
Overview of the Third Quarter 2014 Surveillance and Maintenance Report for the LM Rocky Flats Site

July–September 2014

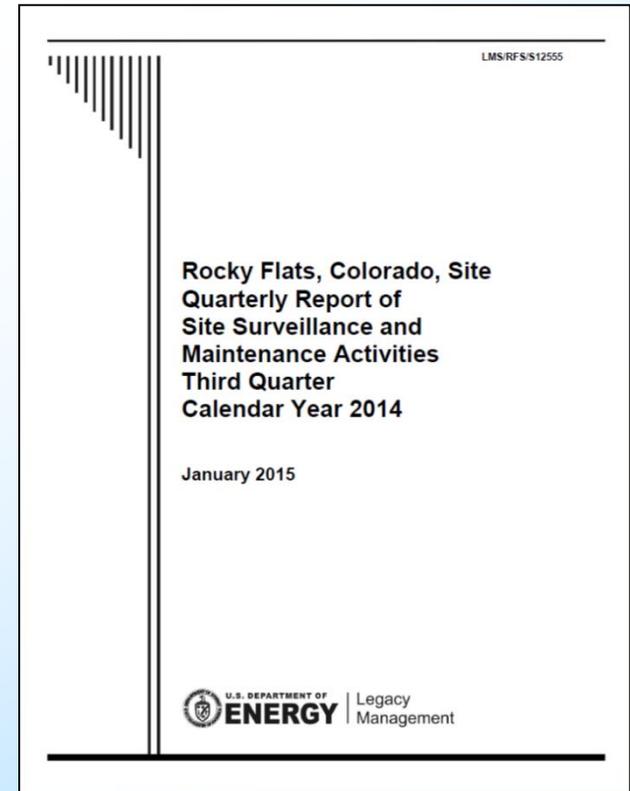


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Quarterly Monitoring and Reporting

- 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



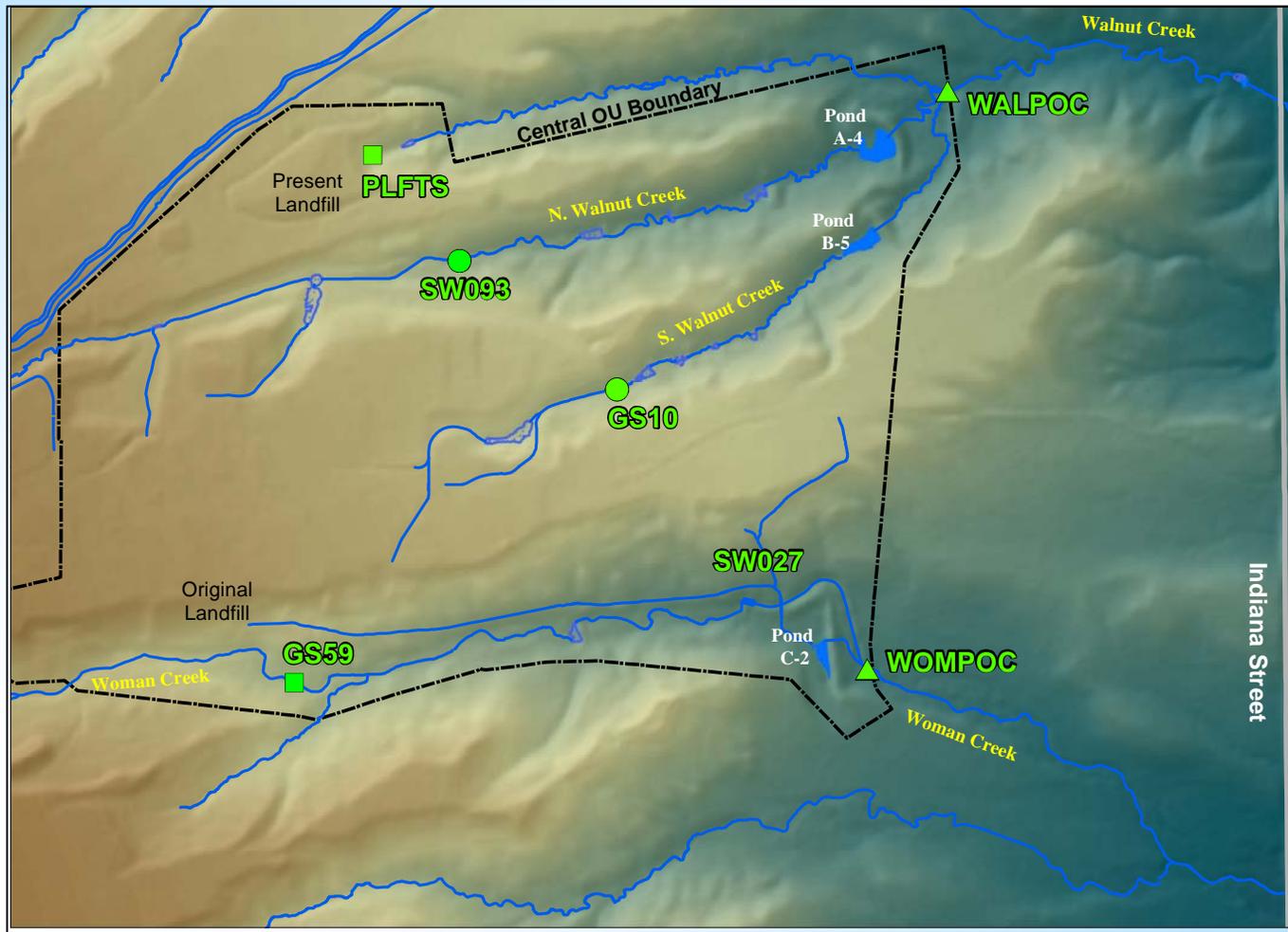
Surface Water Monitoring



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Selected RFLMA Surface Water Monitoring Locations



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

- OLF (Woman Creek)
 - All sampling results met water quality standards during the quarter
- PLF (System Effluent)
 - Routine quarterly sampling result for arsenic (As) was 15.0 $\mu\text{g/L}$
 - Above RFLMA standard of 10 $\mu\text{g/L}$
 - Triggered increased sampling frequency (monthly) per RFLMA evaluation protocols
 - First monthly sampling result (August 19, 2014) for As was 6.8 $\mu\text{g/L}$
 - Below RFLMA standard
 - Sampling frequency reverted to quarterly per RFLMA protocols



Point of Evaluation (POE) Monitoring

- All RFLMA POE analyte concentrations remained below reporting levels throughout the third quarter of calendar year (CY) 2014



Point of Compliance (POC) Monitoring

- All RFLMA POC analyte concentrations remained below reporting levels throughout the third quarter of CY 2014



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Groundwater Monitoring and Operations



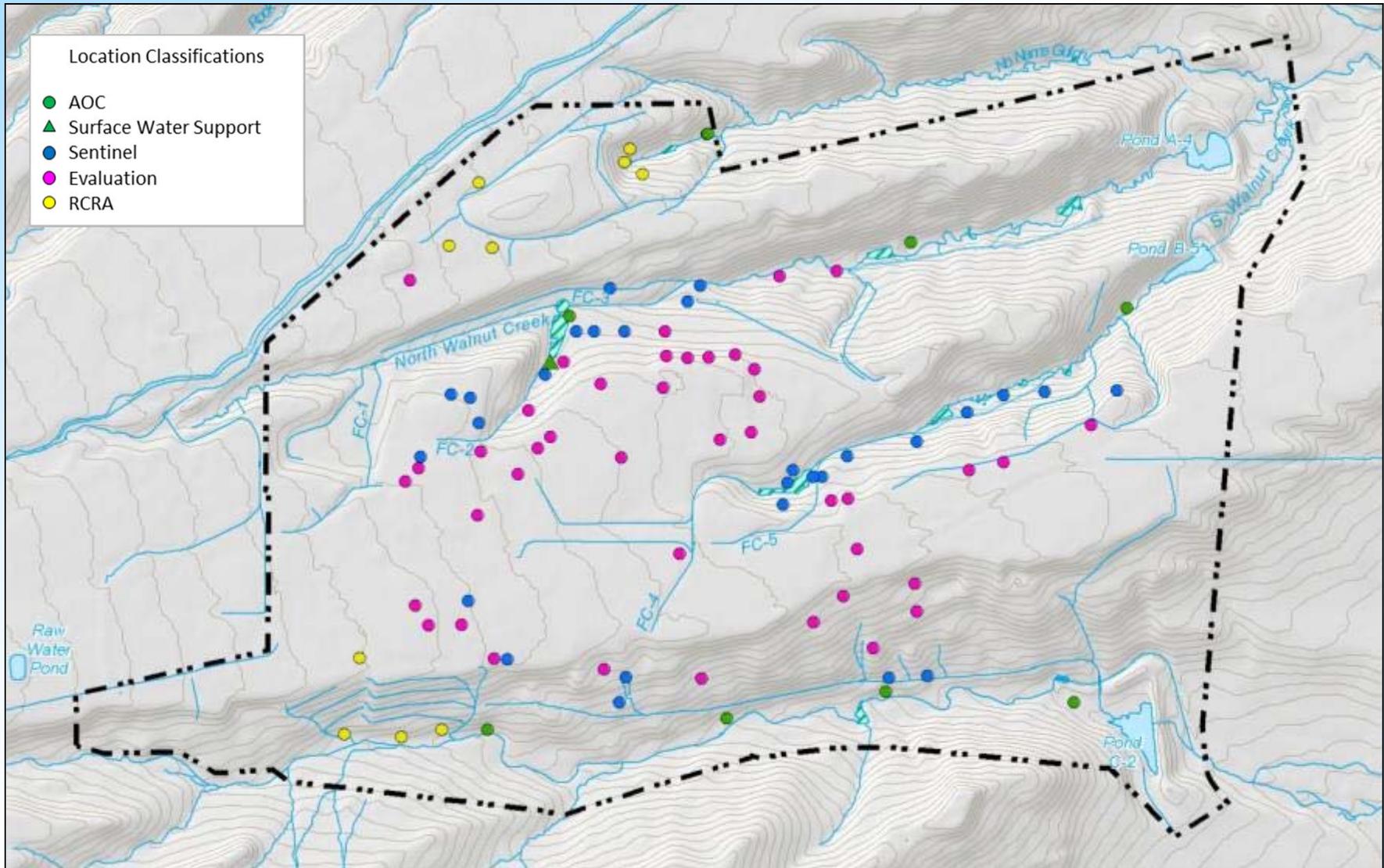
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RFLMA Monitoring

- Light sampling quarter
 - 10 RCRA wells (quarterly)
- Statistical evaluation of results will be presented in annual report





NOTE: Groundwater treatment system locations omitted for clarity



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Non-RFLMA Monitoring

- Treatment systems
 - ETPTS: air stripper, ZVI media
 - ZVI sampled to support disposition
 - SPPTS: microcell and lagoon testing



Treatment System Activities

- MSPTS
 - Air stripper maintenance
- ETPTS
 - Air stripper maintenance
 - Sampled to confirm performance
 - ETPTS reconfiguration project work
- SPPTS
 - Continued microcell tests
 - Continued pilot-scale lagoon tests (including sampling)
 - Maintained pumps, solar/battery power facility
 - Worked to improve flow through original treatment cells
 - Added plumbing to allow tests of microcells using effluent from pilot-scale lagoons

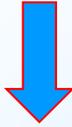


ETPTS Reconfiguration Project

- Drained ZVI-filled treatment cells
- Removed ZVI
- Began converting treatment cells for future purposes (influent batch tank, effluent tank)
- Sampled ZVI to support waste disposition
- Began electrical work, construction of air-stripper enclosure
 - Poor-quality soils led to extensive over-excavation, preparation of subgrade soils, minor redesign of enclosure foundation
- Project scheduled to be completed in January 2015



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Site Operations



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Quarterly Sign Inspections

- RFLMA physical control
- All signs are in good condition



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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 third quarter
- Gradual slumping was 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
- Berms were re-graded where necessary, to restore appropriate berm height and to repair damaged berm outfalls
- Geotechnical engineering review
 - Evaluation of documents, design concepts, and mitigation procedures related to the OLF
 - Review did not identify factors, conditions, or changes in conditions that suggest the current approach is any less valid now than when implemented
- Design of East Perimeter Channel Reconfiguration project was revised



Site Operations – PLF

- One quarterly inspection performed



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Third Quarter Ecology Activities

- Preble's meadow jumping mouse mitigation monitoring
- Wetland mitigation monitoring
- Revegetation monitoring
- Weed mapping
- Vegetation mapping
- Prairie dog surveying
- Nest box surveying
- Forb nursery monitoring
- Photopoint monitoring
- Herbicide applications
(approximately 60 acres treated)

