

ROCKY FLATS STEWARDSHIP COUNCIL
Monday, November 18, 8:30 – 11:00 AM
Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado

Board members in attendance: Sandra McDonald (Alternate, Arvada), Lisa Morzel (Director, City of Boulder), Mike Shelton (Director, Broomfield), Kim Groom (Alternate, Broomfield), David Allen (Alternate, Broomfield), Jim Dale (Director, Golden), Libby Szabo (Director, Jefferson County), Pat O’Connell (Alternate, Jefferson County), Joyce Downing (Director, Northglenn), Shelley Stanley (Alternate, Northglenn), Ken Lish (Alternate, Superior), Jan Kulmann (Director, Thornton), James Boswell (Alternate, Thornton), Kathryn Skulley (Director, Westminster), Jeannette Hillery (Director, League of Women Voters), Linda Porter (Alternate, League of Women Voters), Roman Kohler (Rocky Flats Homesteaders), Arthur Widdowfield (Director, Rocky Flats Cold War Museum), Ken Frieberg (Alternate, Rocky Flats Cold War Museum), Kim Griffiths.

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

Attendees: Andy Keim (DOE-LM), Bob Darr (Navarro), Jeremy Wehner (Navarro), Linda Kaiser (Navarro), Nicole Lachance (Navarro), Jody Nelson (Navarro), Ryan Wisniewski (Navarro), John Boylan (Navarro), George Squibb (Navarro), Jennifer Opila (CDPHE), Lindsay Masters (CDPHE), Rob Beierle (CDPHE), Lindsey Archibald (CDPHE), Laura Dixon (CDPHE), Jeremy Rodriguez (Rep. Perlmutter), Ryan Hanson (Sen. Gardner), Bill Ray (Jefferson Parkway Public Highway Authority), Trea Nance (Woman Creek Reservoir Authority), Linda Hladik, David Wood, Bonnie Graham Reed, John Reed, Laura Hubbard (Broomfield), Lynn Segal, Carl Spreng, Elle Cushman, Erik Sween, Mark Hammer, Nancy Ford (Arvada City Council).

Convene/Agenda Review

Joyce Downing convened the meeting at 8:35 a.m. The first order of business was introductions of Board members and the audience. Joyce noted that the Executive Committee met prior to this meeting and had reviewed and approved the agenda for this meeting.

Public Comment

Lynn Segal suggested that the Stewardship Council have a discussion with Dr. Michael Ketterer about the significance of the large plutonium particle found by the Jefferson Parkway Authority.

Consent Agenda

The Board moved on to the consent agenda, which included approval of the minutes from the September meeting and the checks written since that meeting. Jim Dale moved to approve the September Board minutes and the checks. The motion was seconded by Lisa Morzel. The motion to accept the minutes and checks passed 13-0.

Executive Director’s Report

David Abelson began by congratulating Jan Kulmann on her election as Mayor of Thornton. He also noted that Mark McGoff (who was not present) from Arvada was term limited, so would not be returning to his position on the Stewardship Council. David said Mark had been great to work with, and

that he was a quiet but very engaged member who worked very closely with his staff and City Council. Also leaving his position was Mike Shelton of Broomfield. Mike spent eight years on the Stewardship Council, and David said his active engagement was very appreciated. Finally, Lisa Morzel of Boulder would not be returning for another term. She started with the predecessor organization to the Stewardship Council. David said that throughout her 20 years of engagement, she always looked for common ground, was a pleasure to work with and would be missed. Lisa thanked the group and expressed her belief that the Stewardship Council was not a place for politics. She said working with the scientific staff from the agencies had also been great, as was working with David.

David next provided an update on the status of questions and concerns about the original landfill that the Stewardship Council had forwarded to DOE in February 2019. He explained that the process had been pre-vetted with DOE, with the assurance that if followed the Stewardship Council would not run afoul of the Federal Advisory Committee Act (FACA). It was to both DOE and the Stewardship Council that DOE have the latitude to answer the questions posed by making sure that, upon forwarding the questions and concerns of the Stewardship Council members, the Stewardship Council itself would not be offering an advisory opinion. David explained that in April DOE received a directive from DOE's Office of General Counsel directing DOE to not respond. Joyce and David were notified of that decision in October. David said they were told that this response had been sitting in a DOE email box that apparently did not get checked. He said the effect of this decision was to place the Stewardship Council members at a disadvantage. This new determination by General Counsel puts the Stewardship Council members at a disadvantage. Unlike any other party that might offer its questions, concerns, or even recommendations to LM via the Stewardship Council, the Stewardship Council members are now prohibited from forwarding the collective view of the membership to DOE via the Stewardship Council. Stated another way, community advocacy groups are allowed to partner, to develop questions and recommendations, and to request that the Stewardship Council forward that opinion to DOE, but the Stewardship Council members are not afforded the same opportunity. Libby Szabo asked if the Chair could be the only signer when concerns were forwarded. She said the important thing was to get answers, and it did not matter who signed the letter. Mike Shelton said he would appreciate a written report on this issue from David to get it on the record. He also suggested that perhaps the governor could forward the questions to DOE. Ken Lish asked David to also outline potential workarounds in his report. He suggested an option in which all members would sign the letter, but the name of the Stewardship Council would be removed. Jim Dale asked if copies of the letter were sent to Representatives Perlmutter and Neguse. David said he believed it was, along with the Governor. Kathryn Skulley asked if members should push back via congressional representatives. David said he would keep the Stewardship Council updated on this issue.

Host DOE Quarterly Meeting

DOE briefed on site activities for the second quarter of 2019 (April-June). 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, also what constituents they monitor.

At the Original Landfill (OLF), routine surface water sampling in Woman Creek downstream of the OLF (GS59) showed mean concentrations for all analytes below applicable RFLMA water-quality standards.

At the Present Landfill (PLF) sampling showed concentrations for all analytes below applicable RFLMA water-quality standards.

The 12-month rolling average plutonium concentrations at location SW027 was reportable through April 2019. This average was calculated from a single sample collected in 2018 with 0.16 picocurie per liter (pCi/L) Pu (the standard is 0.15 pCi/L). For more information about this, see RFLMA Contact Record 2019-01. There was no flow in 2019 until May 28. The composite sample started on May 28 is still in progress. Averages for May and June cannot be calculated until analytical results are available. Concentrations at the downstream Woman Creek Point of Compliance (WOMPOC) were not reportable.

No other Point of Evaluation (POE) or Point of Compliance (POC) analyte concentrations were reportable during the second quarter of 2019.

Lynn Segal asked for clarification about George's comment about needing to wait for enough flow to compare results. George explained that the analytical measurement was based on the volume of water available, and that the sampler was automated. He said that analysis required 4 liters in order to be completed. However, the result of 0.16 pCi/L is elevated and is essentially at the site-specific standard of 0.15 pCi/L. They also have not been seeing increased levels at the Point of Compliance downstream. He added that this was why these use a layered monitoring system. David Abelson added that the Rocky Flats water standard for plutonium (0.15 pCi/L) is one hundred times more protective (i.e., lower) than the applicable federal standard. David Wood asked why having very little flow off the 903 Pad was a good thing. George said it shows them that the revegetation was working, and less erosion was occurring.

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). 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 the quarter, all locations were sampled except Evaluation wells and the results were generally consistent with previous data. Data will be evaluated as part of the 2019 annual report. AOC well 10304 remains reportable for trichloroethene (TCE). This well monitors for impacts to surface water quality in Woman Creek. Woman Creek location SW10200 was concurrently sampled per Consultation Posting 010819 (see also Contact Record 2015-10). The result from 10304 was 3.5 micrograms per liter ($\mu\text{g/L}$) TCE (RFLMA standard: 2.5 $\mu\text{g/L}$). Comparatively, the result from SW10200 showed no TCE.

John noted that recent 4th quarter results in 10304 showed TCE below the standard.

Most scheduled locations were successfully sampled. Two wells were dry (Sentinel wells 90299 and 95299), which happens at these locations frequently. All treatment system locations were successfully sampled and results were consistent with previous sampling events.

The Mound/East Trenches system met all treatment targets. The Solar Ponds system met treatment targets for nitrate and reduced uranium concentrations from 80 µg/L to 35 µg/L (approximately 56% removed). A new uranium treatment system component is being developed to address this issue. Routine maintenance was also performed on these treatment systems.

David Allen referred to the consultation posting for TCE, and asked why this was not created as a Contact Record instead. Linda Kaiser (Navarro) said this was because it was tied back to the Contact Record 2015-10 addendum, which was available on the website. Jim Dale asked if the source site was remediated during closure. John said it was. Ken Lish referred to slide 17 and asked John to explain more about the modeling that showed that these results were expected. He asked whether the model showed that an exceedance would last so long. John said he did not know about that specifically, but that the information about the model was available online. Additional information could be found in the Groundwater IM/IRA (2004 or 2005), the Fate and Transport Study (2002), and a Water Balance study. Ken asked if they were sure that the elevated levels were attributable to the wet conditions. John said they have not seen these effects elsewhere, and that they will continue to watch. Kim Groom asked whether groundwater at Rocky Flats moved approximately a half inch per year. John said it depended on various factors. He explained that of the 12-13 inches of precipitation per year, about 90% of that was lost to evapotranspiration. Kim asked where the closest offsite groundwater well was located, and whether there was a need to monitor it. John explained that the impacted groundwater was very shallow above claystone bedrock. The plumes discharge to surface water before leaving the COU. Sandra asked how many times surface water at location SW10200 had been sampled since 2015. John said about 5-7 times, and all results were non-detect. David Allen said that shallow groundwater wells around the area were about 200-300 feet deep, and asked what depth they were onsite. John said that the deepest at Rocky Flats were 60-65 feet, and most were less deep. Mike Shelton asked if they needed large quantities of groundwater to sample. John said generally they did not large quantities. Lynn Segal asked what the implications to human health were from the TCE spike. George said that if you were drinking water from the site, you should have different water source. He added that TCE was not showing in surface water samples.

Site Operations – Jeremy Wehner

Quarterly sign inspections are part of RFLMA physical control requirements. Signs were inspected on May 15, 2019, and all were in good condition and legible.

Jeremy also reported on three monthly inspections at the OLF (April 15, May 17, and June 19). Minor erosion was found along central berm 5 channel as well as five small holes above berm 4. There were no weather-related inspections during the quarter. Settlement monuments were surveyed on June 10. Vertical settling was within design limits. A geotechnical slope stability evaluation was completed in September, including design of the slope stabilization project. A Request for Proposal was issued in May 2019.

The East Subsurface Drain continues to function as designed. At this location, the Seep 10 siphon operated during second quarter, with approximately 745,600 gallons diverted. This water would historically saturate and potentially destabilize the slump area as it flowed to the East Perimeter Channel. A temporary groundwater intercept system also operated during the second quarter. Since season startup on May 17, approximately 50,000 gallons were diverted by the end of June.

At the PLF, the quarterly inspection was on May 24 and there were no weather-related inspections. The landfill is in good condition. Routine maintenance was performed at the PLF Treatment System outlet.

At the North Walnut Creek Slump, there was continued data collection from piezometers where possible. Slump monitoring points were surveyed on April 15, May 6, and June 10. Maximum movement since baseline (September 5, 2017) was approximately two feet vertically. The scarp crack remained largely closed due to elk traffic in the area but was open 1/4 to 1/2 inch in places. Small cracking developed in the Interceptor Trench System Sump access road.

No site road maintenance was conducted during the second quarter but was being planned for summer (July).

Shelley Stanley asked if the groundwater interceptor at the OLF was actively pumping and whether it was working year-round. Jeremy said it was generally operating May through October. Shelley asked if the number of gallons pumped had gone down. Jeremy said it did not operate recently because of the stabilization project, but the rate was about the same. Mike Shelton asked if they would be replacing piezometers. Jeremy said they were no longer needed, and they were reducing the frequency of reading the remaining ones for the same reason. Lynn Segal asked what the piezometers were used for. Jeremy said they were used to determine whether groundwater was a determining factor in slope stability. She asked why they did not take them all out. Jeremy said they were not causing harm, so there was no reason to spend the money to remove them.

Site Ecology – Jody Nelson

Jody reported that ecology activities during the second quarter included:

- Weed mapping
- Commercial herbicide applications (treated approximately 251 acres) in the COU
- Spot herbicide control of small weed infestations in the COU
- Wetland water level monitoring and weed surveys
- Nest box surveys
- Prairie dog survey: None in COU
- Installation of tree cages around woody plants
- Continued installation of wildlife-friendly fence crossings

Kim Griffiths asked about the size of the elk herd onsite. Jody said there were at least 250. Lisa Morzel asked if they were actively tracking the herd. Jody said they were not, but that USFWS was looking at doing a collaring study.

CDPHE Update on State's Response to Plutonium Hot-Spot Along Indiana Street

Jennifer Opila, Division Director, Hazardous Material and Waste Management Division, was on hand to provide a brief update followed by Q&A. She had previously sent an email update, which was distributed to members of the Stewardship Council. She reviewed highlights from that email (see page 61 of Board meeting packet).

Jennifer said that CDPHE would be taking several steps to look at potential effects of contamination on both a Parkway construction worker and the outside area. They will be producing a map of the sample locations and results, which will be posted on their website. Additionally, they will be using the RESRAD model to look at what level of contamination could be left in place based on a particular dose. This tool is specifically designed to help determine the allowable residual radioactivity in site cleanup and has successfully been used in the past to evaluate potential doses from windblown plutonium in the area of Rocky Flats. CDPHE is also working with CSU to review some of the data and the sampling and analysis plan. Finally, CDPHE will be preparing a review of scientific literature addressing the potential effects of a specific particle of radioactive contamination as opposed to a homogenous type of distribution. CDPHE is expecting to have this work completed by April 2020. After completing these steps, CDPHE will determine if there are any additional measures that should be taken to protect public health during the construction of the Jefferson Parkway.

Pat O'Connell asked what would be shown on the map. Jennifer said it would be all the sampling data for the Rocky Mountain Greenway and the Jefferson Parkway. This would be at least 300 samples. Mike Shelton asked if they would also be looking at the dose for residents. Jennifer said that the construction worker scenario involves the highest exposure, but they would also be looking at offsite exposure. Mike asked how they chose RESRAD. Jennifer said it was used at Rocky Flats in order to make land release decisions. Mike referred to the statement that RESRAD had been 'successfully used' to make decisions. He said that rare cancers had been found in surrounding areas and asked how this could be called successful. Jennifer responded that RESRAD was the standard practice. David Abelson added that using RESRAD would also allow good comparison to past scenarios. Lindsey Masters (CDPHE) addressed the concern about rare cancers by noting that a review of the State Cancer Registry (which tracks every case of cancer in Colorado) showed no increased level of rare cancers around Rocky Flats. In fact, they were at or below the average incidence. Mike asked if this included Boulder. Libby Szabo asked if the registry included how long people have lived in Colorado. Lindsey said she would look into those questions. Libby asked if any similar sampling was done while Candelas was being built. Jennifer said she did not believe so. Kim Groom asked if they were increasing the sampling density due to finding of the hot particle. Jennifer noted the Parkway Authority did conduct step-out sampling, as well as more than 200 other samples, and nothing close to that level was found. She also reiterated that the State does not have regulatory authority for this project. Kim asked if the State would do additional sampling or wait for modeling results. She said they were waiting. Jennifer was also asked whether CSU was being asked to weigh in on sampling recommendations. She said their scope had not yet determined. David Abelson pointed out that the area in question was only a 300-foot right-of-way, so people should keep in mind how small it was. Shelley Stanley asked how the group would be notified about results. Jennifer said they would be sharing the information with David to distribute, as well as sending to a short list of interested stakeholders. Ken Lish noted that the link for RESRAD in the packet was not functional. Jennifer said she would resend.

Public Comment

Bonnie Graham Reed asked if the Colorado standard was 0.9 pCi/g. Jennifer said this was only a trigger point for evaluating construction techniques, not a standard. Bonnie said that 0.065 pCi/g was background level and that cancer was so much more rare before 1945 and the nuclear age. She said plutonium was developed to kill and is very dangerous. Regarding the construction worker scenario, she said she understood that precautions would be taken during construction but was concerned about winds later blowing contamination into neighborhoods. She said they needed to look beyond the construction worker. Lynn Segal said plutonium could not be treated like other materials. She said she did not understand why people were being allowed on the Refuge before this analysis was done. Jennifer said that these same analyses were done prior to the Refuge opening. Lynn asked why these studies were being done now. Jennifer said they were looking at new data specifically for the Jefferson Parkway project. David Abelson explained a bit about the historical context of past sampling efforts and noted that there was a wealth of information available online. Nancy Ford stated that the government should do a meta-analysis of this data for the community in layperson language. Jennifer said she was looking at improvements to the Rocky Flats part of the CDPHE website.

2020 Work Plan

The Board reviewed the draft 2020 Work Plan at the September meeting, and no changes were offered at the meeting. David pointed out one small change to what they reviewed last month. On page 2, 2020 Activities, item #2, a second sentence was added. David asked if there were any questions. Ken Lish suggested adding an item related to tracking CDPHE steps related to soil sampling. To do this, David will modify #3 by adding "...and others, including CDPHE's analysis". Mike Shelton said he also would like to get expert information from Dr. Ketterer. Other members said it would make more sense to hear from CSU. David Abelson said these items would be covered by the work plan, but it would be good practice not to mention specific individuals.

Jeannette Hillery moved to approve the 2020 Work Plan. The motion was seconded by Lisa Morzel. The motion passed 13-0.

2020 Budget

The Board reviewed the draft budget at the September meeting. No changes were offered. Ken Lish asked what ECA was and why their conferences were included in the budget. David said ECA was the Energy Communities Alliance, comprised of local government groups that surround DOE facilities. He explained that the Stewardship Council gets reimbursed more for travel expenses than the annual dues cost them as an affiliate member.

Cameron Richards, the Stewardship Council's legal counsel, explained the budget review process. Prior to finalizing the budget, the Stewardship Council must hold a budget hearing and allow time for public comment. Following the public hearing, the Stewardship Council must approve the budget resolution, and approval must occur before the end of each year. Joyce Downing officially opened the hearing for the 2020 budget. She asked for public comment. There being no public comment, the budget hearing was then closed.

Lisa Morzel made a motion to accept the 2020 budget. The motion was seconded by Jan Kulmann. The motion to approve the 2020 budget, appropriate the funds, and adopt the budget resolution was approved 13-0

New Member Selection

Two organizations applied for membership to the Rocky Flats Stewardship Council. These were both existing members; The League of Women Voters and the Rocky Flats Homesteaders. The vote was to approve up to two organizations for Board membership.

Mike Shelton asked what were outreach efforts were made to solicit applications. David Abelson said a variety of methods were used, including advertisements, email distribution list (approximately 130 names), website, and sharing by local governments and others. Murph Widdowfield said prior to his application, he saw it in the newspaper.

Jim Dale made a motion to accept the League of Women Voters and the Rocky Flats Homesteaders to continue as members of the Stewardship Council. The motion was seconded by Kathryn Skulley. The appoints were unanimously approved by the member governments.

Board Roundtable

There were two updates from Stewardship Council members. Mike Shelton said Broomfield has been talking about reimbursing the Jefferson County Parkway Authority for their sampling. Jim Dale noted that former Stewardship Council member Laura Weinberg was elected Mayor of Golden.

Big Picture/Additional Questions/Issue Identification

February 3, 2020

Potential Business Items

- Elect 2020 Officers
- Adopt resolution re: 2020 meeting dates

Potential Briefing Items

- DOE quarterly update
- Understanding Risk - Introduction

April 6, 2020

Potential Business Items

- TBD

Potential Briefing Items

- Understanding Risk - Continued

June 8, 2020

Potential Business Items

- TBD

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 11:07 a.m.

Respectfully submitted by Erin Rogers.