

# ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670  
Boulder, CO 80308-0670  
www.rockyflatssc.org

(303) 412-1200  
(303) 412-1211 (f)

Jefferson County -- Boulder County -- City and County of Broomfield -- City of Arvada -- City of Boulder  
City of Golden -- City of Northglenn -- City of Westminster -- Town of Superior  
League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders  
Karen Imbierowicz

## Monthly Status Report – June 2009

### Board meeting summary:

#### *2008 Stewardship Council Audit*

The auditor did not find any material deficiencies and issued a clean audit. The Board voted to accept the audit.

#### *Interpretative Signage for Rocky Flats*

The Board continued discussing signs USFWS might use to interpret the history of Rocky Flats and ongoing management needs. The conversation focused on three phases of site activities – production, remediation and management following remediation. This conversation is rooted in USFWS’ commitment, which was codified in the April 2005 Comprehensive Conservation Plan (CCP) for the Rocky Flats refuge, to include as part of the interpretative signage for Rocky Flats information about the history of the site as a nuclear weapons facility. Specifically, as the CCP provides, interpretative signage will include information about “DOE’s development and management of a nuclear weapons production site and the cold war history.... to tell the story of the site as a nuclear production site.”

#### *Site Monitoring Program*

The site monitoring program is outlined in the Rocky Flats Legacy Management Agreement (RFLMA), the regulatory document for Rocky Flats. Monitoring, in broad terms, includes environmental monitoring; maintenance of the erosion controls, access controls (signs), landfill covers, and groundwater treatment systems; and operation of the groundwater treatment systems.

More specifically, DOE must report on:

- Surface water and groundwater monitoring data, including the groundwater treatment systems;
- Ecological sampling data;
- Adverse biological conditions;
- Actions taken in response to reportable conditions;
- Maintenance and repairs;
- Inspection reports;
- The state of Colorado environmental covenant and the effectiveness of institutional controls;

- The Original Landfill (OLF) and Present Landfill monitoring data;
- Assessments of analytical data, including laboratory audits; and
- Other conditions or actions taken that are pertinent to the continued effectiveness of the remedy.

#### *Legacy Management (LM) Annual Update*

The Stewardship Council hosted the LM 2008 annual update. Updates included:

- groundwater monitoring
- surface water monitoring
- air monitoring
- ecological monitoring
- surveillance, maintenance and site operations

DOE's annual report executive summary was included in the May 2009 update.

Some of the highlights include:

- The Colorado Water Quality Control Commission (WQCC) accepted DOE's rulemaking petition to revise the site-specific uranium (U) surface water standard to align with the statewide surface water standard. The petition also sought to eliminate the gross alpha and gross beta standards.
- DOE continued investigating slumping on the Original Landfill (OLF). A clay layer containing organic materials at or near the bedrock appears to be a weak interface area. Modeling predicts small-scale instability due to percolating moisture that lubricates this weak interval. The OLF buttress stabilizes the landfill and no large-scale instability is predicted. Maintenance and repairs included adding soil to raise diversion berm heights to meet design criteria, constructing an extension to the Seep 7 drain, adding fill, and regrading the west diversion channel to improve slope stability.
- Phase I upgrades to the Solar Ponds Plume Treatment System (SPPTS) were completed in October 2008. The upgrades were designed to capture and treat more contaminated groundwater that would otherwise discharge, without treatment, to North Walnut Creek. Sampling of the SPPTS and North Walnut Creek locations was increased to support an evaluation of the effects of Phase I improvements to the system and to support planning for additional system upgrades to effectively treat the additional flow and higher concentrations of contaminants resulting from Phase I.
- Surface water flow volumes show expected reductions resulting from land configuration changes and removal of impervious surfaces.
- There were no water surface water quality exceedances. Surface water monitoring at the Present Landfill Treatment System showed four analytes as periodically above applicable standards.
- GS10, a groundwater well, continued to show reportable values for total U. Evaluation has suggested that these values result from changed hydrologic conditions, which have caused groundwater with naturally occurring U to make up a larger proportion of streamflow at GS10. All other analytes at GS10 showed acceptable water quality for the entire year.
- The groundwater treatment systems continued to successfully remove contaminant loading to surface water from groundwater plumes. Groundwater quality and flow at the

Site were generally consistent with previous years. Statistical trending calculations indicated numerous significant concentration trends. More trends were found to be decreasing than increasing (54 versus 44).

- The reportable condition reported at Area of Concern well B206989 due to elevated concentrations of nitrate in groundwater samples persisted through 2008. Concentrations were consistent with previous data, but statistical trending incorporating 2008 data now indicates a decreasing trend in nitrate concentrations that is statistically significant at the 80<sup>th</sup> percent confidence level. Additional consultations will be held to confirm the path forward.
- All RFLMA-required ecological data collection, analysis, and reporting were completed as scheduled.
- Revegetation monitoring data continues to document the establishment of the desirable grassland species at the Site.

### Legacy Management monthly site inspection summary:

May site activities included:

- Second quarter groundwater sampling continued; approximately 79% of the scheduled wells have been sampled.
- Discharge from Pond A-3 to Pond A-4 continued. Pre-discharge samples from Ponds A-4, B-5, and C-2 were collected in preparation for discharging, which began in late May and will be completed in June.
- SPPTS Phase II/III construction continued. The concrete components were set and the area was backfilled and compacted. Coring of the concrete tanks, vaults, and cells was completed and the lower penetrations were tested. Installation of the system instrumentation and telemetry systems began. Staff completed consultations with CDPHE regarding the monitoring plan for the SPPTS Phase II and III pilot studies, including the locations, frequencies, and analytes to be monitored. Preliminary results of the trace metals analysis for the preferred carbon source product (i.e., MicroCglycerin) showed elevated selenium concentrations. A screening-level evaluation concluded that the system effluent concentrations would not have significant impact on surface water quality and that all ARARs would be met. CDPHE agreed that use of this product would be acceptable.
- Spring herbicide applications commenced at various locations.
- OLF Seep #7 has been more active this spring than expected. Upon approval from CDPHE, staff potholed 1 to 2 feet into the OLF cover to observe flows in the drain extension to investigate whether the drain was carrying water. The drain field extension was installed in 2008 to mitigate surface flow from Seep #7. The drain was found to be carrying substantial subsurface flow as intended, but the flow of the seep water was probably too great to penetrate the lower geotextile lining of the drain field, forcing the water around the edge of the drain field and onto the surface. The geotextile fabric was adjusted, resulting in a significant reduction in the surface expression of the seep.
- The inclinometer readings taken the last week of April at the OLF show deflection on the west side increased after the heavy precipitation in April. The observations were discussed with CDPHE and the geotechnical engineer. While the deflection is minor, it is indication that the weak organic layer underneath the OLF identified during the 2008 geotechnical investigation is being lubricated by the moisture. Staff will take more frequent inclinometer

readings to track deflection and continue to observe for surface cracks that may indicate cover integrity issues.

- Due to the precipitation received in May, the OLF cover and berm channels required minor maintenance to fill minor erosion and ponding areas. A small crack located on the south side of Berm #1 was regraded and compacted to prevent water from seeping into it during precipitation events. The area between Berms #1 and #4 that was slightly eroded during the recent precipitation events was regraded.
- The dam breach concrete debris waste disposition work was completed. The waste was shipped to the Energy Solutions, Inc. Clive, UT low level radioactive waste disposal site.
- A small spring road repairs project was completed to repair the most significant winter/spring damage. Additional repairs will be performed if necessary during the annual project later this summer to regrade and re-seal site roads.

### Energy Employee Compensation:

There was no Congressional action on “The Charlie Wolf Nuclear Workers Compensation Act” during June.

### Agency update:

None at this time.

### Congressional update:

The House Appropriations Committee, Energy and Water Appropriations Subcommittee, marked of the fiscal year 2010 bill in late June. That subcommittee’s jurisdiction includes DOE’s Office of Legacy Management (LM). The subcommittee provided full funding for LM (\$190M). According to *Weapons Complex Monitor*, full Committee mark up is scheduled for July 7, with floor action slated for July 16.

### Site document update:

None at this time.

### Stewardship Council update:

On June 11<sup>th</sup>, 15 Stewardship Council members toured the areas of Rocky Flats under DOE’s management. Highlights of the tour included:

- The Original Landfill – reviewing and discussing repairs made to the landfill.
- Dam notching – reviewing and discussing notching at dam C-2 (prior to closure in 2005), and notching at A-1, A-2, B-1, B-2, B-3, and B-4.
- The Solar Ponds Plume Treatment System (SPPTS) – reviewing and discussing the upgrades to the system. DOE recently started the operational testing phase of the project. DOE and CDPHE are hopeful that the new system will result in more effective treatment of groundwater contaminated with nitrates and uranium.

Next meetings: September 14; November 2