLMA evaluation protocols, the results triggered a sampling frequency increase from quarterly to monthly
 - Subsequent results from the first monthly sample showed all three analytes below the standard, or not detected



Point of Evaluation (POE) Monitoring

- Location SW027 – 12-month rolling average for plutonium: Reportable as of April 30, 2015
 - 12-month rolling averages 0.22 (April 30) and 0.72 pCi/L (May 31): standard is 0.15 pCi/L
 - Composite sample initiated June 12, 2015 still in progress
 - RFLMA Contact Record 2015-05 (July 8, 2015)
 - Mitigating actions include enhancing upstream erosion controls
 - All results from downstream WOMPOC are less than applicable standards
- No other RFLMA POE analyte concentrations were reportable throughout third quarter calendar year (CY) 2015



Point of Compliance (POC) Monitoring

- All RFLMA POC analyte concentrations remained below reportable levels throughout third quarter CY 2015



Questions?



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Groundwater Monitoring and Operations

Third Quarter 2015



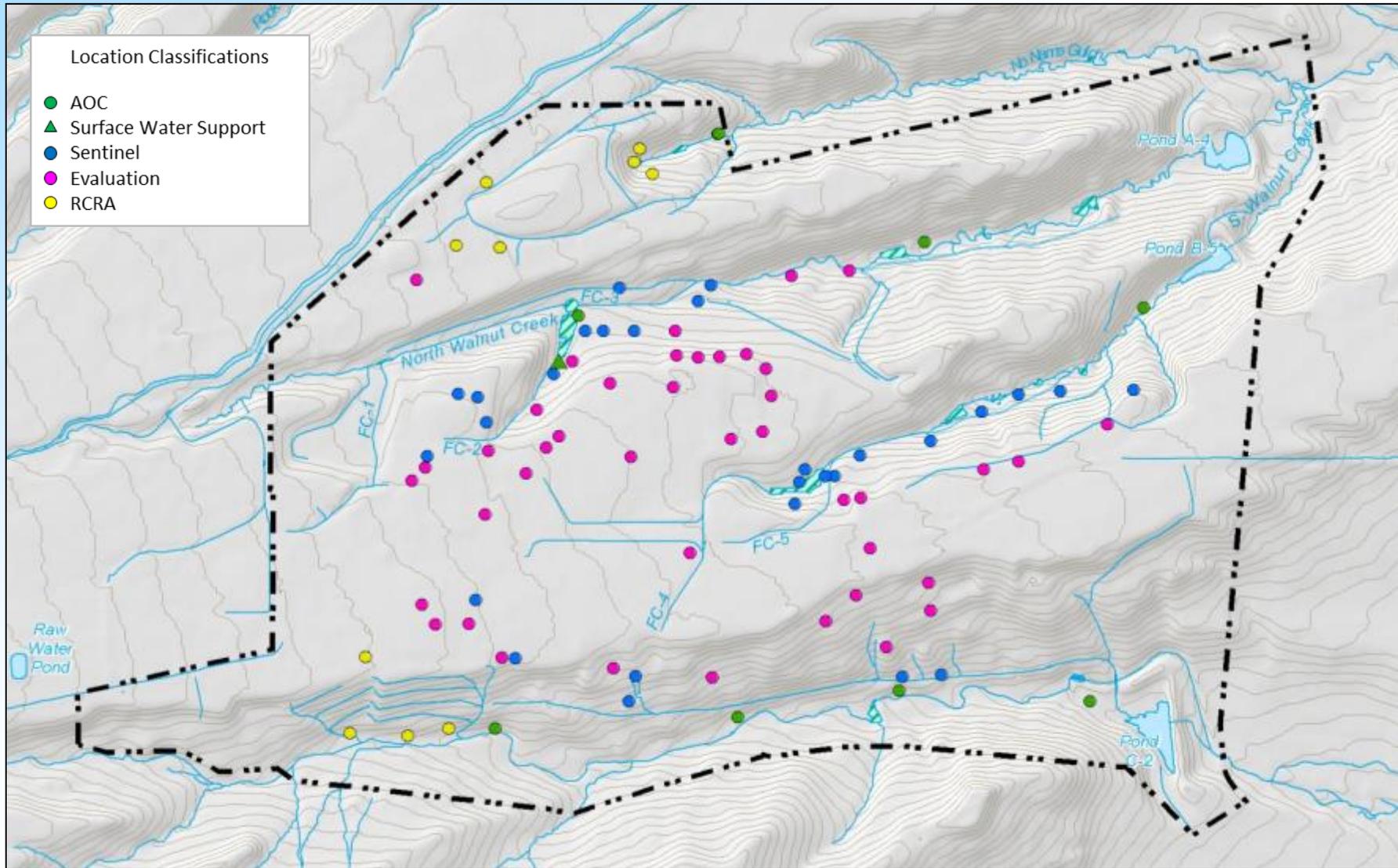
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RFLMA Monitoring

- Light sampling quarter
 - 10 RCRA wells (sampled quarterly)
 - Groundwater quality generally consistent with previous results
 - Results will be evaluated in the annual report
- Heavy spring precipitation continued to affect groundwater levels and treatment system flows





NOTE: Groundwater treatment system locations omitted for clarity



Treatment System Activities

- Treatment systems experienced above-average flows
- MSPTS
 - Routine maintenance on air stripper, other components
 - Continued designing system reconfiguration
 - Construction scheduled for mid-2016
- ETPTS
 - Routine maintenance
 - Adjusted timer settings
 - Monitored power levels (augmented with generator as necessary)
 - Replaced malfunctioning effluent pump (augmented with portable sump pump as necessary)
 - Cleaned scale from some components
 - See less scale buildup compared to original, small-scale air stripper



Treatment System Activities (continued)

■ SPPTS

- Continued microcell and lagoon tests
- Replaced malfunctioning ITSS pump
- Replaced damaged wiring
- Developing procurement package to construct interim configuration
 - Empty original “Big Box” structure, scale it up to test full-scale lagoon operation and performance
 - Construction scheduled for early 2016



Questions?



Site Operations

Third Quarter 2015



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Quarterly Sign Inspections

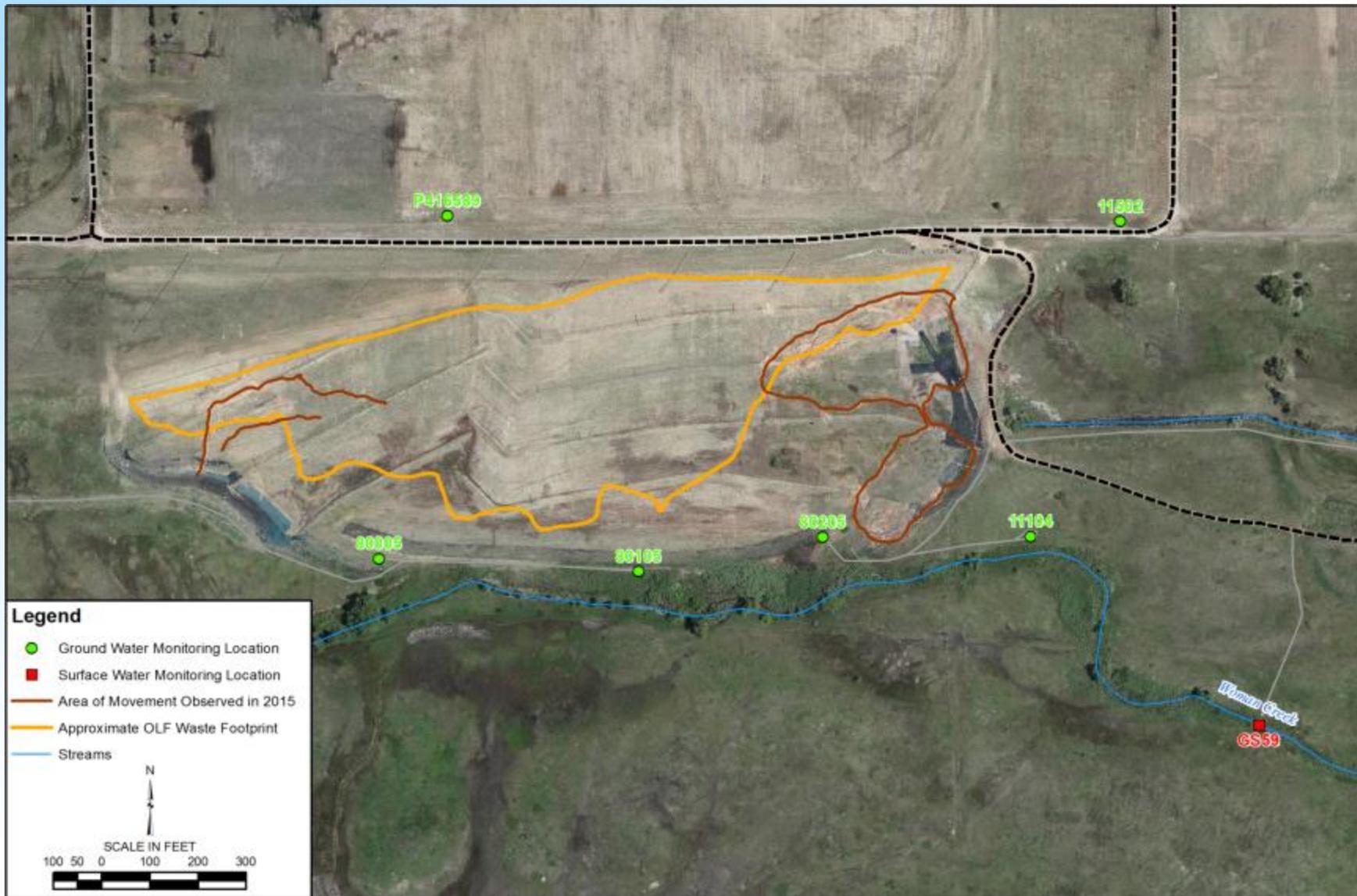
- RFLMA physical control
- All signs are in good condition



Site Operations – OLF

- Performed three monthly inspections
 - One weather-related inspection occurred in July due to a precipitation event producing more than 1 inch of rain in a 24-hour period
- Monitored eight settlement monuments
- Cracking and slumping were less pronounced on OLF east and west sides, compared to second quarter observations
- Construction – interim action to reestablish surface water management on portions of the OLF
 - Began August 18 and completed September 22
 - Graded, smoothed, and filled cracks to promote water drainage from the cover
 - Potholed existing east subsurface drain to investigate reason for low flows
 - Applied seed and installed erosion control matting on all disturbed areas





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Site Operations – OLF (continued)



OLF East Scarp Area – July 2015



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Site Operations – OLF (continued)



OLF West Side – July 2015





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OLF East Side Former Scarp Area – September 2015





OLF West Side – September 2015

Site Operations – PLF

- Performed one quarterly inspection and one weather-related inspection for precipitation events producing more than 1 inch of rain in a 24-hour period
 - No issues were observed during inspections



Former Building Areas 371, 771, 881, and 991

- Inspected former building areas
 - Observed and filled subsidence areas at 881 and 771
 - Subsidences ranged from 1 to 3 feet wide, and 1 to 1.5 feet deep



Questions?



Ecology Activities

- Conducted Preble's mouse and wetland mitigation monitoring, wetland delineations, and revegetation monitoring
- Conducted forb nursery monitoring
- Surveyed current and former prairie dog towns in and near the COU for activity
- Conducted revegetation activities
- Treated approximately 145 acres with herbicides for weed control
- Continued watering habitat enhancement shrubs planted in spring 2015

