

ROCKY FLATS STEWARDSHIP COUNCIL

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

Board of Directors Meeting – Agenda

Monday, September 8, 2014, 8:30 AM – 12:00 PM

**Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado**

- 8:30 AM Convene/Introductions/Agenda Review
- 8:35 AM Chairman’s Review of August 18, 2014, Executive Committee meeting
- 8:40 AM Business Items
1. Consent Agenda
 - o Approval of meeting minutes and checks
 2. Executive Director’s Report
- 8:50 AM Public Comment
- 9:00 AM Host DOE Quarterly Meeting (briefing memo attached)
- o DOE will brief the Stewardship Council on site activities for the first quarter of 2014 (January – March).
 - o DOE has posted the report on its website and will provide a summary of its activities to the Stewardship Council.
 - o Activities include surface water monitoring, groundwater monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).
- 10:00 AM Briefing/Discussion on Groundwater at Rocky Flats (briefing memo attached)
- o Throughout 2014, the Stewardship Council has been studying groundwater issues. This briefing will be the third in a series of briefings and discussions.
 - o This briefing will focus on the groundwater treatment systems.
- 11:00 AM Board Review of Stewardship Council Activities for 2014 and Initial Review of 2015 Work Plan (briefing memo attached)

- The 2014 Stewardship Council work plan provides that the Board shall review its work for the year. The review is a first step the board will take in approving the 2015 work plan.
- The board will also review and edit the draft 2015 work plan.
- Formal approval of the work plan will take place at the October 27th meeting.

11:20 AM FY 15 Budget – Initial Review (briefing memo attached)

- The Board will review, and modify as necessary, the draft FY 15 budget.
- Formal budget hearings and adoption of the 2015 budget will take place at the October 27th meeting.

11:30 AM IGA Triennial Review – Initial Review (briefing memo attached)

- Every three years, each member government must pass a resolution affirming its intent to continue as a party to the IGA.
- All resolutions must be approved no later than February 13, 2015.
- At this meeting we will confirm that all member governments intend to continue with the Stewardship Council, and then discuss the approval process and text of the resolution.

11:40 AM Public comment

11:50 PM Updates/Big Picture Review

1. Member Updates
2. Review Big Picture

Adjourn

Next Meetings: October 27 (4th Monday of month)
 February 2, 2015

Rocky Flats Acronym List, Prepared by Rik Getty, Rocky Flat Stewardship Council, November 2012

Acronym or Term	Means	Definition
Alpha Radiation		A type of radiation that is not very penetrating and can be blocked by materials such as human skin or paper. Alpha radiation presents its greatest risk when it gets inside the human body, such as when a particle of alpha emitting material is inhaled into the lungs. Plutonium, the radioactive material of greatest concern at Rocky Flats, produces this type of radiation.
Am	americium	A man-made radioactive element which is often associated with plutonium. In a mass of Pu, Am increases in concentration over time which can pose personnel handling issues since Am is a gamma radiation-emitter which penetrates many types of protective shielding. During the production era at Rocky Flats, Am was chemically separated from Pu to reduce personnel exposures.
AME	Actinide Migration Evaluation	An exhaustive years-long study by independent researchers who studied how actinides such as Pu, Am, and U move through the soil and water at Rocky Flats
AMP	Adaptive Management Plan	Additional analyses that DOE is performing beyond the normal environmental assessment for breaching the remaining site dams.
AOC well	Area of Concern well	A particular type of groundwater well
B	boron	Boron has been found in some surface water and groundwater samples at the site
Be	beryllium	A very strong and lightweight metal that was used at Rocky Flats in the manufacture of nuclear weapons. Exposure to beryllium is now known to cause respiratory disease in those persons sensitive to it
Beta Radiation		A type of radiation more penetrating than alpha and hence requires more shielding. Some forms of uranium emit beta radiation.
BMP	best management practice	A term used to describe actions taken by DOE that are not required by regulation but warrant action.
BZ	Buffer Zone	The majority of the Rocky Flats site was open land that was added to provide a "buffer" between the neighboring communities and the industrial portion of the site. The buffer zone was approximately 6,000 acres. Most of the buffer zone lands now make up the Rocky Flats National Wildlife Refuge.
CAD/ROD	corrective action decision/record of decision	The complete final plan for cleanup and closure for Rocky Flats. The Federal/State laws that governed the cleanup at Rocky Flats required a document of this sort.
CCP	Comprehensive Conservation Plan	The refuge plan adopted by the U.S. Fish and Wildlife Service in 2007.
CDPHE	Colorado Department of Public Health and Environment	State agency that regulates the site.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	Federal legislation that governs site cleanup. Also known as the Superfund Act
cfs	cubic feet per second	A volumetric measure of water flow.
COC	Contaminant of Concern	A hazardous or radioactive substance that is present at the site.

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COU	Central Operable Unit	A CERCLA term used to describe the DOE-retained lands, about 1,500 acres comprised mainly of the former Industrial Area where remediation occurred
CR	Contact Record	A regulatory procedure where CDPHE reviews a proposed action by DOE and either approves the proposal as is or requires changes to the proposal before approval. CRs apply to a wide range of activities performed by DOE. After approval the CR is posted on the DOE-LM website and the public is notified via email.
Cr	chromium	Potentially toxic metal used at the site.
CRA	comprehensive risk assessment	A complicated series of analyses detailing human health risks and risks to the environment (flora and fauna).
D&D	decontamination and decommissioning	The process of cleaning up and tearing down buildings and other structures.
DG	discharge gallery	This is where the treated effluent of the SPPTS empties into North Walnut Creek.
DOE	U.S. Department of Energy	The federal agency that manages portions of Rocky Flats. The site office is the Office of Legacy Management (LM).
EA	environmental assessment	Required by NEPA (see below) when a federal agency proposes an action that could impact the environment. The agency is responsible for conducting the analysis to determine what, if any, impacts to the environment might occur due to a proposed action.
EIS	environmental impact statement	A complex evaluation that is undertaken by a government agency when it is determined that a proposed action by the agency may have significant impacts to the environment.
EPA	U.S. Environmental Protection Agency	The federal regulatory agency for the site.
ETPTS	east trenches plume treatment system	The treatment system near the location of the east waste disposal trenches which treats groundwater contaminated with organic solvents emanating from the trenches. Treated effluent flows into South Walnut Creek.
FC	functional channel	Man-made stream channels constructed during cleanup to help direct water flow.
FACA	Federal Advisory Committee Act	This federal law regulated federal advisory boards. The law requires balanced membership and open meetings with published Federal Register meeting dates.
Gamma Radiation		This type of radiation is very penetrating and requires heavy shielding to keep it from exposing people. Am is a strong gamma emitter.
GAO	Government Accountability Office	Congressional office which reports to Congress. The GAO did 2 investigations of Rocky Flats relating to the ability to close the site for a certain dollar amount and on a certain time schedule. The first study was not optimistic while the second was very positive.
g	gram	metric unit of weight
gpm	gallons per minute	A volumetric measure of water flow in the site's groundwater treatment systems and other locations.
GWIS	groundwater intercept system	Refers to a below ground system that directs contaminated groundwater toward the Solar Ponds and East Trenches treatment systems.
IA	Industrial Area	Refers to the central core of Rocky Flats where all production activities took place. The IA was roughly 350 of the total 6,500

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		acres at the site.
IC	Institutional Control	ICs are physical and legal controls geared towards ensuring the cleanup remedies remain in place and remain effective.
IHSS	Individual Hazardous Substance Site	A name given during cleanup to a discrete area of known or suspected contamination. There were over two hundred such sites at Rocky Flats.
ITPH	interceptor trench pump house	The location where contaminated groundwater collected by the interceptor trench is pumped to either the Solar Ponds and East Trenches treatment systems
L	liter	Metric measure of volume, a liter is slightly larger than a quart.
LANL	Los Alamos National Laboratory	One of the US government's premier research institutions located near Santa Fe, NM. LANL is continuing to conduct highly specialized water analysis for Rocky Flats. Using sophisticated techniques LANL is able to determine the percentages of both naturally-occurring and man-made uranium which helps to inform water quality decisions.
LM	Legacy Management	DOE office responsible for overseeing activities at closed sites.
LMPIP	Legacy Management Public Involvement Plan	This plan follows DOE and EPA guidance on public participation and outlines the methods of public involvement and communication used to inform the public of site conditions and activities. It was previously known as the Post-Closure Public Involvement Plan (PCPIP).
M&M	monitoring and maintenance	Refers to ongoing activities at Rocky Flats.
MOU	Memorandum of Understanding	MOU refers to the formal agreement between EPA and CDPHE which provides that CDPHE is the lead post-closure regulator with EPA providing assistance when needed.
MSPTS	Mound site plume treatment system	The treatment system for treating groundwater contaminated with organic solvents which emanates from the Mound site where waste barrels were buried. Treated effluent flows into South Walnut Creek.
NEPA	National Environmental Policy Act	Federal legislation that requires the federal government to perform analyses of environmental consequences of major projects or activities.
nitrates		Contaminant of concern found in the North Walnut Creek drainage derived from Solar Ponds wastes. Nitrates are very soluble in water and move readily through the aquatic environment
Np	neptunium	A man-made radioactive isotope that is found as a by-product of nuclear reactors and plutonium production.
NPL	National Priorities List	A listing of Superfund sites. The refuge lands were de-listed from the NPL while the DOE-retained lands are still on the NPL due to ongoing groundwater contamination and associated remediation activities.
OLF	Original Landfill	Hillside dumping area of about 20 acres which was used from 1951 to 1968. It underwent extensive remediation with the addition of a soil cap and groundwater monitoring locations.
OU	Operable Unit	A term given to large areas of the site where remediation was focused.
PCE	perchloroethylene	A volatile organic solvent used in past operations at the site. PCE is also found in environmental media as a breakdown product of other solvents.

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pCi/g	picocuries per gram of soil	A unit of radioactivity measure. The soil cleanup standard at the site was 50 pCi/g of soil.
pCi/L	picocuries per liter of water	A water concentration measurement. The State of Colorado has a regulatory limit for Pu and Am which is 0.15 pCi/L of water. This standard is 100 times stricter than the EPA's national standard.
PLF	Present Landfill	Landfill constructed in 1968 to replace the OLF. During cleanup the PLF was closed under RCRA regulations with an extensive cap and monitoring system.
PMJM	Preble's Meadow Jumping Mouse	A species of mouse found along the Front Range that is on the endangered species list. There are several areas in the Refuge and COU that provide an adequate habitat for the mouse, usually found in drainages. Any operations that are planned in potential mouse habitat are strictly controlled.
POC	Point of Compliance (surface water)	A surface water site that is monitored and must be found to be in compliance with federal and state standards for hazardous constituents. Violations of water quality standards at the points of compliance could result in DOE receiving financial penalties.
POE	Point of Evaluation (surface water)	These are locations at Rocky Flats at which surface water is monitored for water quality. There are no financial penalties associated with water quality exceedances at these locations, but the site may be required to develop a plan of action to improve the water quality.
POU	Peripheral Operable Unit	A CERCLA term used to describe the Wildlife Refuge lands of about 4,000 acres.
Pu	plutonium	Plutonium is a metallic substance that was fabricated to form the core or "trigger" of a nuclear weapon. Formation of these triggers was the primary production mission of the Rocky Flats site. Pu-239 is the primary radioactive element of concern at the site. There are different forms of plutonium, called isotopes. Each isotope is known by a different number. Hence, there are plutonium 239, 238, 241 and others.
RCRA	Resource Conservation and Recovery Act	Federal law regulating hazardous waste. In Colorado, the EPA delegates CDPHE the authority to regulate hazardous wastes.
RFCA	Rocky Flats Cleanup Agreement	The regulatory agreement which governed cleanup activities. DOE, EPA, and CDPHE were signors.
RFCAB	Rocky Flats Citizen Advisory Board	This group was formed as part of DOE's site-specific advisory board network. They provided community feedback to DOE on a wide variety of Rocky Flats issues from 1993-2006.
RFCLOG	Rocky Flats Coalition of Local Governments	The predecessor organization of the Rocky Flats Stewardship Council
RFETS	Rocky Flats Environmental Technology Site	The moniker for the site during cleanup years.
RFLMA	Rocky Flats Legacy Management Agreement	The post-cleanup regulatory agreement between DOE, CDPHE, and EPA which governs site activities. The CDPHE takes lead regulator role, with support from EPA as required.
RFNWR	Rocky Flats National Wildlife Refuge	The approximate 4,000 acres which compose the wildlife refuge.
RFSOG	Rocky Flats Site	The nuts-and-bolt guide for post-closure site activities performed by

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	Operations Guide	DOE and its contractors.
SPPTS	solar ponds plume treatment system	System used to treat groundwater contaminated with uranium and nitrates. The nitrates originate from the former solar evaporation ponds which had high levels of nitric acid. The uranium is primarily naturally-occurring with only a slight portion man-made. Effluent flows into North Walnut Creek
SVOCs	semi-volatile organic compounds	These compounds are not as volatile as the solvent VOCs. They tend to be similar to oils and tars. They are found in many environmental media at the site. One of the most common items to contain SVOCs is asphalt.
TCE	trichloroethylene	A volatile organic solvent used in past operations at the site. TCE is also found in environmental media as a breakdown product of other solvents.
U	uranium	Naturally occurring radioactive element. There were two primary isotopes of U used during production activities. The first was enriched U which contained a very high percentage (>90%) of U-235 which was used in nuclear weapons. The second isotope was U-238, also known as depleted uranium. This had various uses at the site and only had low levels of radioactivity..
USFWS	United States Fish & Wildlife Service	An agency within the US Department of the Interior that is responsible for maintaining the nation-wide system of wildlife refuges, among other duties. The regional office is responsible for the RFNWR.
VOC	volatile organic compound	These compounds include cleaning solvents that were used in the manufacturing operations at Rocky Flats. The VOCs used at Rocky Flats include carbon tetrachloride (often called carbon tet), trichloroethene (also called TCE), perchloroethylene (also called PCE), and methylene chloride.
WCRA	Woman Creek Reservoir Authority	This group is composed of the three local communities, the Cities of Westminster, Northglenn, and Thornton, who use Stanley Lake as part of their drinking water supply network. Water from the site used to flow through Woman Creek to Stanley Lake but the reservoir severed that connection. The Authority has an operations agreement with DOE to manage the Woman Creek Reservoir.
WQCC	Water Quality Control Commission	State board within CDPHE tasked with overseeing water quality issues throughout the state. DOE has petitioned the WQCC several times in the last few years regarding water quality issues.
ZVI	zero valent iron	A type of fine iron particles used to treat VOC's in the ETPTS and MSPTS.

Business Items

- June 2, 2014, draft board meeting minutes
- List of Stewardship Council checks

ROCKY FLATS STEWARDSHIP COUNCIL

Monday, June 2, 2014, 8:30 AM – 10:40 AM

**Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado**

Board members in attendance: Mark McGoff (Director, Arvada), Sandra McDonald (Alternate, Arvada), Lisa Morzel (Director, City of Boulder), Tim Plass (Alternate, City of Boulder), Deb Gardner (Director, Boulder County), Megan Davis (Alternate, Boulder County), Mike Shelton (Director, Broomfield), David Allen (Alternate, Broomfield), Laura Weinberg (Director, Golden), Pat O'Connell (Alternate, Jefferson County), Joyce Downing (Director, Northglenn), Shelley Stanley (Alternate, Northglenn), Joe Cirelli (Director, Superior), Emily Hunt (Alternate, Thornton), Bob Briggs (Director, Westminster), Mary Fabisiak (Alternate, Westminster), Jeannette Hillery (League of Women Voters), Sue Vaughan (League of Women Voters), Ann Lockhart (Director, Rocky Flats Institute & Museum), Arthur Widdowfield (Alternate, Rocky Flats Institute & Museum), Ken Freiberg (Alternate, Rocky Flats Institute & Museum), Roman Kohler (Rocky Flats Homesteaders), Nancy Newell (citizen).

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

Attendees: John Dalton (EPA), Vera Moritz (EPA), Charles Adams (CDPHE), Walter Avromenko (CDPHE), Carl Spreng (CDPHE), Scott Surovchak (DOE-LM), Linda Kaiser (Stoller), Bob Darr (Stoller), John Boylan (Stoller), Jody Nelson (Stoller), George Squibb (Stoller), Jeremiah McLaughlin (Stoller), David Ward (Stoller), Jon Lipsky (citizen), Mickey Harlow (citizen), Anne Fenerty (citizen), Tim Allport (citizen)

Convene/Agenda Review

Board Chair Joyce Downing convened the meeting at 8:36 a.m.

Bob Briggs moved to approve the February 3, 2014, Board meeting and the checks. The motion was seconded by Jeannette Hillery. The motion to accept the minutes and checks passed 14-0.

Next, the Board discussed a resolution to change the November 3 meeting date to October 27. Joe Cirelli moved that the Board change the meeting date. The motion was seconded by Jeannette Hillery. The motion passed 14-0.

Public Comment

Anne Fenerty provided a statement. She said that she had served on the Rocky Flats Citizens Advisory Board in 2002, and that she held a master's degree in organic chemistry. She said that when Rocky Flats became a Superfund site the proposed remediation was to follow RCRA requirements. Because of this, she said that Scott Surovchak's comments in an October 2013 *Boulder Weekly* article that the Original Landfill remediation did not need to follow RCRA was not true. She said that an independent consultant recommended a subtitle C cap, consisting six layers. She noted that DOE decided to call the Original Landfill a 'sanitary waste landfill' and

covered it with two feet of dirt instead. She said this is why the cap is cracking and why radionuclides are now being discharged from the landfill. She noted that if DOE had followed MARSSIM, which was accepted by EPA, NRC, and others, we would not now have contaminant flows.

She added that Scott Surovchak called Rocky Flats “nothing but a fancy machine shop” in the *Denver Post*. She noted that while Rocky Flats was machining plutonium bombs, it also handled up to 14 tons of the material—of which 1 microgram is potentially lethal – and housed four nuclear reactors. She said that the long list of carcinogens on the site included radionuclides, beryllium and VOC’s. She added that it is now known that cancers are caused by ionizing radiation such as X-rays, tars from tobacco and radioactive materials, and not caused by foods or behavior.

In terms of the Rocky Flats Wildlife Refuge, which surrounds the remaining Superfund site, she said that institutional and physical controls are known not to be permanent, and that burrowing animals will bring up pollution. She said that the Stewardship Council and others have prevented efforts to put signage to the entrance of the refuge. She closed by saying that Rocky Flats was too polluted to allow children recreate on it, and should remain closed permanently. Some Board members asked for copies of her remarks.

Mickey Harlow spoke next, also raising concerns about Scott Surovchak’s comments to the *Denver Post*. Mickey also raised concern about the site’s groundwater systems.

Anne and Mickey’s comments are posted on the Stewardship Council website at http://www.rockyflatssc.org/public_comment.html

Executive Director’s Report

David Abelson noted that the Arvada Center symposium focusing on Rocky Flats was scheduled for the upcoming weekend. He said that a few minor changes had been made to the agenda. He added that several groups would have informational tables set up during the event, such as the Rocky Mountain Peace and Justice Center, the Bulletin of Atomic Scientists, the Rocky Flats Institute and Museum, the Atomic Photographers guild, a nuclear worker advocacy group, and author Kristen Iverson.

David said that he had been noticing an uptick in the interest level regarding Rocky Flats issues over the last couple of months. The Stewardship Council was receiving more requests from people to be added to the mailing list. He said there were likely various reasons for this, including the Candelas development, but believes that the primary energy behind it was likely Kristen Iverson’s book about Rocky Flats. He said that four members of the public attended the Executive Committee meeting, and that it was good to see more people are interested and engaging. Tim Plass recognized Jon Lipsky, who was in the audience and wanted to make sure people knew that he was involved in the raid on Rocky Flats. Tim also thanked Jon for his work.

David next spoke about worker compensation issues and the defense authorization bill, which includes DOE programs. There had been a bi-partisan amendment designed to bring additional

oversight to the EEIOCPA program. The intent was to establish an advisory board on toxic substances and worker health. This effort was now being called a 'sense of Congress', and would carry over to the Senate, where Senator Udall supports it in his committee. David said that it was hard to know how this would play out, but it was an important statement about transparency and the value of this compensation program. He noted that the Stewardship Council has consistently stood behind these worker health efforts.

David next updated the Board on the upcoming triennial review for the Stewardship Council. The Council was created under an Intergovernmental Agreement (IGA), which calls for a review of the organization every three years and requires each local government to reaffirm their commitment to participate. More information will be distributed prior to the September meeting. Each of the local governments will need to pass the same resolution, and the language will be provided by the Board's attorney, Barb Vander Wall. This process will need to be completed by February 2015. Mary Fabisiak asked David if he anticipated any significant changes as part of this process. He said he had not heard from any governments that were not planning on continuing. David Allen noted that the last Triennial Review resulted in some amendments to the IGA, and asked if there were likely to be any changes to it this year. Barb Vander Wall said that the intention was to keep the IGA the same and simply reaffirm it. She explained that two new governments were added to the IGA last time, and a previous rotating membership was made permanent, but no such changes are expected this year.

Rik Getty announced that the annual site tour was scheduled for June 11, and that he would send out an email for others interested in attending. The backup date was June 25. He would also be sending out an email with information about the visit and what to bring.

DOE 2013 Annual Update

Surface Water – George Squib

George noted that a great deal of additional information was available on the Rocky Flats website. He began by displaying a map of surface water monitoring locations, and noted that the former Points of Compliance (POCs) at GS01 and GS03 were still being monitored. Points of Evaluation (POE's) are situated closer in to the former Industrial Area, and are upstream of the POC's. There are also monitoring locations at the former landfills. The POC regulatory framework is based on a 12-month rolling average, while results of a 30-day rolling average provide an indication when they should begin looking closer at certain areas. At the POE's, only the 12-month rolling average is used. At the landfills, samples are compared to the relevant standard. Certain results can lead to increased monitoring frequency, as well as possible consultation with the regulators if standards are exceeded more than three months in a row.

At the Original Landfill (OLF) during 2013, an increased sampling frequency was temporarily required for selenium. At the Present Landfill (PLF), increased sampling frequency was temporarily required for vinyl chloride, arsenic and selenium.

At the GS10 POE, reportable 12-month rolling average values for americium, plutonium, and uranium were observed during 2013. Additional sampling is being conducted both upstream and

downstream of GS10. Seep sampling in this area was not conclusive, and a decreased turnaround time on results has been implemented.

At the Walnut Creek POC (WALPOC), reportable 30-day average values for uranium were first observed during December 2013. The 12-month rolling average (7.5 µg/L) remains well below the remedy performance standard (16.8 µg/L). Additional sampling is being conducted upstream of WALPOC. Currently, Rocky Flats has a more stringent standard than the drinking water standard for uranium. George said that the site is working with a geochemical subcontractor to investigate further, and that a report would be coming out later in the summer or early fall. Lisa Morzel asked who the subcontractor was. George said it was Wrightwater Engineers. She also asked if the site was sending any samples to LANL related to this issue. George said that the site was now sending samples to Lawrence Berkeley for high resolution uranium analysis. He added they are seeing 75% natural uranium, which is consistent with typical results. Jon Lipsky asked which isotopes were analyzed. John said Plutonium 239 and 240, americium, and uranium total mass. David Allen asked if this was the first reportable condition at a POC. George said it was.

Mickey Harlow noted that some of the samplers had been damaged during flooding and asked if there was any thought of increasing the size of the collection bottles. George said that they did that a couple years ago, and that they use 50 liter bottles now. She asked why samples were not collected during the storm event. George said that they did get samples at the beginning of the event, which is the time that the contamination would have moved the most with soil. He said they collected one year's worth of water in 12 hours. He added that collecting grab samples was not a normal protocol. Mickey said that CDPHE grabbed samples; however Scott Surovchak said that was not true. He added that access was restricted to much of the site during the flooding. George said that they focused on reaching the POC's first since they could access all of the samplers. He said they got time-paced samples out of Pond C2 throughout the whole event, and that data from that matched with other data they saw, which was below the standard. Mickey asked if the sampling numbers were available, and George said that they could be found in the annual report. Specific tables show where samplers were down, what they caught, estimated flow rates and volumes.

Groundwater – John Boylan

John next spoke about groundwater monitoring and operations issues during 2013. The objective of these activities is protection of surface water quality. 88 locations were sampled throughout the year, including:

- 64 wells and one surface location were sampled one-to-four times each
- Treatment system locations were sampled two-to-several times each
- Also non-routine and non-RFLMA sampling and locations (e.g., to support evaluation of groundwater treatment tests)

All RFLMA-required monitoring and evaluation was performed. All AOC well data was below RFLMA levels. Results were consistent with previous data. At the OLF and PLF Resource Conservation and Recovery Act (RCRA) wells, statistical evaluations were carried out per RFLMA and results were similar to previous years. A few analytes were higher in downgradient groundwater than in upgradient groundwater, and a few analytes in downgradient groundwater

were on an increasing trend. Several statistical results may not be valid due to abundance of non-detects, estimated concentrations, and/or changes to detection limits.

A large amount of work was conducted at groundwater treatment systems during the year. Two new air strippers were added and ongoing lagoon and microcell tests were conducted. There was also extra (non-routine) sampling in or near selected source areas. Evaluation wells were not scheduled in 2013; however, some evaluation wells were sampled due to a wetter spring than in 2012 (the last routinely-scheduled sampling round). Some evaluation wells were sampled after the heavy September precipitation, and results were generally consistent with previous data. The September precipitation event affected groundwater, as many areas showed higher water levels and treatment system flows increased. Hydrographs show a sharp rise of about 15 feet from the precipitation event. Wells in drainages did not show impacts of the event at all, while wells on top of the pediment surface showed large increases.

Lisa Morzel asked if the site was sampling this spring and what the results were looking like now. John said they were doing a great deal of sampling and that the results were still elevated. Mickey Harlow asked if the site had measured VOC's coming off the treatment cells and whether DOE was exempt from these requirements. John said they were not exempt, and that they do monitor before and after the air stripper treatment. The results have been negligible. The site was also still sampling boundary wells to ensure plumes were not moving. Wells near former buildings have been showing almost nothing. All of these sampling numbers are available in the Annual Report. John was also asked if there was a backup for the solar panels in place at plume treatment systems. He said that they were designed to run three days without charge.

Site Operations – Jeremiah McLaughlin

Jeremiah began with an update on the Original Landfill (OLF), where 12 monthly inspections were performed and eight settlement monuments and seven inclinometers were monitored in 2013. There was a localized slump after the heavy rains, which was addressed right away. Jeremiah noted that the site is working with a geotechnical engineer on further stability improvements, which they will implement if necessary. At the Present Landfill (PLF), four quarterly inspections were completed during the year, and nine settlement monuments and six side-slope monitors were surveyed. The annual Site Inspection took place in March. They looked for signs of significant erosion or adverse biological conditions, and also evaluated the effectiveness of institutional controls. Quarterly sign inspections were also conducted throughout the year, and all signs were found to be in good condition.

Shelley Stanley asked whether there were any changes in the seeps at the OLF after the heavy precipitation. Jeremiah said that they did flow a little longer and were not drying as fast. She also asked if they saw anything new upstream of GS10. He said they did not. Mickey Harlow commented that it seemed like there was quite a bit of maintenance required on the OLF, and that she would like to see how much was spent on this.

Ecological Monitoring – Jody Nelson

Activities during 2013 involved project assistance, revegetation monitoring, wetland mitigation monitoring, Preble's mouse mitigation monitoring, weed monitoring and control, and wildlife monitoring. Jody noted that there were no prairie dogs living in the Central Operable Unit

(COU). He also mentioned that about two-thirds of the nesting boxes they placed throughout the site appear to have been used.

Receive Stewardship Council 2013 Financial Audit

The representative from the auditing company was not able to attend, so the Board's accountant Jennifer Bohn was on hand to present the results of the 2013 audit. David Abelson noted that neither state law nor the Board's grant with DOE requires the Stewardship Council to seek an audit. However, 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. Therefore, the Stewardship Council enlists an independent company to review its financial records each year.

Jennifer noted that she had reviewed the report, as did Barb Vander Wall and David. She explained the auditors did not find any material deficiencies, and issued a clean audit. One adjustment that the auditors made had to do with funds received after year end. There were no changes from prior years.

Jon Lipsky asked what accounting system the Board uses, and whether it was subject to an audit by DOE. David Abelson answered that DOE does not require the Stewardship Council to do an audit because of the amount of the grant, and that the Stewardship Council does this voluntarily. DOE has a minimum threshold of \$300K in funding before requiring an audit and the local government threshold is \$500K. The Stewardship Council budget is about \$125K. Jon asked if records were available publicly. David said that they could be made available. The Stewardship Council was required to formally accept the audit at this meeting.

Bob Briggs moved to accept the 2013 audit. The motion was seconded by Roman Kohler. The motion passed 12-0.

Briefing/Discussion on Groundwater at Rocky Flats

Throughout 2014, the Stewardship Council has been studying groundwater issues. This briefing was the second in a series of briefings and discussions, and was set up to focus on the groundwater monitoring network, contaminants, groundwater treatment systems, and decision-making flowcharts contained in the Rocky Flats Legacy Management Agreement.

George Squibb, the presenter, noted that this discussion was not in response to any issue, but was intended as education for the Board. He began by reviewing the last groundwater briefing to the Stewardship Council, which focused on the hydrogeology of the Rocky Flats area.

He explained that an iterative process was used to develop the Rocky Flats groundwater monitoring network. Characterization identified areas of contaminated groundwater, contaminants of concern (COCs), and flow directions. Primary well installation targets incorporated areas of contamination (known and suspected) and potential data gaps (particularly along flowpaths to surface water). The analytical suites were initially broad, but were narrowed

to reflect local conditions. Hydrogeologic data was also used (hydraulic conductivity, recharge rates, water levels, subsurface geology, etc).

Monitoring wells have been used at the site since 1954, and the last two decades before site closure were the most active in terms of adding new wells. The sampling frequencies vary depending on data needs (weekly, monthly, quarterly, semiannually, one-time, or as-requested). Analytical suites also vary:

- Radionuclides (tritium; isotopes of plutonium, americium, uranium, cesium, strontium, neptunium, radium, thorium, others)
- Metals (including some of potential special interest, such as beryllium), metalloids (including special interest, such as arsenic)
- Organics (VOCs, SVOCs, total petroleum hydrocarbons, others)
- Various nonmetals, halogens, cations, and anions (sulfate, sulfide, orthophosphate, fluoride, silica, chloride, etc.)
- Constituents of potential interest (nitrate, nitrite, ammonia, cyanide, total organic carbon, etc.)

Location-specific groundwater data drove monitoring practices, well installations/abandonments, and remediation. Wells were abandoned as appropriate, and the methods followed State of Colorado guidelines. Wells needing design improvement were also abandoned and then replaced. Depictions of groundwater contamination were developed using the monitoring data, including well evaluation reports, Operable Unit work plans and reports, Annual RCRA and RFCA reports, Groundwater IM/IRA, and RI/FS – which defined the ultimate contaminants of concern.

The primary objective of groundwater monitoring is to evaluate potential impact of groundwater on surface-water quality. Groundwater conditions change slowly in/near source areas (less-frequent sampling is appropriate). More frequent monitoring was needed at plume fronts in drainages and along pathways to surface water.

Input on the final monitoring network design was provided by community representatives, stakeholders, regulators, and site staff. There were extensive meetings in the years leading up to closure to determine the focus of the network (locations, analytical suites, data evaluation) from characterization to long-term stewardship.

Groundwater COCs were agreed to be VOCs, nitrate, and uranium. Additional constituents were monitored per agreements, such as metals at the OLF and PLF, SVOCs at the OLF, and plutonium and americium at 5 wells downgradient of former B371 and B771.

The network was designed around several types of wells:

- Evaluation wells
 - Closest to source areas
 - Monitored biennially (second quarter, even-numbered years)
- Sentinel wells
 - Along downgradient plume edges and pathways to surface water
 - Monitored twice annually (second and fourth quarters)

- AOC wells, Surface Water Support location
 - Downgradient of plume(s), within drainage
 - Monitored twice annually (second and fourth quarters)
 - Have reportable-condition criteria
- RCRA wells
 - RCRA identified as “applicable or relevant and appropriate requirement” to groundwater monitoring at both landfills
 - Upgradient and downgradient at PLF and OLF
 - Monitored quarterly
 - Results can trigger consultation
- Groundwater treatment systems
 - Influent, effluent, and surface-water performance locations
 - Monitored twice annually (second and fourth quarters)

Treatment system locations were designed where contaminated groundwater was detected at or near surface water and fed by a source area. They knew systems were appropriate at: PLF, South Walnut Creek downgradient of Mound source area (former seep SW059), South Walnut Creek downgradient of East Trenches source area, and North Walnut Creek downgradient of Solar Ponds source area. Also, modeling evaluated whether treatment was needed in other areas.

As designed, each system incorporates a groundwater intercept component. Except for PLFTS, each system has required modification since closure. They were originally designed to reduce contaminant loads. Effluent is compared with RFLMA Table 1 standards. Each system treats a very low flow of water.

John outlined how each system works.

Mound Site Plume Treatment system; East Trenches Plume Treatment System

- Dissolved chlorinated solvents
- ZVI reacts chemically with solvent molecules
- Results of complete treatment: chlorine, carbon dioxide, water (ethene, ethane also possible)
- Result of incomplete treatment: partially-dechlorinated compounds
- Air strippers added to assist ZVI-based treatment

Present Landfill Treatment System

- Also chlorinated solvents, treated via cascade aeration

Solar Ponds Plume Treatment System

- Nitrate and uranium
- Sawdust: carbon source for denitrifying bacteria
- ZVI: removes uranium Large mass in a tank versus small amounts in “microcells”
- Testing lagoons for treating nitrate
 - Nearly-stagnant water with abundant denitrifying bacteria
 - Influent dosed with nutrients
 - Bacteria convert the nitrate (NO₃) to nitrogen gas (N₂)

RFLMA Attachment 2 defines well classes and objectives and presents data evaluation protocols (flowcharts). Evaluation protocols incorporate use of statistics (calculation of trends, calculation of 85th-percentile concentrations, and comparison of upgradient versus downgradient concentrations). Flowchart notes address monitoring frequencies, concentrations for comparison, and statistical approaches. Annual reports are required which present results of statistical evaluations plus other charts, tables, and information.

Tim Plass asked what the spacing of wells was. John said it could be as little as 100-150 feet, but that it varied. Mickey Harlow asked about movement of plutonium in groundwater. John said that when some wells were installed, contaminated soil was pulled down into the boreholes and plutonium and/or americium were found in the wells. Since then, these contaminants have not been seen. He added that surface water is also monitored for plutonium and americium. He said they were not blind to the potential for colloidal movement, but that they were just not seeing it happen.

Public Comment

There was none

Member Updates

Bob Briggs mentioned a Jazz Festival in Westminster on June 14. Ann Lockhart noted that Rocky Flats Institute and Museum volunteers developed an exhibit for the Arvada Center which will be on display for three months. Sandra McDonald introduced herself as the new Stewardship Council alternate director from Arvada.

Updates/Big Picture Review

September 8, 2014

Potential Business Items

- Initial discussion of 2015 budget and workplan
- Continue IGA triennial review

Potential Briefing Items

- DOE quarterly update
- DOE groundwater briefing

October 27, 2014 (4th Monday)

Potential Business Items

- Approve 2015 budget and work plan
- Continue IGA triennial review

Potential Briefing Items

- DOE quarterly update
- Risk Assessment briefing
- What are key questions people have about Rocky Flats (David will consult with Scott, Vera & Carl about this)

Lisa Morzel said that she would like to hear from John Boylan regarding a groundwater levels update. David Abelson told other Board members that if they had other requests like this to let him know.

Issues to watch:

- Americium, plutonium and uranium levels upstream of pond B-3 and U levels at WALPOC
- AMP sampling
- Original landfill

The meeting was adjourned at 10:45 a.m.

Respectfully submitted by Erin Rogers.

12:07 PM

08/24/14

Rocky Flats Stewardship Council
Check Detail-2014
 May 13 through August 24, 2014

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check		5/25/2014		CASH-Wells Fargo-Operating		-3.50
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Check		6/25/2014		CASH-Wells Fargo-Operating		-3.50
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Check		7/28/2014		CASH-Wells Fargo-Operating		-8.50
				Admin Services-Misc Services	-8.50	8.50
TOTAL					-8.50	8.50
Bill P...	1676	5/13/2014	HUB SW	CASH-Wells Fargo-Operating		-3,012.75
Bill	020...	5/1/2014		Insurance	-3,012.75	3,012.75
TOTAL					-3,012.75	3,012.75
Bill P...	1677	5/13/2014	The Hartford	CASH-Wells Fargo-Operating		-500.00
Bill	115...	5/6/2014		Insurance	-500.00	500.00
TOTAL					-500.00	500.00
Check	1678	6/1/2014	Century Link	CASH-Wells Fargo-Operating		-27.77
				Telecommunications	-27.77	27.77
TOTAL					-27.77	27.77
Bill P...	1679	6/1/2014	Crescent Strategies...	CASH-Wells Fargo-Operating		-7,270.88
Bill	5/31...	5/31/2014		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-136.21	136.21
				TRAVEL-Local	-71.68	71.68
				Postage	-15.99	15.99
				Printing	-197.00	197.00
TOTAL					-7,270.88	7,270.88
Bill P...	1680	6/1/2014	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-348.50
Bill	14-34	5/31/2014		Accounting Fees	-348.50	348.50
TOTAL					-348.50	348.50
Bill P...	1681	6/1/2014	The Rogers Group, ...	CASH-Wells Fargo-Operating		-425.00
Bill	5/17...	4/30/2014		Personnel - Contract	-425.00	425.00
TOTAL					-425.00	425.00
Bill P...	1682	6/1/2014	Wagner Barnes & ...	CASH-Wells Fargo-Operating		-4,020.34
Bill	18314	5/1/2014		Annual Audit	-4,020.34	4,020.34
TOTAL					-4,020.34	4,020.34
Check	1683	7/8/2014	Century Link	CASH-Wells Fargo-Operating		-26.70

12:07 PM

08/24/14

Rocky Flats Stewardship Council
Check Detail-2014
 May 13 through August 24, 2014

Type	Num	Date	Name	Account	Paid Amount	Original Amount
				Telecommunications	-26.70	26.70
TOTAL					-26.70	26.70
Bill P...	1684	7/8/2014	Blue Sky Bistro	CASH-Wells Fargo-Operating		-270.00
Bill	1799	6/2/2014		Misc Expense-Local Government	-270.00	270.00
TOTAL					-270.00	270.00
Bill P...	1685	7/8/2014	Crescent Strategies...	CASH-Wells Fargo-Operating		-7,272.44
Bill	6/30...	6/30/2014		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-136.21	136.21
				TRAVEL-Local	-170.24	170.24
				Postage	-15.99	15.99
				Printing	-100.00	100.00
TOTAL					-7,272.44	7,272.44
Bill P...	1686	7/8/2014	Energy Communiti...	CASH-Wells Fargo-Operating		-950.00
Bill	201...	7/1/2014		Subscriptions/Memberships	-950.00	950.00
TOTAL					-950.00	950.00
Bill P...	1687	7/8/2014	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-357.00
Bill	14-37	6/30/2014		Accounting Fees	-357.00	357.00
TOTAL					-357.00	357.00
Bill P...	1688	7/8/2014	Seter & Vander Wal...	CASH-Wells Fargo-Operating		-354.50
Bill	68855	5/31/2014		Attorney Fees	-354.50	354.50
TOTAL					-354.50	354.50
Check	1689	8/12/2014	Century Link	CASH-Wells Fargo-Operating		-27.29
				Telecommunications	-27.29	27.29
TOTAL					-27.29	27.29
Bill P...	1690	8/12/2014	Crescent Strategies...	CASH-Wells Fargo-Operating		-7,056.17
Bill	7/31...	7/31/2014		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-136.21	136.21
				TRAVEL-Local	-31.36	31.36
				Postage	-15.99	15.99
				Misc Expense-Local Government	-22.61	22.61
TOTAL					-7,056.17	7,056.17
Bill P...	1691	8/12/2014	Jennifer A. Bohn	CASH-Wells Fargo-Operating		-494.00
Bill	14-48	7/31/2014		Accounting Fees	-494.00	494.00
TOTAL					-494.00	494.00
Bill P...	1692	8/12/2014	Seter & Vander Wal...	CASH-Wells Fargo-Operating		-954.68
Bill	69351	6/30/2014		Attorney Fees	-883.43	883.43
Bill	769...	7/31/2014		Attorney Fees	-71.25	71.25
TOTAL					-954.68	954.68

DOE Quarterly Report Briefing

- Cover memo
- Table of contents from quarterly report

Groundwater Briefing

- Cover memo
- Figure 13

ROCKY FLATS STEWARDSHIP COUNCIL

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City of Golden -- City of Northglenn -- City of Thornton -- City of Westminster -- Town of Superior
League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders
Nancy Newell

MEMORANDUM

TO: Stewardship Council Board
FROM: Rik Getty
SUBJECT: DOE Quarterly Report Briefing
DATE: August 27, 2014

We have scheduled 60 minutes for DOE to present its quarterly update for the first quarter of 2014 (January – March). The report (144 pages), can be found at: http://www.lm.doe.gov/Rocky_Flats/Documents.aspx

DOE will brief on the following topics in a format similar to past quarterly report updates:

- surface water monitoring;
- groundwater monitoring;
- results of the annual site inspection;
- ecological monitoring; and,
- site operations (inspections, pond operations, general maintenance, etc.).

The cover and table of contents are attached to this memo.

FIRST QUARTER 2014 QUARTERLY REPORT

Highlights of the surveillance and maintenance activities are as follows (quoting from the document).

Water Monitoring Highlights

During the first quarter of CY 2014, water monitoring successfully met the targeted monitoring objectives as required by the RFLMA and was in conformance with RFSOG implementation guidance. The routine RFLMA network consists of 8 automated gaging stations, 11 surface water grab-sampling locations, 8 treatment system locations, and 89 wells (DOE 2014). Additional locations are occasionally sampled in support of investigations in response to reportable conditions. During the quarter, 28 flow-paced composite samples, 26 surface water grab samples, 20 treatment system samples, and 10 groundwater samples were collected (in accordance with RFLMA protocols) and submitted for analysis.

The Site experienced very high flows during the second week of September 2013 following very heavy precipitation. Effects of this precipitation were still evident in the first quarter of 2014, for example in groundwater treatment system flows.

Groundwater monitoring results will be evaluated as part of the annual report for CY 2014.

Reportable 30-day average uranium concentrations occurred in December 2013 for surface water at RFLMA POC monitoring station WALPOC, which is located on Walnut Creek at the eastern COU boundary. WALPOC is evaluated in Section 3.1.2.1 of this report. The RFLMA 30-day average reportable conditions at POCs are for evaluation purposes only and are not an exceedance of the remedy standard.

All other RFLMA POC analyte concentrations remained below reporting levels throughout the first quarter of CY 2014.

Reportable 12-month rolling average americium (Am) and plutonium (Pu) activities were observed throughout the quarter in surface water at RFLMA POE monitoring station GS10, which is located on South Walnut Creek upstream of former Pond B-1. An update to the GS10 evaluation is presented in Section 3.1.3.1 of this report.

All other RFLMA POE analyte concentrations remained below reporting levels throughout the first quarter of CY 2014.

In response to the reportable conditions summarized above, a qualified geochemistry subcontractor is currently conducting an extensive evaluation of the fate and transport of uranium at the Site. The study also evaluates data to attempt to identify source terms that may contribute to elevated plutonium and americium results at the GS10 location (see Contact Record 2011-08).

The primary purpose of the study is to evaluate variability in uranium concentrations—due to seasonal, hydrologic, geochemical, and geographic effects—through the collection of targeted analytical and field data. The study also incorporates the ongoing calculation of the percentages of natural uranium versus anthropogenic uranium in Walnut Creek. Information from the study will support the GS10 (Contact Records 2011-04 and 2011-05) and WALPOC (Contact Record 2014-05) reportable conditions evaluations.

The methods used for the study include assessing historical and current data, identifying patterns or correlations, and evaluating potential geochemical mechanisms that may contribute to the noted results. The study has also identified additional data needs; collection of these data is ongoing.

A report summarizing the study is scheduled to be issued in CY 2014. The results of that assessment will include a determination of whether the study needs to continue in order to improve the understanding of how site dynamics affect the concentrations of uranium, plutonium, and americium in Walnut Creek. Information from the study will be reported in a future RFLMA annual report.

Annual Site Inspection

Annual inspection and monitoring of evidence of significant erosion and violation of Institutional Controls (ICs) is required in accordance with RFLMA Attachment 2, Sections 5.3.4 and 5.3.6. The inspection was conducted on March 25, 2014.

The following categories were inspected or monitored during the inspection:

- Evidence of significant erosion in the COU, and the proximity of this erosion to subsurface features identified in RFLMA Attachment 2, Figure 3 and Figure 4. This monitoring included observation for precursor evidence of significant erosion, such as cracks, rills, slumping, subsidence, and sediment deposition.
- The effectiveness of ICs as determined through any evidence of the violation of any of these controls.
- Evidence of adverse biological conditions, such as unexpected morbidity or mortality.

As part of the IC inspection, verification that the Environmental Covenant remains in the Administrative Record and on file in Jefferson County records is required annually. In addition, physical controls (i.e., signs placed along the COU fence) were also verified to be in place. The annual inspection was scheduled so that surface features could be observed adequately after snow cover had melted, once the surface was dry, and before vegetation growth could obscure land surface features.

To conduct this work, the inspection team walked down the COU surface to observe the conditions. The inspection team included knowledgeable employees of DOE and of The S.M. Stoller Corporation, a wholly owned subsidiary of Huntington Ingalls Industries. The areas walked down were designated as Areas A through E and are shown on the maps included in Appendix B. These areas generally coincide with the location of the subsurface features in RFLMA Attachment 2, Figure 3 and Figure 4, or they afforded adequate viewing of the surface in these locations (e.g., sloping areas). Several inspection team members were assigned to walk down a particular area or areas identified on the maps. Reference points, such as monitoring wells and roads, were used to orient the inspection team members within designated inspection areas.

Marker flags were placed where conditions showed evidence of the three condition categories listed above to track their location for follow-up by Site subject matter experts. Areas that required evaluation were documented in the Site Observation Log for evaluation and follow-up.

Debris on the surface or trash was either picked up during the inspection or subsequently removed. Several areas were noted as having evidence of erosion, possible depressions, or holes. Rocky Flats field operations subject matter experts evaluated the areas and none appeared to be significant.

No evidence of violations of institutional or physical controls was observed.

No adverse biological conditions were noted during the inspection.

On March 26, 2014, an inspection team member verified that the Environmental Covenant for the COU remains in the Administrative Record and on file with the Jefferson County land records, which are used by the Planning and Zoning Department.

Landfills

Present Landfill (PLF)

The PLF is inspected quarterly in accordance with the requirements of the PLF Monitoring and Maintenance (M&M) Plan (DOE 2008) and Attachment 2 of the RFLMA (DOE 2012a). Evaluations of the landfill cover vegetation have been discontinued, as the success criteria, according to the requirements outlined in RFLMA, have been met.

The routine PLF inspection for the first quarter of CY 2014 was performed on February 24. No significant problems were observed during this inspection. Copies of the landfill inspection forms are presented in Appendix A.

The annual survey of the PLF settlement monuments was performed on December 9, 2013. The next annual survey will be completed in the last quarter of 2014.

Original Landfill (OLF)

The OLF is inspected monthly, in accordance with the requirements in the OLF Monitoring & Maintenance Plan (DOE 2009a) and the RFLMA. It was anticipated that after the first year, the inspection frequency might be reduced to quarterly for an additional 4 years. However, because of observed localized slumping and seep areas, and investigation and repairs to the OLF cover completed in 2009, no change to the monthly inspection frequency was recommended in the third five-year review of the Site (DOE 2012b).

Routine OLF inspections during the first quarter of CY 2014 were performed on January 27, February 24, and March 27, 2014. Evaluations of the landfill cover vegetation have been discontinued, as the success criteria, according to the requirements outlined in the RFLMA, have been met. The completed inspection forms are presented in Appendix A.

Localized surface cracking and differential settlement in the northeastern portion of the cover were noted following the high precipitation event received in September 2013. (As described below, the affected area is near an area where small cracks were observed in 2010 and 2011.) In accordance with RFLMA Attachment 2, Section 6.0, "Action Determinations," DOE determined this was a reportable condition affecting the effectiveness of the OLF cover. Figure 1 shows the location of the observed cracking. DOE informed CDPHE and EPA of the cracking on the northeast side of the OLF on September 17, 2013. DOE, CDPHE, and EPA personnel toured the area on September 18 to start the consultative process to develop a proposed course of action.

Contact Record 2013-02 documents the initial mitigation steps taken by DOE to minimize the potential for infiltration of precipitation. Initial steps included (1) minor regrading of the differential displacement cracks to seal the openings using Rocky Flats Alluvium from the adjacent area, (2) filling minor cracks by smoothing and tamping the surrounding surface, and (3) installing a temporary drainage pipe to help channel water along Berm 4 and into the East Perimeter Channel. Erosion mats were placed over the regraded area. The minor regrading and

filling cracks was completed on September 20, 2013. The temporary drain was installed on October 3, 2013. This area has continued to be inspected weekly. Minor additional cracks have been observed during these inspections; however, no significant cracking has been noted within the landfill boundaries since September 2013. Observed cracks were filled by smoothing out and tamping the surface as needed or by importing and placing material with Site all-terrain vehicles. During the first quarter of CY 2014, cracking and slumping were 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. Figure 1 shows cracks observed in September 2013.

A project to complete maintenance on Berm 4 and to address slope stability in the East Perimeter Channel and surrounding area was originally scheduled for completion in December 2013 but was rescheduled to the summer of 2014 because the soil was either frozen or too wet to complete the project. The maintenance work and the proposed modifications are described and approved in Contact Record 2013-03, "Soil Disturbance Review Plan (SDRP) for Regrading the East Perimeter Channel (EPC) and Associated Diversion Berms at the Original Landfill (OLF)." CDPHE approved Contact Record 2013-03 on December 4, 2013. Because of the additional movement in the East Perimeter Channel and continued minor cracking within the landfill area, DOE is re-evaluating the approved design before implementation. Any changes to the approved design will be documented in a contact record.

Groundwater Treatment Systems

Four groundwater treatment systems are operated and maintained in accordance with requirements defined in the RFLMA and the RFSOG. Three of these systems (the Mound Site Plume Treatment System [MSPTS], the East Trenches Plume Treatment System [ETPTS], and the Solar Ponds Plume Treatment System [SPPTS]) include a groundwater intercept trench (collection trench), which is similar to a French drain with an impermeable membrane on the downgradient side. Groundwater entering the trench is routed through a drainpipe into one or more treatment cells, where it is treated and then discharged. Solar-powered air strippers were added in early 2013 to the MSPTS (to polish effluent from the treatment cells) and ETPTS (to pretreat water before it enters the treatment cells). The fourth system, the PLF Treatment System (PLFTS), treats water from the northern and southern components of the Groundwater Intercept System and flow from the PLF seep.

MSPTS

Routine maintenance activities continued at the MSPTS through the first quarter of CY 2014. These activities included checking flows, piping, and water levels.

The air stripper operated throughout the quarter. Air stripper maintenance mainly comprised monitoring the water pressures and nozzle spray patterns, maintaining the fan assembly that provides powered ventilation, and cleaning the pump, lines, and nozzles as warranted. The nozzle configuration was also changed during the quarter to support an evaluation of air stripper effectiveness. Sampling was conducted to support continuing evaluation and optimization efforts.

The annual report for 2014 will provide a more detailed discussion of the MSPTS, including the air stripper.

Refer to Section 3.1.9.1 for information on water quality sampling.

ETPTS

Routine maintenance activities continued at the ETPTS through the first quarter of CY 2014. These activities included checking flows, piping, and water levels.

The air stripper operated throughout the quarter. Air stripper maintenance mainly comprised monitoring the water pressures and nozzle spray patterns, and cleaning the pumps, lines, and nozzles as warranted. Sampling was conducted to support continuing evaluation and optimization efforts.

The annual report for 2014 will provide a more detailed discussion of the ETPTS, including the air stripper.

Refer to Section 3.1.9.2 for information on water quality sampling.

SPPTS

Routine maintenance activities continued at the SPPTS through the first quarter of CY 2014. These activities included weekly inspections of the solar/battery systems that power the pumps, the operation of the pumps, and influent and effluent flow conditions.

Tests also continued through the quarter on (1) treating uranium (U) with smaller-scale “microcell” treatment components incorporating zero-valent iron as a treatment media and (2) treating nitrate using pilot-scale lagoons.

Both the microcell and lagoon tests are expected to continue for the next several months. The associated results will be discussed in greater detail in the annual report for 2014.

Refer to Section 3.1.9.3 for information on water quality sampling.

PLFTS

Routine maintenance activities continued at the PLFTS through the first quarter of CY 2014. These activities generally consisted of inspecting the system for potential problems.

Refer to Section 3.1.9.4 for information on water quality sampling.

Sign Inspection

“U.S. Department of Energy - No Trespassing” signs are required to be posted at intervals around the perimeter of the COU to notify persons that they are at the boundary of the COU. Signs listing the use restrictions (ICs) and providing contact information are also required to be posted at access points to the COU. The signs are required as physical controls of the remedy, are inspected quarterly, and are maintained by repairing or replacing them as needed. Physical controls protect the engineered components of the remedy, including landfill covers, groundwater treatment systems, and monitoring equipment, which are also inspected routinely during monitoring and maintenance activities.

The signs were inspected on March 20, 2014, and they met the requirements.

Erosion Control and Revegetation

Maintenance of the site erosion control features required continued effort throughout the first quarter of CY 2014, especially following high-wind or precipitation events. Erosion wattles and matting that were loosened and displaced by high winds or rain were repaired. Erosion controls were installed and maintained for the various projects that were ongoing during the first quarter of CY 2014.

Please let me know if you have any questions.

**Rocky Flats Colorado, Site
Quarterly Report of
Site Surveillance and
Maintenance Activities
First Quarter Calendar Year 2014**

July 2014



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Appendixes

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Appendix B	Annual Inspection Maps
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Abbreviations

Am	americium
AOC	Area of Concern
CAD/ROD	Corrective Action Decision/Record of Decision
CDPHE	Colorado Department of Public Health and Environment
COU	Central Operable Unit
CY	calendar year
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ETPTS	East Trenches Plume Treatment System
IC	institutional control
LANL	Los Alamos National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LM	Office of Legacy Management
µg/L	micrograms per liter (sometimes expressed as ug/L)
M&M	monitoring and maintenance
MCL	maximum contaminant level
MSPTS	Mound Site Plume Treatment System
OLF	Original Landfill
pCi/L	picocuries per liter
PLF	Present Landfill
PLFTS	Present Landfill Treatment System
POC	Point of Compliance
POE	Point of Evaluation
Pu	plutonium
RCRA	Resource Conservation and Recovery Act
RFLMA	<i>Rocky Flats Legacy Management Agreement</i>
RFSOG	<i>Rocky Flats, Colorado, Site Site Operations Guide</i>
Site	Rocky Flats Site
SPPTS	Solar Ponds Plume Treatment System
U	uranium

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League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders
Nancy Newell

MEMORANDUM

TO: Stewardship Council Board
FROM: Rik Getty
SUBJECT: Groundwater Treatment Systems Briefing
DATE: August 26, 2014

We have scheduled 60 minutes for DOE to brief on the site's four groundwater treatment systems.

Background on contaminated groundwater plumes

At Rocky Flats there are four groundwater treatment systems. The first three systems listed below treat groundwater plumes, while the final one treats the effluent seep from the Present Landfill.

- Mound Site Plume Treatment System (MSPTS): treats volatile organic compounds (VOCs, solvents)
- East Trenches Plume Treatment System (ETPTS): treats VOCs
- Solar Ponds Plume Treatment System (SPPTS): treats nitrates and uranium
- Present Landfill Treatment System (PLTS): treats VOCs.

At the meeting, DOE will discuss each of these systems.

In preparation for the meeting, attached is background information about the four systems. For all but the PLTS, I have pulled this information from technical analyses that I previously developed for the Rocky Flats Coalition of Local Governments. These facts sheets can be found at: http://www.rockyflatssc.org/residual_contamination_info.html

Also attached to this memo is a map showing the contaminated groundwater plumes. This map was also included in the February 2014 board meeting packet.

Mound Site

As Rocky Flats began production operations in the early 1950's, the Atomic Energy Commission quickly learned that waste production would dramatically exceed waste disposal. Initial planning for Rocky Flats had not adequately forecast the amount of wastes produced. As a result, many waste forms were stored in drums located outside of production buildings.

Beginning in 1954, drums of contaminated wastes containing radionuclides (uranium isotopes and some plutonium), volatile organic compounds (VOCs; solvents like carbon tetrachloride and perchloroethylene), and semi-volatile organic compounds (SVOCs; machining oils and lathe coolants) were transferred from production buildings for burial at the Mound Site. The Mound Site was a shallow trench about 175 feet by 150 feet. Drums were placed in rows and then were covered with soil with the resulting burial site extending above initial ground level (hence the name “Mound”).

Burial of drums at the Mound Site continued until 1958 (about 1,400 drums total). At that point waste drums were no longer buried at the Mound Site but instead were transferred for aboveground, open-air storage at the new 903 drum storage area. Soil and groundwater characterization data from the 1950’s and 1960’s indicated the presence of the contaminants previously mentioned. After the site recognized that its waste disposal practices in the 1950’s and 1960’s caused environmental contamination, cleanup of certain waste areas commenced. After the initial cleanup of the 903 drum storage area in 1968, the Mound Site was excavated in 1970. All drums were removed from the area, as was contaminated soil. Groundwater monitoring wells were drilled in the four corners of the Mound Site to determine the nature and extent of groundwater contamination.

East Trenches

During the early years of site operations, there was no access road from Indiana Street leading into Rocky Flats, so the eastern portion of the Industrial Area (roughly one mile from Indian Street) was relatively isolated from other parts of the site. (At that time the sole access point was from Highway 93.) The general terrain in the eastern portion of the Industrial Area was flat but there were some slopes present. The East Trenches were first constructed in the flat parts of the eastern area in 1954 to dispose of sludge from the site’s sanitary and waste water treatment systems. The sludge contained small amounts of radioactivity (primarily uranium with some plutonium), heavy metals, and other contaminants of concern from various processing activities at the site.

In addition, other forms of waste were buried in the trenches such as:

- volatile organic compounds (VOCs) from waste drums (primarily chlorinated solvents);
- asphalt planking from the first Solar Ponds (contaminated with actinides and metals);
- crushed drums which contained sludge remnants from uranium and plutonium machining operations; and,
- various types of debris wastes from site activities.

Solar Ponds

The initial Solar Evaporation Ponds (SEPs) were built during the 1950s when liquid (aqueous) waste processing in Building 774 was not able to keep pace with increasing waste treatment demands. These wastes were transferred from throughout Rocky Flats via the Original Process Waste Lines to Building 774 for processing.

At the time of the initial SEPs design and construction, a nonpermeable lining was not specified and the SEPs were lined with clay and other semi-permeable materials such as asphalt planking. As a result, liquid wastes leaked into the ground under the SEPs. The liquid wastes were

composed of complex mixtures of nitrates, trace amounts of radionuclides, metals, and VOC/SVOCs. Plumes of contaminated groundwater primarily containing soluble nitrates and some uranium were discovered migrating downgradient from the SEPs towards North Walnut Creek.

The leaking SEPs prompted the Atomic Energy Commission to reduce the inventory of liquid wastes stored at the SEPs. One of the methods chosen was to spray-irrigate the liquid wastes over a large area of land east of the SEPs known as the East Spray Fields. Millions of gallons of liquid wastes were treated in this manner before this practice was stopped.

Remaining liquid wastes and sludge material from the SEPs were treated with a mixture of Portland cement forming a product known as “Pondcrete”. Due to quality control and storage problems, Pondcrete became a waste product which caused a lot of difficulties for the Site.

A further item of interest is that one of the SEPs (Pond 2 auxiliary) was located where Building 779 was to be built. This SEP was taken out of service and Building 779 was constructed in its location. Actinide-contaminated soil from Pond 2 auxiliary was to have been buried in the east trenches, but site documents could not be found which referenced where the soil was placed.

Current Treatment System Operations

The July 2013 Site Operations Guide provides an overview of the four treatment systems (quoting from the document):

The MSPTS, ETPTS, and SPPTS each consist of a groundwater collection trench with a collection sump that feeds water to the treatment cells. Each of these systems was designed to operate passively with gravity driving the flow; however, an active component was added to the SPPTS (treats nitrates and uranium contamination in groundwater) in 2002, and additional active components have been added to all three systems since closure in 2005. Also, the treatment cells were historically configured so that water flowed downward through each cell in series, and then to the metering manholes for release to the subsurface. However, the MSPTS (VOC treatment) and ETPTS (VOC treatment) both incorporate plumbing upgrades allowing them to be operated in a range of upflow, downflow, series, and parallel configurations. This both extends the life of the zero-valent iron (ZVI) media and can improve flow characteristics, for example by reducing the potential for preferential flow to develop.

In 2010 a prototype air stripper consisting of a small solar panel array, a solar-powered pump, specialized spray nozzles, and associated plumbing was installed in the MSPTS effluent manhole to further reduce trace amounts of VOCs from effluent that flows into the discharge gallery. This unit operated part time to support testing and optimization efforts. A larger, full-time air stripper replaced this prototype in early 2013, and at the same time a similar unit was installed within the influent manhole at the ETPTS. While the air stripper at the MSPTS polishes residual VOCs from system effluent, that at the ETPTS reduces VOCs from influent to the treatment cells.

Upgrades to the SPPTS were made beginning in FY2009. A new sump was installed to collect additional groundwater for treatment, and a new effluent discharge line was installed

(collectively, these are referred to as the Phase I upgrades to the SPPTS); an easily-accessible new treatment cell for uranium was installed (Phase II); and pilot-scale treatment cells for the investigation of improved nitrate treatment were installed (Phase III), together with various accessory components. While the initial phased approach was designed to culminate in a full-scale improved nitrate treatment component referred to as Phase IV, continuing evaluation and optimization efforts have indicated that technical aspects of both uranium and nitrate treatment need to be considered in a recommended final reconfiguration. Information collected through these ongoing efforts will be used to design and install the broadened Phase IV, which comprises a full-scale, more efficient, and more effective nitrate and uranium treatment configuration. The objective of these SPPTS upgrades is to increase overall system effectiveness and treatment efficiency and reduce Operating & Maintenance (O&M) and waste disposal costs.

The fourth system, the PLFTS, receives the diverted flow from the north and south components of the Groundwater Intercept System (GWIS) and flow from the PLF Seep. This combined flow is routed across an engineered aerating surface that causes VOCs in the water to volatilize.

Sampling and analysis at these treatment systems are addressed in Section 9.1 and are performed in compliance with the RFLMA (DOE 2007a). Additional sampling may be performed beyond that required by the RFLMA, (e.g., to support optimization studies or assess media conditions).

O&M requirements for these treatment systems and a guide for media replacement are contained in site-specific internal procedures and the PLF M&M Plan (DOE 2008a). Each of the four systems must be routinely inspected and maintained to ensure continued flow and treatment. The effectiveness of the systems that incorporate treatment cells is influenced by the permeability and chemical condition of the media, which is evaluated using water level, flow, water quality, and (if available) pressure data. The MSPTS, ETPTS, and the SPPTS are also equipped with automated instrumentation that allows more detailed evaluation of system performance, and these components require occasional maintenance.

Routine inspection and maintenance at the MSPTS and ETPTS include the following:

- Checking water levels
- Checking and cleaning flow meters
- Checking valves and piping
- Cleaning effluent lines
- Inspecting the instruments in the associated instrument vaults
- Checking and servicing the solar panels, batteries, and pumps
- Installing, operating, cleaning/maintaining, and monitoring air stripper components (nozzles, ventilation, pressure gages, and so on)
- Sampling
- Inspecting and potentially flushing the filters in the instrument vaults

At the SPPTS, routine inspection and maintenance include the following:

- Checking water levels (Intercept Trench System Sump [ITSS] and central SPPTS locations)
- Checking and cleaning flow meters
- Checking valves and piping

- Cleaning effluent lines
- Checking and servicing the solar panels, batteries, and pumps (ITSS and central SPPTS locations)
- Inspecting the instruments in the associated vaults (SPIN, Metering, and SPOUT vaults)
- Installing, operating, cleaning/maintaining, and monitoring Phase II and Phase III components (pumps, dosing lines, dedicated instrumentation, and so on)
- Sampling (ITSS and central SPPTS locations)
- Inspecting and potentially flushing the filters in the instrument vaults

At the PLFTS, routine inspection and maintenance include the following:

- Checking piping, manholes, grates, and steps for damage and proper operation
- Removing anything that might be blocking flow








In addition, replacement of the reactive media is occasionally needed at the MSPTS, ETPTS, and SPPTS, as described in site-specific procedures.

Occasional replacement of the ZVI media at the MSPTS, ETPTS, and SPPTS is required because the media permeability and treatment effectiveness gradually decrease. This decrease is a result of the precipitation of minerals and amorphous solids within the pores of the media. These precipitates form in part because of the high dissolved oxygen content of Rocky Flats groundwater, which oxidizes the ZVI to form iron oxides and oxyhydroxides. In addition, this groundwater has high concentrations of dissolved calcium and carbonate, which allow calcite and iron carbonates such as siderite to form. The formation of these precipitates within the voids between ZVI grains causes the observed crust development and media clogging. At the SPPTS, the high nitrate concentrations also act to passivate and clog ZVI media. This process can be tracked using measurements of online pressures, water levels, and fundamental chemical parameters (e.g., major ion concentrations that would be determined through non-RFLMA sample analysis), and can also be deduced from an overall decrease in treatment effectiveness, and the media's hardened, cemented condition upon its replacement. When the media is replaced, the design of the new media fill should consider and account for this tendency.

Please let me know if you have any questions.

Figure 13
Composite Plume Map¹






KEY

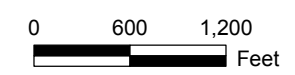
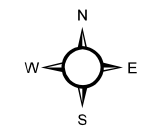
-  Predicted groundwater flow direction (from figure 2.18)²
-  Groundwater treatment system
-  881 Hillside French drain
-  Mound French drain
-  Nitrate exceeds the surface water standard
-  Uranium (unfiltered) exceeds the surface water standard³
-  VOC composite plume⁴

Notes:

- 1) No metals or fluoride were included because of their dissimilar transport characteristics.
- 2) The length of the arrow does not correspond to the groundwater velocity.
- 3) There is no radionuclide filtered uranium standard and thus it has not been represented on the map. (Uranium that exceeded the metal filtered uranium standard is less than 1% of the data and is also not represented.)
- 4) The VOC composite plume is all VOC AOIs that exceed the surface water standard.
- 5) Modeling results indicate that groundwater discharge concentrations will be below surface water standards at these locations.
- 6) Groundwater in the area is in weathered bedrock and is only saturated during wet years, thus AOI transport is limited to wet years (high groundwater levels). See the Groundwater IM/IRA for details.

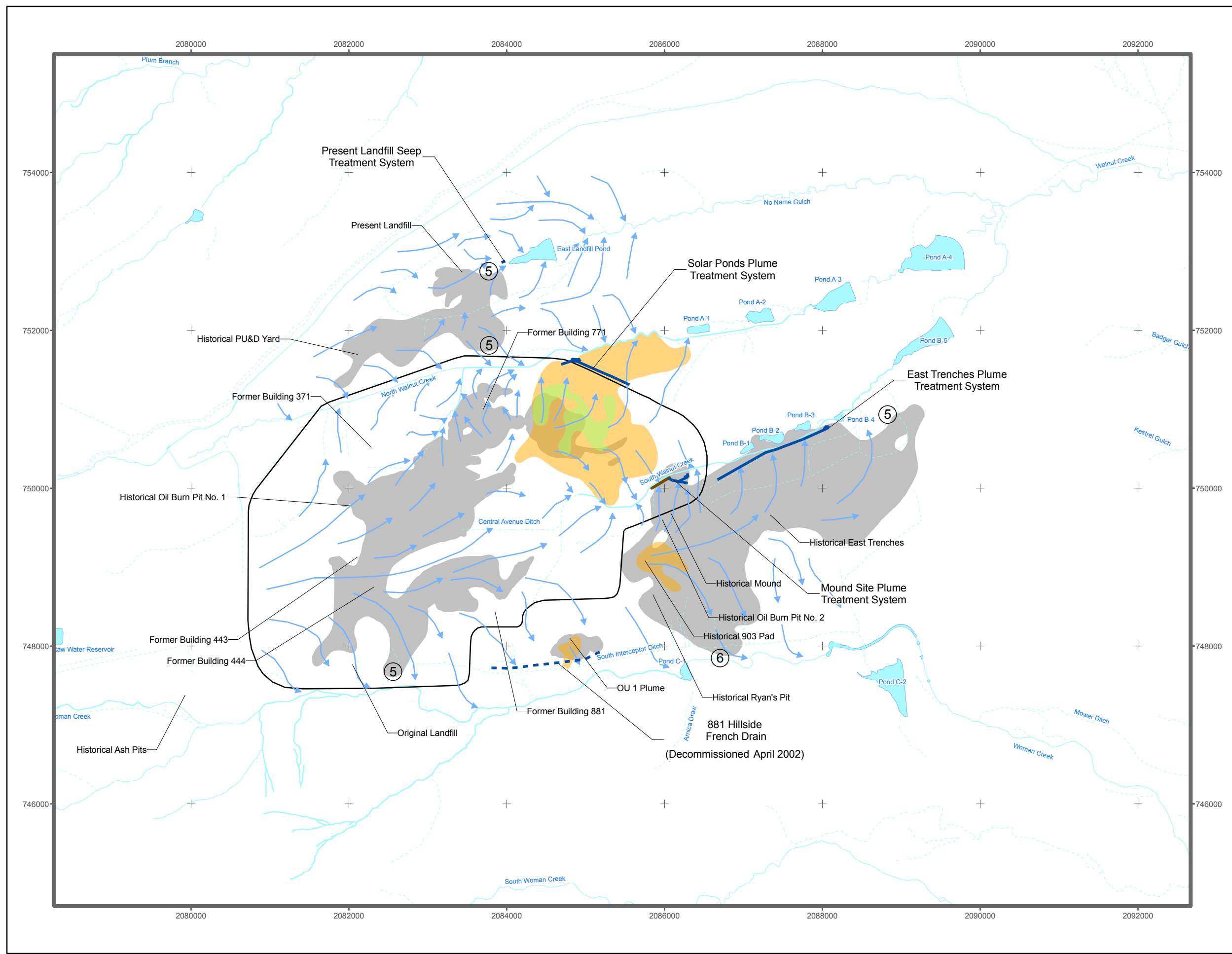
Standard Map Features

-  IA OU boundary
-  Pond
-  Perennial stream
-  Intermittent stream
-  Ephemeral stream



Scale 1:14,400
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental
Technology Site



Draft 2015 Work Plan

- Cover memo
- Draft work plan

Draft 2015 Budget

- Cover memo
- Draft budget

Intergovernmental Agreement – Triennial Review

- Cover memo
- Draft resolution

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League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders
Nancy Newell

MEMORANDUM

TO: Board
FROM: David Abelson & Rik Getty
SUBJECT: Initial review of 2014 work plan
DATE: August 27, 2014

At this meeting the Board will evaluate its efforts for 2014 and start reviewing its 2015 work plan (draft plan attached). Any changes to the draft plan will be incorporated into a revised draft that will be reviewed, modified as necessary, and approved at the October 27th meeting.

Review of 2014 Activities

The 2014 work plan contains the following provision:

“How the Stewardship Council will measure its success is important. Many organizations use sophisticated techniques to measure success, but these are not necessary for the Stewardship Council. Rather each year the Stewardship Council will pause and reflect on its Work Plan elements to help determine its ability to accomplish the stated mission and objectives. The review shall include an assessment of how the organization can improve in the coming year, focusing on areas of weakness and opportunities for improvement.”

The first part of the conversation will be the Board’s assessment. We will then begin identifying key questions the Board has about the cleanup and ongoing management. Briefings on these topics will start in 2015 and extend into 2016 as needed.

Overview of Draft Plan

At its August meeting, the executive committee agreed to stay the course but make the following changes:

1. Include a provision about identifying key questions Board members have about the cleanup and ongoing management issues. Examples could include:
 - a. Overview of cleanup
 - b. Extent of off-site contamination and resulting risk
 - c. Actinide movement

- d. Air quality monitoring
 - e. Risk from fire
2. Should USFWS begin to open the Rocky Flats National Wildlife Refuge, work with USFWS to understand its plan, communications strategies (including signage), and other relevant issues.

We also removed the provision about tracking changes to land being transferred to USFWS as those transfer are complete for the foreseeable future. All of these changes are noted using track changes.

Please let us know what questions you have, particularly if there are any items we did not include in the draft work plan.

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2015 Work Plan

Draft #1 – September 2014

Mission:

The mission of the Rocky Flats Stewardship Council is to provide continuing local oversight of activities at the Rocky Flats site and to ensure local government and community interests are met with regards to long-term stewardship of residual contamination and refuge management. The mission also includes providing a forum to track issues related to former site employees and to provide an ongoing mechanism to maintain public knowledge of Rocky Flats, including educating successive generations of ongoing needs and responsibilities regarding contaminant management and refuge management.

Background:

The Stewardship Council occupies two roles: (1) serving as the Local Stakeholder Organization (LSO) for Rocky Flats, and (2) engaging USFWS on the management of the Rocky Flats National Wildlife Refuge.

Local Stakeholder Organization (LSO)

Legacy Management approved the LSO Plan for Rocky Flats on December 21, 2005. That Plan identifies how the main responsibilities Congress identified in the legislation authorizing the creation of LSO (Section 3120 of the Fiscal Year 2005 Defense Authorization bill) are to be carried out at Rocky Flats. These responsibilities are summarized as follows:

- Solicit and encourage public participation in appropriate activities relating to the closure and post-closure operations of the site.
- Disseminate information on the closure and post-closure operations of the site to the State and local and Tribal governments in the vicinity of the site, and persons and entities having a stake in the closure or post-closure operations of the site.
- Transmit to appropriate officers and employees of DOE questions and concerns of governments, persons, and entities referred to in the preceding bullet.

In fulfilling these responsibilities, the Stewardship Council has been tasked with helping DOE meet its public involvement obligations identified in the Legacy Management Public Involvement Plan (LMPIP) for Rocky Flats.

Rocky Flats National Wildlife Refuge

“The Rocky Flats National Wildlife Refuge Act of 2001” established that Rocky Flats shall become a national wildlife refuge following EPA certification that the site has been cleaned to the agreed-upon regulatory standards. In July 2007 DOE conveyed jurisdictional responsibility over nearly 4000 acres to the Department of the Interior for the Rocky Flats National Wildlife Refuge.

In April 2005, USFWS published the Rocky Flats Comprehensive Conservation Plan (CCP), the conservation plan for the Rocky Flats National Wildlife Refuge. The CCP describes the desired future conditions of the Refuge and provides long-range guidance and management direction. Per the CCP, in the coming years USFWS anticipates developing the following “step-down” management plans, which provide specific guidance for achieving the objectives established in the CCP:

1. Vegetation and Wildlife Management Plan
2. Integrated Pest Management Plan
3. Fire Management Plan
4. Visitors Services Plan
5. Health and Safety Plan
6. Historic Preservation Plan

Due to funding restrictions, USFWS has delayed implementation of the CCP, including delaying the timeline for opening the Refuge for public access. Should USFWS take steps to open the Refuge, the Stewardship Council would work with USFWS and DOE to ensure the current access restrictions to DOE-retained lands remain effective and to address issues as needed.

Work Plan Elements

The Work Plan is divided into the following five sections:

1. DOE Management Responsibilities
2. Former Rocky Flats Workforce
3. Outreach
4. Rocky Flats National Wildlife Refuge
5. Business Operations

DOE Management Responsibilities

Overview:

One of the key roles of the Stewardship Council continues to be to understand and engage the various issues regarding the cleanup and post-closure management of Rocky Flats, and to provide a forum to foster discussions among DOE, the regulatory agencies, and community members.

2015 Activities:

1. Review information regarding the long-term stewardship and management of the Rocky Flats site, including but not limited to the results of the operational and performance monitoring data of site operations and DOE status reports.
2. Identify key questions about the cleanup and ongoing management, and evaluate for remedy effectiveness and impacts to human and ecological receptors. Discussions will take place at Board meetings throughout the year and into 2016 as needed.
3. Track the progress made in treating contaminated groundwater at the groundwater treatment systems.
4. Track the ongoing investigation into the source(s) of elevated actinide levels found in surface water near monitoring location GS-10.
5. In preparation for USFWS' plans to conduct a prescribed burn on the southern part of the Rocky Flats National Wildlife Refuge, work with DOE to understand the impacts and risk from fire at Rocky Flats.
6. Work with DOE on implementing its Legacy Management Closure Public Involvement Plan (LMP/IP), including the meetings DOE identified in the LMP/IP.
7. Review DOE budgets for implementation of DOE responsibilities.
8. Participate in DOE, CDPHE and/or EPA assessment(s) of remedy operations and effectiveness.
9. As needed, evaluate legal and regulatory issues regarding implementation of RFLMA and related site documents, and provide information to the Stewardship Council and to the community.
10. Work with DOE and the regulators to understand technical data regarding implementation and effectiveness of cleanup remedies and long-term controls, and provide information to the Stewardship Council and to the community.
11. Transmit to appropriate officers and employees of the DOE questions and concerns of governments, persons and entities regarding Rocky Flats.
12. Continue to participate in Adaptive Management Plan meetings, including technical evaluations of data.
13. Support the Rocky Flats Cold War Museum efforts to establish a museum and on mechanisms for educating successive generations about the history of Rocky Flats, particularly about residual contamination and continued need for long-term stewardship.
14. Track the development of Jefferson County Parkway as it relates to Rocky Flats.

Deleted: <#>Examine suite of issues related to groundwater plumes and treatment systems.¶

Deleted: <#>Track issues related to transfer of administrative jurisdiction over former mineral parcels from DOE to Department of the Interior for inclusion in the Rocky Flats National Wildlife Refuge.¶

Former Rocky Flats Workforce

Overview:

One of DOE's primary post-closure responsibilities is to manage the health and pension benefits of former site workers. Many of these workers are the constituents of the Stewardship Council governments. Further, the Rocky Flats Homesteaders, which represents more than 1800 former site workers, sits on the Board of the Stewardship Council. For these and other reasons, as noted in the Stewardship Council's IGA, worker issues will continue to be an important focus of the Stewardship Council.

2015 Activities:

1. Track issues related to the implementation of the Energy Employee Occupational Illness Compensation Program Act (EEOICPA). Respond as needed.
2. Communicate worker concerns to the Administration and to members of the Colorado Congressional delegation.

Outreach

Overview:

As the LSO for Rocky Flats, a core responsibility for the Stewardship Council is reaching out to the community and providing a mechanism to educate people about Rocky Flats and the ongoing management needs. As part of this mission it remains essential that the Stewardship Council maintain close communications with DOE, EPA, CDPHE, and Congress.

The local communities have developed over the period of many years a very good working relationship with the two primary regulatory agencies that oversee the site, EPA and CDPHE. It is imperative that the Stewardship Council continue this tradition of partnership with these agencies.

The Colorado congressional delegation likewise played a critical role in addressing Rocky Flats issues. The Stewardship Council shall remain an important vehicle for addressing issues of concern to the delegation and for providing community interface with the delegation on the numerous site-specific issues and concerns.

2015 Activities:

1. Hold quarterly Board meetings and provide opportunity for public comment and public dialogue.
2. Communicate with other local officials, DOE, state and federal regulators, the Colorado congressional delegation, and other stakeholders about the Stewardship Council's mission and activities, as appropriate.
3. Seek public input and involvement on issues related to DOE and USFWS responsibilities at Rocky Flats.
4. Evaluate Congressional action affecting DOE and USFWS and administrative action that could affect Rocky Flats.
5. Maintain communication with federal and state legislators, as appropriate, and track federal and state legislation as needed.
6. Provide opportunities at meetings and in between meetings for education and feedback.
7. Work with DOE to disseminate information on the cleanup and post-closure operations of Rocky Flats.
8. Participate in local, regional and national forums.
9. Implement mechanisms for the Stewardship Council and the general public to be informed of the results of the monitoring data and other relevant information, recognizing that not all communication between DOE and Rocky Flats constituencies will flow through the Stewardship Council. Options include:
 - o Periodic reports
 - o Email updates

- White papers
- Letters

Rocky Flats National Wildlife Refuge

Overview:

A core function of the Stewardship Council is to engage on issues related to the development and management of the future Rocky Flats National Wildlife Refuge. This work includes tracking and addressing issues related to the interface of the Refuge to lands that DOE will retain as part of its management responsibilities. Without funding for the Refuge, there will be little management activities for the foreseeable future.

2015 Activities:

1. Track agency and Congressional action affecting funding for USFWS, and efforts to begin opening the Rocky Flats National Wildlife Refuge. Engage as needed.
2. Track issues related to the inclusion of Section 16 in the southwest corner of Rocky Flats into the Refuge.
3. Track issues related to the development of a trail network connecting Rocky Flats National Wildlife Refuge, Rocky Mountain Arsenal National Wildlife Refuge, Two Ponds National Wildlife Refuge, and Rocky Mountain National Park.

Business Operations

Overview:

Business Operations refers to organizational management responsibilities – conducting the annual audit, submitting financial reports to DOE, adopting annual Work Plan and annual budget, etc.

2015 Activities:

1. Work with DOE to ensure the Stewardship Council continues to meet the needs as the LSO for Rocky Flats.
2. Operate Stewardship Council in compliance with state and federal regulations.
3. Conduct financial audit.
4. Prepare and adopt the annual work plan and the annual budget.
5. Submit financial reports to DOE.
6. Review and renew as necessary consulting agreements.
7. Provide annual report on activities.

Success Measurement Criteria

How the Stewardship Council will measure its success is important. Each year the Stewardship Council will pause and reflect on its Work Plan elements to help determine its ability to accomplish the stated mission and objectives. The review shall include an assessment of how the

Deleted: Many organizations use sophisticated techniques to measure success, but these are not necessary for the Stewardship Council. Rather e

organization can improve in the coming year, focusing on areas of weakness and opportunities for improvement.

ROCKY FLATS STEWARDSHIP COUNCIL

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

(303) 412-1200
(303) 600-7773 (f)

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

MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Initial review of 2015 budget
DATE: August 26, 2014

Attached for your review is the first draft of the Stewardship Council's fiscal year 2015 budget. As a unit of local government under the Colorado Constitution, the Stewardship Council must review the budget at this meeting and then hold budget hearings at a second meeting prior to adopting a final budget. The budget hearings will be held at the October 27th meeting, at which time the Board will adopt the budget.

Budget Overview

Following the Board's direction since the Stewardship Council's inception, the budget is for more than the anticipated costs (approximately 20% above projected costs). Over-budgeting gives the Board latitude in how it manages expenditures without requiring supplemental budgeting should expenditures increase. Over the past few years organizational costs have remained level. Accordingly, the executive committee agreed to present a flat budget for 2015, with the assumption that expenditures will remain relatively constant.

Please let me know what questions you have.

ROCKY FLATS STEWARDSHIP COUNCIL
2015 Budget -- Draft #1

		<u>2014 Budget</u>	<u>2014 Actual/ Projected Expenses*</u>	<u>2014 Budget vs. 2014 Projected Expenses</u>	<u>2013 Expenses</u>
A. Personnel	\$ 93,000.00	\$ 93,000.00	\$ 82,200.00	\$ (10,800.00)	\$ 82,200.00
Executive Director and Technical Advisor (\$7750/month)					
B. Fringe Benefits	\$ -	\$ -	\$ -	\$ -	\$ -
Benefits	\$ -				
Staff are contract employees					
C. Travel	\$ 5,700.00				
Out of State	\$ 4,500.00	\$ 4,500.00	\$ 3,413.87	\$ (1,086.13)	\$ 2,790.00
National DOE-related trips \$1500/trip X 3 trips					
Local Travel	\$ 1,200.00	\$ 1,200.00	\$ 967.48	\$ (232.52)	\$ 765.00
\$100/month for 12 months					
D. Computer Equipment	\$ 500.00				
Purchase misc. hardware, software	\$ 500.00	\$ 500.00	\$ -	\$ (500.00)	\$ -
E. Supplies	\$ 1,200.00				
Supplies (\$100/month)	\$ 1,200.00	\$ 1,200.00	\$ 368.49	\$ (831.51)	\$ 85.00
F. Contractual	\$ 40,100.00				
Attorney & Accounting Services	\$ 33,500.00				
Legal Services (\$1400/ month)	\$ 16,800.00	\$ 16,800.00	\$ 10,213.34	\$ (6,586.66)	\$ 10,114.00
Accounting (\$850/month)	\$ 10,200.00	\$ 10,200.00	\$ 4,916.50	\$ (5,283.50)	\$ 4,225.00
Audit Report	\$ 6,500.00	\$ 6,500.00	\$ 4,020.34	\$ (2,479.66)	\$ 4,001.00

Admin. Services		\$ 4,600.00				
Misc. Services: bank fees, etc.	\$ 1,000.00		\$ 1,000.00	\$ 42.00	\$ (958.00)	\$ 1,091.00
Minutes Preparation (6 meetings) (also includes web site management)	\$ 3,600.00		\$ 3,600.00	\$ 3,150.00	\$ (450.00)	\$ 1,850.00
Local Government Expenses		\$ 2,000.00	\$ 2,000.00	\$ 1,433.50	\$ (566.50)	\$ 1,352.00
Miscellaneous expenses not covered by DOE funds (includes meeting expenses)						
G. Construction		\$ -	\$ -	\$ -	\$ -	\$ -
None						
H. Other		\$ 14,300.00				
Printing & Copy		\$ 2,000.00	\$ 2,000.00	\$ 1,102.40	\$ (897.60)	\$ 935.00
Postage		\$ 1,500.00	\$ 1,500.00	\$ 791.88	\$ (708.12)	\$ 660.00
\$125/month for 12 months						
Liability Insurance		\$ 4,000.00	\$ 4,000.00		\$ (487.25)	
Property Contents/General Liability	\$ 500.00			\$ 500.00		\$ 500.00
Board Members	\$ 3,500.00			\$ 3,012.75		\$ 2,856.00
Telephone, email, etc.		\$ 2,700.00	\$ 2,700.00	\$ 1,993.45	\$ (706.55)	\$ 1,883.00
Website		\$ 2,000.00	\$ 2,000.00	\$ -	\$ (2,000.00)	
Hosting	\$ 500.00					
Web master	\$ 1,500.00					
Subscriptions/Memberships		\$ 2,100.00	\$ 2,100.00		\$ (300.60)	
ECA membership	\$ 950.00			\$ 950.00		\$ 950.00
Conference registration fees	\$ 500.00			\$ 439.40		
Newspapers	\$ 650.00			\$ 410.00		\$ 419.00
J. Indirect Costs		\$ -	\$ -	\$ -	\$ -	\$ -
N/A						
TOTAL PROPOSED BUDGET		\$ 154,800.00	\$ 154,800.00	\$ 119,925.40	\$ (34,874.60)	\$ 116,676.00

REVENUE FOR 2015

Local government contributions	\$ 10,000.00
Department of Energy grant	\$ 130,000.00
RFCLOG carry-over	\$ 14,800.00
TOTAL	\$ 154,800.00

*2014 Actual/Projected Expenses = actual January through July; projected August through December

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Nancy Newell

MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Intergovernmental Agreement Triennial Review
DATE: August 27, 2014

At this meeting we will begin discussing the triennial review. The Stewardship Council's Intergovernmental Agreement (IGA) contains a triennial review provision, which in short provides each government must express no later than February 13, 2015, its intent to continue the IGA. Failure to do so results in the cessation of the Rocky Flats Stewardship Council.

The applicable language from the IGA provides:

10. Term, Withdrawal and Dissolution. This IGA shall commence on the date of its full execution by all the Parties, and shall remain in effect until the earliest of

- a. termination or rescission by the unanimous written agreement of all Parties, or
- b. decrease of the number of Parties to fewer than six, or
- c. **lack of a unanimous triennial determination by the Parties that the Stewardship Council should continue for an additional three (3) years. Every third calendar year, commencing from the effective date of this IGA until termination of the Stewardship Council, the Parties agree to consider whether to continue the Stewardship Council's existence.**

At this meeting, we will start discussing whether to continue the organization—we assume the answer is yes—and address any questions the Board has about the IGA renewal process.

As the governments did in 2008 and 2011, the easiest and most efficient way to continue the Stewardship Council for another three years is for each member government to adopt a resolution. Attached for your review is the proposed resolution that Barb Vander Wall, the Stewardship Council's attorney, drafted. The draft resolution in short makes a finding not to terminate the Stewardship Council at this time, and to allow it to continue for an additional three years. Barb requests that all parties adopt substantially the same form of resolution so that we can recognize the unanimous determination without question. For this reason, she drafted the language of the resolution to be stated as simply as possible.

In preparation for the meeting, please:

1. Talk with your councils/commissions about continuing to be part of the organization
2. Have your attorneys review the attached resolution
3. Let Barb and me know what questions you have that we can address prior to or during the meeting.

The draft resolution is attached for your review.

Please let me know what questions you have. Thanks.

RESOLUTION
of
[COUNTY/CITY/TOWN of _____]
Regarding

**Triennial Determination for the Continuation of
The Rocky Flats Stewardship Council**

WHEREAS, the City and County of BROOMFIELD, the Counties of BOULDER and JEFFERSON, the Cities of ARVADA, BOULDER, GOLDEN, NORTHGLENN, THORNTON and WESTMINSTER, and the Town of SUPERIOR (collectively, the “Parties”), entered into an intergovernmental agreement dated February 13, 2006, as amended on February 6, 2012 (“IGA”) establishing the Rocky Flats Stewardship Council, a separate legal public entity created by such IGA as permitted by Colorado Constitution Article XIV and section 18(2), part 2 of article 1, title 29, C.R.S. (“Stewardship Council”); and

WHEREAS, the Stewardship Council was established to allow local governments to continue working together on issues related to the long-term protection of Rocky Flats, as described in the IGA; and

WHEREAS, pursuant to the terms of the IGA, the Stewardship Council shall terminate absent, *inter alia*, the unanimous triennial determination by all Parties that the Stewardship Council should continue for another three years; and

WHEREAS, the [BOCC/COUNCIL] of the [COUNTY/CITY/TOWN] now desires to consider and make a determination concerning the continuation of the Stewardship Council;

NOW, THEREFORE, BE IT RESOLVED BY THE [BOARD OF COUNTY COMMISSIONERS/COUNCIL] of [COUNTY/CITY/TOWN OF _____] AS FOLLOWS:

That the [BOCC/COUNCIL] of the [COUNTY/CITY/TOWN of _____] does hereby find and determine that,

- a. It is not desirable for the Stewardship Council to terminate at this time; and
- b. The Stewardship Council should continue for an additional three (3) years from the date of February 13, 2015, pursuant to the terms and provisions of the IGA.

APPROVED AND ADOPTED this _____ day of _____, 2014.

[BOCC/COUNCIL]

By: _____
Chair

ATTEST:

By: _____

First Reading:
Second Reading:

DRAFT