

ROCKY FLATS STEWARDSHIP COUNCIL
Monday, June 4, 2018, 8:30 – 10:30 a.m.
Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado

Board members: Mark McGoff (Director, Arvada), Summer Laws (Alternate, Boulder County), Lisa Morzel (Director, Boulder), Mike Shelton (Director, Broomfield), David Allen (Alternate, Broomfield), Jim Dale (Director, Golden), Joyce Downing (Director, Northglenn), Shelley Stanley (Alternate, Northglenn), Jan Kulmann (Director, Thornton), Emily Hunt (Alternate, Thornton), Shannon Bird (Director, Westminster), Cathy Shugarts (Alternate, Westminster), Jeannette Hillery (Director, League of Women Voters), Murph Widdowfield (Director, Rocky Flats Cold War Museum), Roman Kohler (Director, Rocky Flats Homesteaders), Kim Griffiths

Stewardship Council staff and consultants: David Abelson (Executive Director), Cameron Richards (Seter & Vander Wall, P.C.), Rik Getty (Technical Program Manager), Sandy Thomas

Attendees: Ryan Hanson (Sen. Gardner), Rachel Martens (City of Arvada), Carl Spreng (CDPHE), Lindsay Masters (CDPHE), Meghan Hughes (CDPHE), Rob Beierle (CDPHE), Linda Kaiser (Navarro), George Squibb (Navarro), John Boylan (Navarro), Bob Darr (Navarro), Jeremy Wehner (Navarro), Scott Surovchak (DOE-LM), Vera Moritz (EPA), Marion Whitney, Bonnie Graham-Reed, Pat Mellen, Randy Stafford, Renee Sereff, Jeff Seacrest, Kim Seroff, Chuck Seroff, Elizabeth Panzer, Sasha Stiles, Chris Houghton.

Convene/Agenda Review: Chair Joyce Downing opened the meeting at 8:30 a.m.

Public comment on Consent Agenda and Non-Agenda Items: Chuck Seroff stated he served as a construction worker at Rocky Flats for 16 years. As a result of his work, he was diagnosed with berylliosis. Chuck does not believe that Rocky Flats is safe for children.

Jeff Seacrest stated he worked at Rocky Flats for 31 years (1967-1998), running the motor pool and heavy equipment division. Although he refused to enter any of the buildings during his tenure, he developed lymphoma, which he attributes to working at the site. He stated he would not take anyone to the Rocky Flats refuge and is concerned for the residents downwind of the site.

Randy Stafford praised Dr. Mark Johnson, Jefferson County Health official, for voicing his concerns about the potential impact of opening of the Rocky Flats National Wildlife Refuge.

Kim Seroff voiced her concerns about potential hidden dangers at the site. She stated that, at the time, no one knew of the potential dangers. She is concerned that no one can guarantee that Rocky Flats is 100% safe.

Bonnie Graham-Reed noted that both Broomfield and Northglenn have voiced their opposition regarding the breaching of the terminal ponds.

Pat Mellon, who presented at the April board meeting, said she spoke with Donovan Robinson of the Office of Management and Budget. According to Pat, Mr. Robinson is concerned about DOE's Office of Legacy Management providing funds to USFWS for the joint DOE-USFWS Rocky Flats Visitor Center. In follow-up to an issue she raised at the April meeting about a document she claims was a site document, she stated that per Scott Surovchik's request for the source of a document provided to Pat by Gale Biggs, she has not yet been able to identify the source. Ms. Mellon reiterated that she believed Dr. Carl Johnson was terminated from the Jefferson County Health Department in the early 1980s because he filed whistleblower suit. Lastly, Pat stated that her previous discussion about the Stewardship Council and David Abelson's conflict of interest was only meant to open discussion about DOE providing to the Stewardship Council.

Next, Sasha Styles expressed concern regarding the studies conducted over the years on the site. She agreed with Dr. Mark Johnson that an absolute epidemiological study of the environment to include soils, water, highways, the refuge and other areas should be completed before allowing for access to the site. She stated that there is not the money available for one grant to do an inclusive study. Therefore, she has had to rely on studies from various universities and others to cobble together funding sources. She requested help from interested parties who would like to volunteer. She stated that she and Dr. Mark Johnson think a retrospective study by a disinterested party (e.g., National Institute of Health) is needed.

Mike Shelton responded to the last two speakers. He stated that although people may think the Stewardship Council is swayed by DOE funding, the exact opposite is true. The Stewardship Council's goal has always been to keep the area safe. He does not want there to be any misconceptions, and he encouraged everyone with concerns to bring them to Stewardship Council members who can then advocate for them.

Jim Dale also responded by reminding those present that the Stewardship Council was formed because of concerns about the area and for the citizens. When looking for funding, only the DOE offered to fund the endeavor. It does not sway the Stewardship Council or affect its analysis of site conditions and the associated risks.

Business Items:

Consent Agenda: Approval of Minutes and Checks: Jeannette Hillery moved to approve the minutes and checks; Lisa Morzel seconded the motion. The motion was approved 12-0.

Executive Director's Report: David began by introducing Sandy Thomas. Sandy previously worked for Seter and Vander Wall until her retirement a few years ago. She is now going to take and develop the Stewardship Council's minutes. David next introduced Cameron Richards, an attorney working for Seter and Vander Wall. Cam is filling in for Barb who is on vacation.

David noted that all of the local government dues have been received. He thanked the Board for its help in processing the dues. He next discussed federal funding for DOE's Office of Legacy Management (LM), the program office that manages Rocky Flats. David said both the House and Senate appropriations committees approved fiscal year 2019 funding bills. Those bills next go to their respective chambers for consideration by the entire body. DOE requested

\$158,000,000 for fiscal year 2019 (October 1, 2018 – September 30, 2019), an increase of \$4.2 million over the current year funding. David said he has not yet asked LM what its fiscal year 2019 priorities will be for Rocky Flats but will in due time.

Finally, David turned to an issue that he notes points an important contrast between the Rocky Flats communities and other communities hosting DOE nuclear weapons sites. He started by noting that one of the most significant differences between the Rocky Flats communities and others is that the others are disproportionately affected by site funding. These communities, he observed, are largely dependent on ongoing site mission, and at times compete for new mission. This dynamic is playing out right now as New Mexico and South Carolina are vying for the work to expand plutonium pit production. That work, which was Rocky Flats' central focus, shifted to Los Alamos following the closure of Rocky Flats. As DOE seeks to expand production, elected officials and communities in the two states are advocating that this mission be part of their site's mission. David said that the differences between the Rocky Flats communities and other communities is also reflected in their differing views on cleanup. What is acceptable at one site would not meet the interests or goals of communities neighboring Rocky Flats. David noted that in making these observations he is not commenting on the wisdom or efficacy of other cleanups, or community values at those sites.

Lisa Morzel echoed David's comments. With its diverse economy, the Rocky Flats communities were able to oppose efforts to redevelop Rocky Flats. Mike Shelton asked about ongoing federal ownership, noting the importance of it. He asked for some background on the provision. David said that the Refuge Act was premised on two important community priorities: (1) Ongoing federal ownership following closure, and (2) prohibiting redevelopment of the site. Whether it makes financial sense, the lands that comprise the Refuge are clean enough to support residential and industrial development, an idea that, in time, all local governments opposed. Bringing these two ideas together, DOE or another federal agency would continue to manage Rocky Flats. The only land management agency that would undertake that task would be within the Department of the Interior (DOI), and within DOI, the only two agencies are National Park Service and US Fish and Wildlife Service (USFWS). Without getting into the details, David said USFWS was chosen. Lisa echoed Mike's question, noting that another priority was making sure that no roads bisect Rocky Flats, an idea that was on the table when the governments formed the Rocky Flats Coalition of Local Governments in 1999. She also echoed David's statement that there was pressure to develop Rocky Flats and that the governments worked to halt that idea.

2017 Stewardship Council Audit: David introduced the auditor, Eric Barnes of Fiscal Focus Partners. Eric began by noting that state law does not require that the Stewardship Council seek an audit of its finances. However, as the Board has done from its inception, conducting the audit makes good sense. Eric discussed the report, noting that once again the Stewardship Council got a clean audit. He said the Stewardship Council's internal control system is accurate, and that accountant Jennifer Bohn is very competent. He said the Stewardship Council has one main asset (cash) with \$145,000 in revenue from the federal grant and contributions from members, and \$138,000 in expenses.

Mark McGoff asked Eric to confirm that the audit is filed with the state, even though an audit is not required. Eric confirmed that Mark's understanding is correct.

Jim Dale made a motion to accept the Stewardship Council 2017 Financial Audit. The motion was seconded by Lisa Morzel. The motion passed 12-0.

DOE Annual Report: This report is for the calendar year 2017. The Stewardship Council was previously briefed on the first, second and third quarters.

Surface Water, George Squibb

Routine composite sampling during 2017 at GS59 showed that quarterly concentrations for all analytes were below applicable RFLMA standards. Quarterly sampling of the system effluent showed that arsenic (during the first and fourth quarters) and vinyl chloride (during the third quarter) concentrations were above applicable RFLMA standards, triggering an increase to monthly sampling per RFLMA evaluation protocols. Subsequent monthly sampling results for arsenic and vinyl chloride were below the standards and sampling frequency reverted back to quarterly.

Plutonium (Pu) concentrations at SW027 reflected that a 12-month rolling average concentration remained above the RFLMA standard of 0.15 picocurie per liter (pCi/L) which is a reportable condition under the RFLMA. There were 20 days of flow during 2017. As of April 30, 2017, Pu was no longer reportable. Concentrations at the Woman Creek point of compliance, downstream of SW027, remained well below 0.15 pCi/L. No analyte concentrations were reportable at other RFLMA points of evaluation during 2017.

Reportable uranium concentrations at the Walnut Creek POC were above the RFLMA standard of 16.8 ug/l for December 8, 2016 and April 3, 2017 during winter baseflow conditions. The 12-month rolling average uranium concentration remained below 16.8 ug/l. No analyte concentrations were reportable at other RFLMA points of contact during 2017.

David Allen stated that uranium values on South Walnut Creek are stable and then spike. He noted it remains important to monitor because no one knows why and when the spikes occur. George responded that although they are unsure why this happens, continual monitoring is the correct response. Lisa Morzel concurred with David, stating that continued monitoring of the surface water and groundwater is necessary, particularly given that upstream data shows nothing abnormal. George responded that when the uranium values are high, the response is increased monitoring.

Public comment re: Surface Water: None.

Groundwater Monitoring and Operations: John Boylan

John reported that the RFLMA monitoring network remained the same in 2017. There are ten Resource Conservation and Recovery Act (RCRA) wells that are monitored quarterly to evaluate potential impacts from the Original Land Fill (OLF) and the Present Land Fill (PLF). There are nine Area of Concern (AOC) wells, and one surface water support location, which are monitored semiannually. They are located in drainages downstream of contaminant plumes and are evaluated for plumes discharging to surface water. There are twenty-seven Sentinel wells monitored semiannually for downgradient of treatment systems, edges of plumes, and in

drainages. They also look for plumes migrating to surface water and treatment system problems. There are forty-two evaluation wells that are monitored biennially. They are within plumes, near source areas, and the interior of the Central Operable Unit (COU). There are nine treatment system locations; seven are monitored semiannually and two are monitored quarterly.

The Evaluation Wells were not sampled in 2017 but will be sampled in 2018. All other well categories were sampled.

The 2017 results were generally consistent with previous data. The OLF and PLF statistical results were the same as in 2016; the statistical results for landfills were very similar to those in earlier years. The measured precipitation was close to average precipitation with 12.7 inches in 2017 as compared to the average of 12.2 inches for 1997-2016. Monitoring for Pu and Americium (Am) in the groundwater at the three Sentinel wells downgradient of former Building 771/774 and two Sentinel wells downgradient of former Building 371/374 resulted in all non-detects for 2017. Since closure of the facility, samples from these wells have only reported non-detects for Pu and Am.

A reportable condition at Area of Concern (AOC) well 10304 was triggered by trichloroethene (TCE) in a sample collected in fourth quarter 2015. The elevated TCE was anticipated in response to wet conditions such as in spring 2015. AOC well 10304 was no longer reportable as of fourth quarter 2017, and TCE was not detected in any of the samples from location SW10200.

In reporting groundwater collection and treatment system findings, John reported that the Mound Site Plume Collection System (MSPCS) routed water to the East Trenches Plume Treatment System (ETPTS) throughout the year. This is the first full year of operation following reconfiguration in 2016, and the air stripper at ETPTS now treats combined influent. The combined MSPCS and ETPTS flow in 2017 was approximately 2.5 gallons per minute, slightly less than the average flow. The overall treatment effectiveness is much better than average for MSPCS and ETPTS with no RFLMA exceedances.

The Solar Ponds Plume Treatment System (SPPTS) full-scale test nitrate treatment lagoon operated throughout the year. This is its first full year of operation following interim reconfiguration in 2016. The SPPTS flow in 2017 was slightly less than average at approximately 1 gallon per minute. The effectiveness of the nitrate treatment was much better than average and there were no RFLMA exceedances. Moving forward on a path to uranium treatment, subcontractors will assess alternatives.

Treatment system activities included routine maintenance at the MSPCS, ETPTS, and SPPTS nitrate treatment lagoon. At SPPTS, the main effort was looking at alternatives for uranium treatment by evaluating groundwater availability, treatment technologies, site constraints such as no water or sewer, performing additional treatability studies, and hiring expert subcontractors to assess alternatives. The path forward is under consideration.

Mike Shelton commented that the lagoon would eventually need to be cleaned out. John concurred that this will need to be done. David Allen asked how far away the wells were from Building 771. John responded that they are located about 30 yards away. David then asked how

the wells were measured. John responded that they are measured from the floor above the bottom of the well and at screen intervals. Jim Dale asked if TCE could be a surrogate measure for plutonium and americium. John responded that because plutonium americium moves so slowly, there is no need to measure it.

Public comment re: Groundwater: Randy Stafford commented that in the late 1990's, Iggy Lator discovered plutonium migrating in Walnut Creek. John stated that subsequent studies both confirm Lator's conclusions and provide additional details that Lator did not identify. That new information includes the determination that plutonium moves by attaching to soil particles, and is not soluble.

Site Operations, Jeremy Wehner

Jeremy noted that signs are inspected quarterly and are reattached as needed. Site inspections were performed monthly, and there were four weather-related inspections (one combined with the monthly inspection). Eight settlement monuments were monitored quarterly. The vertical settling at each monument was within design limits.

Slumping was found on the OLF hillside southeast of the waste footprint, with the movement area being similar to 2016. The slumping was outside the waste footprint. Minor cracking was found behind Berm 4. The slump area was maintained by filling cracks to promote runoff and mechanical compaction. The material in the East Perimeter Channel was left in place. OLF activities included East Subsurface Drain repairs, which were completed January 5, 2017, and are inspected as part of the monthly and weather-related inspections. A temporary groundwater intercept system was operated from March 29 through October 26, 2017.

Present Landfill (PLF) activities included four quarterly inspections and four weather related inspections. The PLF is in good condition, and no significant issues were identified. Microbial buildup was removed from PLF Treatment System outlet pipes. Nine settlement monuments were monitored quarterly and vertical settling at each monument was within design limits.

Four quarterly inspections and four weather related inspections were performed at former building areas 371, 771, 881 and 991. There were no observable changes or new areas of subsidence. Hillside maintenance grading was done during the second quarter at North Walnut Creek Slump. In the third quarter, a crack developed along the regraded slump scarp alignment with a maximum displacement of 3 to 4 inches wide and two feet deep. Crack repair took place during the fourth quarter, and best management practices inspections were conducted. A geotechnical engineering firm was hired to evaluate the slumping and analyses; recommendations will be completed in 2018. Excess soil from the North Walnut Creek Slump was used to add additional cover for some of the East Trenches which have gradually settled 6 to 12 inches over the years. This was performed as a preventative maintenance measure, and the results will ensure positive drainage.

The access roads were in good shape. On July 6 and November 22, Durablend was applied to the main access roads to control dust.

Lisa Morzel asked what the weather range was to trigger a weather event. Jeremy responded that it was 1" of rain and 10" of snow. Shelley Stanley asked about the size of the regrade area and how often it was measured. Jeremy replied that it was about six acres. Initially it was measured weekly and is now measured quarterly. David asked whether applying Durablend on the roads is part of ongoing road maintenance and is not specific to Rocky Flats-related activities or concerns. Jeremy confirmed that David's understanding is correct, that like local governments do, applying Durablend is a common road maintenance practice.

Public comment re: Site Operations: None.

Ecology: John Boylan

Jody Nelson is on vacation so John is filling in for him. Herbicide applications were performed on approximately 133 acres by broadcast spraying and 6 acres by spot spraying. Thirteen acres were interseeded or revegetated as part of a project, and four new forb nurseries were established in 2017. Twelve areas were monitored for revegetation. Ten continued to meet success criteria. Two were new revegetation areas. The Preble's meadow jumping mouse mitigation monitoring showed that the habitat continues to establish, and one area met the success criteria. Wildflowers continue to establish and spread in the forb nursery. No active prairie dog towns were found within the Central Operating Unit (COU). Eighteen of the twenty-one nest boxes were inhabited by various species of birds in 2017. There were no active raptor nests observed in COU in 2017.

Public comment re: Ecology: None.

Board Roundtable: David Abelson discussed the Big Picture. At the September 17th meeting, the Board will review the 2019 draft work plan and 2019 draft budget, be briefed on DOE's quarterly report, and hear from the Rocky Flats Cold War Museum.

The meeting was adjourned at 10:30 a.m.

Prepared by Sandy Thomas