

**ROCKY FLATS STEWARDSHIP COUNCIL**  
**Monday, June 8, 2020, 8:30 – 10:00 AM**  
**Virtual Meeting via WebEx**

**Board members in attendance:** Nancy Ford (Arvada), Sandra McDonald (Alternate, Arvada), Matt Jones (Director, Boulder County), Summer Laws (Alternate, Boulder County), Mirabai Nagle (Alternate, City of Boulder), Deven Shaff (Director, Broomfield), Heidi Henkel (Alternate, Broomfield), David Allen (Alternate, Broomfield), Jim Dale (Director, Golden), Libby Szabo (Director, Jefferson County), Joyce Downing (Director, Northglenn), Sophie Porcelli (Alternate, Northglenn), Mark Lacin (Director, Superior), Ken Lish (Alternate, Superior), Jan Kulmann (Director, Thornton), Emily Hunt (Alternate, Thornton), Kathryn Skulley (Director, Westminster), Rich Seymour (Alternate, Westminster), Lindie Aragon (Alternate, Westminster), Jeannette Hillery (Director, League of Women Voters), Linda Porter (Alternate, League of Women Voters), Roman Kohler (Rocky Flats Homesteaders), Murph Widdowfield (Rocky Flats Cold War Museum), Kim Griffiths (Director/Citizen).

**Stewardship Council staff members and consultants in attendance:** David Abelson (Executive Director), Melissa Weakley (Technical Program Manager), Barb Vander Wall (Seter & Vander Wall, P.C), Erin Rogers (consultant).

**Attendees:** Scott Surovchak (DOE-LM), Andy Keim (DOE-LM), Gwen Hooten (DOE-LM), Karen Edson (DOE-LM), Peter O’Konski (DOE-LM), Nicole Lachance (Navarro), Chris Stewart (Navarro), Jody Nelson (Navarro), Dana Santi (Navarro), John Boylan (Navarro), George Squibb (Navarro), Jesse Aviles (EPA), Lindsey Archibald (CDPHE), Lindsey Masters (CDPHE), Laura Hubbard (Broomfield), Trea Nance (Westminster), Nell Salzman (Westword), Heather Pruitt (auditor), Eric Barnes (auditor), Lynn Segal (citizen), Nancy Wolfe (citizen).

**Convene/Agenda Review**

Chair Joyce Downing convened the meeting at 8:37 a.m. David Abelson noted that the Board sent out information in advance of the meeting requiring anyone wishing to provide public comment to sign up in advance. No requests for public comment were received. He said one comment was received from Lynn Segal, which was shared with the Board and would be posted to the website. He also noted that the Executive Committee decided to hold this meeting virtually.

**Consent Agenda**

The Board moved on to the consent agenda, which included approval of the minutes from the February meeting and the checks written since the last meeting. David Abelson noted one typo on the February minutes that would be corrected.

Joyce Downing moved to approve the February Board minutes as amended and the checks. The motion was seconded by Matt Jones. The motion to accept the minutes and checks passed 14-0.

**Executive Director’s Report**

David Abelson began by sharing the information that DOE-Legacy Management had provided the RFSC with another round of funding. This funding applies to the grant cycle beginning March 1, 2020 through

February 28, 2021. He said there was no deduction for \$4,500 of carryover funds, but this would likely be addressed during the next grant period.

David also noted that CDPHE was in the process of reviewing the soil sampling analysis from the Jefferson Parkway Public Highway Authority (JPPHA). However, the timeline for completion of the review was pushed back to late June or early July. He said there would also be a public comment process.

David shared that during the pandemic there had been a significant increase in visitor use at the Rocky Flats National Wildlife Refuge. He added that local county health departments made a request to the US Fish and Wildlife Service to allow the Refuge to stay open in order to allow people to get outdoors during this time.

### **Receive Stewardship Council 2019 Financial Audit**

David Abelson introduced a review of the Board's 2019 audit. He explained that the Stewardship Council is not required by either state law or the DOE grant to secure an audit. However, the Board has always operated according to a belief that an independent audit is an important check that confirms both the Board and staff are managing the finances in accordance with applicable laws and regulations.

Eric Barnes with Fiscal Focus Partners was on hand to present the audit to the Board and answer any questions. Eric began by summarizing that the audit resulted in a 'clean opinion', as it had each year. Heather Pruitt, the manager who prepared the audit, explained that their work involved obtaining an understanding of the Board's financial processes and then to develop tests to get to level of assurance on balances. She noted that the Board's processes were working as intended. She referred to page 5 of the report, which showed the budget-to-actual comparison. She noted a small upcoming change to the totals, which was not significant to their findings. She said that the total 2019 expenditures were less than the amount approved by the Board. The Stewardship Council was found to be in compliance with all applicable laws and regulations.

Jeannette Hillery moved to accept the Stewardship Council 2019 Financial Audit. The motion was seconded by Roman Kohler. The motion passed 14-0.

### **Host DOE Quarterly Meeting**

DOE was on hand to brief the Board regarding on the 2019 Annual Report. Annual Reports are required as part of the Rocky Flats Legacy Management Agreement (RFLMA) to document that the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedy continues to be protective of people and the environment. The Stewardship Council was previously briefed on the first, second and third quarters of 2019. The full report is posted on the Rocky Flats website.

The Rocky Flats Site remedy components include:

- Maintain two landfill covers
- Maintain three groundwater treatment systems
- Monitor surface water and groundwater

- Maintain physical controls
  - Signage
  - Access restriction
- Institutional controls
  - No occupied building construction
  - Excavation and soil-disturbance restrictions
  - No surface water consumption or agricultural use
  - No groundwater wells, except for monitoring
  - Protection of landfill covers and engineered remedy components

Activities included surface water monitoring, groundwater monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).

*Surface Water Monitoring – George Squibb*

George began with a quick review of the monitoring requirements and map of locations and monitoring sites, noting the list constituents which are monitored for.

At both the Original Landfill (OLF) on Woman Creek and the Present Landfill (PLF), quarterly concentrations for all analytes were below applicable RFLMA standards during all of calendar year (CY) 2019.

Turning to points of evaluation (POEs), George noted that the 12-month rolling average for plutonium concentrations at location SW027 were above the RFLMA standard of 0.15 picocuries per liter (pCi/L)—a reportable condition under the RFLMA—for January through April 2019 (note: see RFLMA Contact Record (CR) 2019-01). Due to the very small volumes of water monitored at SW027 in 2019, no new composite samples could be collected.

Concentrations at the Woman Creek point of compliance (WOMPOC), downstream of SW027, remained well below 0.15 pCi/L. No other RFLMA point of evaluation (POE) analyte concentrations were reportable during 2019.

Finally, George reported that no RFLMA point of compliance (POC) analyte concentrations were reportable during 2019.

*Groundwater Monitoring – John Boylan*

John first reviewed the RFLMA monitoring network, which includes:

- 10 Resource Conservation and Recovery Act (RCRA) wells (sampled quarterly to evaluate potential impacts from OLF and PLF)
- 9 Area of Concern (AOC) wells and one Surface Water Support location (sampled semiannually). These are located in drainages downstream of contaminant plumes and are evaluated for plumes discharging to surface water.
- 27 Sentinel wells (sampled semiannually). These are downgradient of treatment systems, edges of plumes, and in drainages, and are used to look for plumes migrating to surface water and treatment system problems.

- 42 evaluation wells (sampled biennially – will occur second quarter 2020). These are located within plumes, near source areas, and interior of Central Operable Unit (COU) and are used to evaluate whether monitoring of an area or plume can cease.
- 9 treatment system locations (seven are sampled semiannually, and two are quarterly)

During 2019, all sites were sampled, with the exception of the evaluation wells, and results were generally consistent with previous data. Several locations were dry when visited for sampling.

- Second and fourth quarters: two wells that are often or usually dry
- Fourth quarter: five other locations that are not usually dry
  - All in Walnut Creek drainages
  - May reflect lingering effects of recent dry years (2016 and 2018) and drier third quarter

As of fourth quarter, AOC well 10304 was no longer reportable for trichloroethene (TCE)

- See Consultation Posting 010819
- Concentration reported in fourth quarter sample: 2.1 ug/L, below TCE standard of 2.5 ug/L
- TCE was not detected in any of the samples collected from nearby Woman Creek location SW10200 (sampled in response to reportable condition)

Data are presented and evaluated in the 2019 annual report.

John also explained that during 2019 OLF and PLF data was used to perform statistical comparisons of downgradient water quality with upgradient water quality. Results were the same as in previous years for both landfills. They also looked at whether downgradient groundwater showed increasing concentration trends. Results were almost the same as in previous years. The only difference was at the PLF. Here they identified increasing trends in boron in all three downgradient wells (previously confirmed in one well). The highest concentration ever reported was 150 ug/L, well below RFLMA standard of 750 ug/L.

None of the constituents identified in these statistical evaluations were volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs). During the year, they also identified decreasing trends in downgradient groundwater and increasing trends in upgradient groundwater.

DOE also performed statistical trending calculations for sentinel wells. As in other years, they were able to identify numerous concentration trends, both increasing and decreasing. The statistical evaluations followed two different approaches, as was done in the 2018 annual report. There were differences in how non-detects were treated.

- “Conventional” approach is the same as has been used since pre-closure era
- “Alternate” approach focuses on data collected starting in 2009, for constituents detected in at least 40% of the samples from a given well.

Results from both approaches are summarized in the text of the report and presented fully in an appendix.

John reported that the primary groundwater treatment systems continued to remove contaminants. The total flow at each system in 2019 was less than calculated annual average.

- East Trenches Plume Treatment System (ETPTS) - Met all treatment objectives for both collection/treatment systems (Mound and East Trenches)
- Solar Ponds Plume Treatment System (SPPTS) - Met nitrate treatment objectives except for a few instances in February and April
  - Removed approximately 35% of the uranium
  - Uranium treatment evaluation continued. Testing is based on in-situ tests being conducted at other Office of Legacy Management (LM) sites (e.g., Rifle, Shiprock). Plans for procuring design firm and associated work will be 2020-2021 focus).

John next spoke about the effort involving split sampling with Colorado Department of Public Health and Environment (CDPHE) during the fourth quarter of 2019. Six wells were selected for sampling (one RCRA well, four sentinel wells, and one AOC well). The CDPHE team accompanied the LM team during the project. They collected two sets of samples for RFLMA-required analytes at each location (one for LM, one for CDPHE). AOC well 10304 (reportable for TCE through second quarter) was included. They also included concurrent grab sampling in Woman Creek per Consultation Posting 010819 (represents a seventh sample location). The analytical results were comparable, with only minor differences consistent with typical environmental variability and laboratory uncertainty. See the Annual Report for additional details.

John concluded by presenting the big-picture results since the site closed:

- Overall groundwater quality has not changed dramatically
- Treatment systems are collecting and treating more contamination

#### *Site Operations – Jody Nelson*

Jody reviewed the Site Operations activities for 2019, beginning with RFLMA-required physical controls. Signs were inspected quarterly and reattached or replaced as needed.

Additional inspections and records confirmations included:

- Restrictive Notice (formerly the Environmental Covenant)
  - Confirmed in Administrative Record and on file in Jefferson County records (March 19, 2019)
- Annual site inspection was conducted on March 26, 2019
  - No evidence of violations of institutional or physical controls was observed
  - No adverse biological conditions were noted
- Former building areas (B371, B771, B881, and B991) were inspected as a Best Management Practice, in addition to their inclusion in the annual site inspection
  - Quarterly, and after significant precipitation events in March, May, and July (five total)
  - No issues observed, except at B881. Small depression (3 feet in diameter, 3 feet deep) found on B881 in fourth quarter inspection

Site operations also included the performance of quarterly and weather-related inspections of the PLF (six inspections in 2019). The landfill was found to be in good condition, with no significant issues

identified. PLF settlement monuments are also surveyed annually, and vertical settling at each monument was within design limits.

Monthly and weather-related inspections were performed at the OLF (13 in 2019). Eight settlement monuments were surveyed quarterly, and vertical settling at each monument was within design limits. An OLF Stabilization project was ongoing, as of April 23, 2020:

- 246 of 265 anchors were installed and locked off
- Interceptor collection trenches were installed
- Earthwork continued

At the North Walnut Creek Slump, visual observations were made weekly throughout the year, and slump monitoring points were surveyed monthly as a Best Management Practice. Visual observations and monitoring data showed slope creep, with greater movement during wetter periods. A slope stability evaluation and cost estimate was completed, but additional data is required for a final recommendation.

Jody completed his briefing by noting a few other miscellaneous Site Operations activities. Site roads were regraded, and dust suppressant applied to the primary routes (July through September), and a few other spots were repaired. Site erosion controls were monitored and maintained. He also noted that the U.S. Fish and Wildlife Service wildlife refuge surrounding COU was open.

#### *Site Ecology – Jody Nelson*

Jody reported on vegetation management activities:

- Herbicide applications (approximately 269 acres treated by broadcast and spot spraying in 2019)
- Interseeding and revegetation (approximately 1.9 acres were revegetated as part of a project in 2019)

Ecological monitoring included:

- Revegetation monitoring
  - 13 areas monitored
  - Eight continue to meet success criteria
  - Five were newer revegetation areas
- Preble's meadow jumping mouse mitigation monitoring
  - Habitat continues to establish at mitigation locations
- Wetland mitigation monitoring
- Forb nursery monitoring
  - Wildflowers continue to establish and spread

Wildlife monitoring included:

- Prairie dog monitoring
  - No active prairie dog towns within the COU
- Nest boxes
  - 16 of 25 nest boxes were active in 2019 (tree swallows and house wrens)
- Raptor nests
  - One Swainson's hawk nest observed in COU in 2019
- Elk

Following the presentations, Board members were given the opportunity to ask questions. David Allen asked George about reportable conditions for plutonium at SW027. In April 2019, the reportable condition ended. Three samples were able to be taken in March and April 2020. All individual results have been well below the standard.

David Allen referred to John's comment about nitrate levels at the SPPTS in February and April, and asked him how far off the levels were from what they expected. John said there were a few elevated samples, but the rest were non-detects. David asked Jody for the vertical settling design limits for monuments. DOE will follow up with an answer.

### **Board Roundtable**

Jeannette Hillery noted the COVID effect on the 2020 Census, and said she hoped that the local communities were working to get good results.

Mark Lacis referred to an April 9 press release that pertained to research by Dr. Michael Ketterer on soil sampling near the former east gate of Rocky Flats. Mark said that Ketterer identified 40 respirable-sized hot particles. Mark wanted to hear what David Abelson and CDPHE thought about the press release. David said that it was important information, in that it confirmed that historic and current sampling results were in alignment. He said it also served to expand the historical timeframe of data collected. David noted that for years before Ketterer began his work, particles had been found both east and west of Indiana. David emphasized that, while Ketterer seemed to be saying that he had found new information, there was fortunately nothing new in his findings. David also explained that the pathway involving respirable particles was considered when the cleanup scenario was agreed upon. David also thought it was curious that Ketterer and his team performed digging in areas of known contamination without protective gear. Lindsay Masters with CDPHE said that they included the 'hot particle' theory in the analysis they will be publishing and will talk further about this over the next couple of months. She also said that CDPHE had reached out to Ketterer and has seen his data. She said it did not show any contamination above current standards. She agreed with David that there was nothing new in the dataset that was not already known. Mark asked Lindsay whether CDPHE was considering re-visiting the appropriateness of the 50 pCi/g plutonium cleanup standard. She said she did not know whether there were plans to make a statement on this.

Deven Shaff referred to information he saw about the Rocky Mountain Greenway trail being completed in spring of 2023 and said he had not heard about it before. He asked whether this had been discussed within the RFSC. David Abelson said it had been extensively discussed. He noted that the USFWS was in the process of changing the location of some trails, which is why they did some sampling. The Greenway Trail was being designed to connect three metro area National Wildlife Refuges (Rocky Mountain Arsenal, Two Ponds and Rocky Flats) with Rocky Mountain National Park. David that the Fish and Wildlife Service was getting ready to issue an Environmental Assessment for this project in next month or so. He said there would be a public comment period, but no details are known at this point. David added that six local governments have done independent sampling pertaining to the trail access points.

### **Big Picture/Additional Questions/Issue Identification**

**September 9, 2020**

*Potential Business Items*

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- Work plan budget

*Potential Briefing Items*

- DOE Quarterly Update
- CDPHE sampling

**October 28, 2020**

*Potential Business Items*

- New member interviews

*Potential Briefing Items*

- TBD

Issues to watch:

- Soil sampling results
- Dam Breach
- Uranium exceedances in surface water
- Trichloroethylene (TCE) exceedances in groundwater

The meeting was adjourned at 9:45 a.m.

*Respectfully submitted by Erin Rogers.*