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
Arthur Widdowfield

Board of Directors Meeting – Agenda

Monday, November 5, 2012, 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 Chair's Review of October 17th Executive Committee meeting

8:40 AM Business Items (briefing memo attached)

1. Consent Agenda
   - Approval of meeting minutes and checks
2. Adopt resolution supporting Rocky Flats Cold War Museum
3. Executive Director's Report

8:50 AM Public Comment

9:00 AM Host DOE Quarterly Meeting (briefing memo attached)
- DOE will brief the Stewardship Council on site activities for the second quarter of 2012 (April – June).
- DOE has posted the report on its website and will provide a summary of its activities to the Stewardship Council.
- Activities include surface water monitoring, groundwater monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).

10:15 AM Briefing by CDPHE and EPA on Role of Regulators (briefing memo attached)
- CDPHE and EPA were the state and federal regulators during cleanup and continue regulatory oversight of Rocky Flats.
- They will brief on their respective roles and offer their perspectives on the state of the effectiveness of the cleanup remedies and ongoing management activities.

10:45 AM Approve Fiscal Year 2013 Work Plan (briefing memo attached)
- The board reviewed the draft work plan at the September meeting.

- No changes were offered at that meeting.

Action Item: Approve 2013 work plan

11:00 AM Fiscal Year 2013 Budget Hearing (briefing memo attached)

- The board reviewed the draft budget at the September meeting. No changes were offered.
- Prior to finalizing the budget, the board must hold a budget hearing and allow time for public comment.
- Following the public hearing, the board must approve the budget resolution.

Action Item: Hold hearing and approve 2013 budget

11:15 AM Public comment

11:25 PM Big Picture Review/Updates

1. Review Big Picture
2. Member Updates

EXECUTIVE SESSION

Adjourn

Next Meetings: February 4, 2013 (remainder of 2013 calendar will be set at that meeting)

Rocky Flats Acronym List
Prepared by Rik Getty, Rocky Flat Stewardship Council
March 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.
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	The complete final plan for cleanup and closure for Rocky Flats. The Federal/State

	decision	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.
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	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 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. That analysis helps 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.
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.
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 Operations Guide	The nuts-and-bolt guide for post-closure site activities performed by 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	trichloroethlyene	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

- Cover memo
- September 10, 2012, draft board meeting minutes
- List of Stewardship Council checks
- Resolution supporting Rocky Flats Cold War Museum

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MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Business Items -- Resolution in support of Rocky Flats Cold War Museum
DATE: October 25, 2012

In addition to approving the minutes and checks, the board will consider, and presumably approve, a resolution supporting the Rocky Flats Cold War Museum (RFCWM). As we discussed at the September meeting, the RFCWM requested a resolution to assist with their fundraising efforts.

Attached is the draft resolution. Please let me know what questions you have and any changes we should make to the resolution.

Action item: Approve as modified resolution supporting Rocky Flats Cold War Museum

ROCKY FLATS STEWARDSHIP COUNCIL
Monday, September 10, 2012, 8:30 AM – 11:30 AM
Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado

Board members in attendance: Shelley Cook (Director, Arvada), Jim McCarthy (Alternate, Arvada), Tim Plass (Alternate, City of Boulder), Carl Castillo (Alternate, Boulder), Deb Gardner (Director, Boulder County), Meagan Davis (Alternate, Boulder County), Greg Stokes (Director, Broomfield), Mike Shelton (Alternate, Broomfield), David Allen (Alternate, Broomfield), Bill Fisher (Director, Golden), Joyce Downing (Director, Northglenn), Shelly Stanley (Alternate, Northglenn), Chris Hansen (Alternate, Superior), Bob Briggs (Director, Westminster), Shirley Garcia (Director, Rocky Flats Cold War Museum), Ann Lockhart (Alternate, Rocky Flats Cold War Museum), Roman Kohler (Director, Rocky Flats Homesteaders), Arthur Widdowfield (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: Cathy Shugarts (City of Westminster), Stuart Feinhor (U.S. Rep. Polis), Joe Cafferty (U.S. Rep. Polis), Vera Moritz (EPA), John Dalton (EPA), Carl Spreng (CDPHE), Charles Adams (CDPHE), Scott Surovchak (DOE-LM), Bob Darr (Stoller), Rick DiSalvo (Stoller), John Boylan (Stoller), Jody Nelson (Stoller), George Squibb (Stoller).

Convene/Agenda Review

Vice Chair Bob Briggs convened the meeting at 8:34 a.m. He asked if there were any suggested changes to the agenda and there were not.

Chairman's Review of August 7 Executive Committee meeting

Bob Briggs noted that an Executive Committee meeting was held on August 7, 2012. Meeting attendees included Executive Committee members (Bob Briggs, Lisa Morzel and Jeannette Hillery) and David Abelson. The purpose was to develop the agenda for this meeting. These meetings are always open to public, and have been held at the Boulder Municipal Building.

Consent Agenda

Chris Hansen moved to approve the June Board meeting minutes and the checks. The motion was seconded by Joyce Downing. The motion to accept the minutes and checks passed 12-0.

Executive Director's Report

David Abelson first updated the group on issues related to health benefits for former workers. The Board had previously discussed sending a letter supporting the Charlie Wolf Act; however the bill was not reintroduced this year. David said he had spoken with the Executive Committee and Roman Kohler, and developed a plan to address this topic at the February meeting. They will

present a letter for Board consideration that expresses concern about the Energy Employees Occupational Illness Compensation Program Act (EEIOCPA) and encourages Congress to take action to strengthen it. Given the timing of the election, the group felt it best to readdress the issue with the new Congress. David said he had also been corresponding with Ann Lockhart, President of the Rocky Flats Cold War Museum Board. She has requested letters/resolutions of support from affected governments, and a Board resolution endorsing the continued efforts of the Museum. David said he will look at the request and develop an agenda item for the November Board meeting. Next, David provided an update on his experience as a panel member at a State and Tribal Government Working Group conference in late June. He said there were six members on the panel, including former Rocky Flats site manager Frazer Lockhart. The panel members talked about lessons learned at Rocky Flats. One thing David noted was, although DOE has a success story at Rocky Flats (such as the contract model, public involvement, cleanup strategies, etc.), it is not widely replicating this strategy. The New Mexico site is looking closely at Rocky Flats. Their Citizens Advisory Board toured the site in early August, and met with representatives from DOE, EPA and CDPHE. LANL is working on setting up a community organization similar to the Rocky Flats Coalition of Local Governments and Rocky Flats Stewardship Council, and are looking particularly at crafting effective interaction with regulators. Finally, David noted that the DOE Office of Health, Safety and Security is launching public website focusing on chronic beryllium disease. David explained that some people are sensitive to beryllium, while others are not. National Jewish Hospital in Denver is at the forefront of studying and treating this disease. The website will be a valuable source for providing up-to-date resources to former workers and their families.

Public Comment

There was none.

Board Review of Stewardship Council Activities for 2012 and Initial Review of 2013 Work Plan

The 2012 Stewardship Council work plan provides that the Board shall review its work for the year. 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 review is a first step the Board will take in approving the 2013 work plan. The draft 2013 work plan contains minor updates to the 2012 plan. Formal approval of the 2013 work plan will take place at the November 5th meeting.

David Abelson began by delving a bit into the history of the RFSC since it was formed in March 2006. At that time, no one was sure how long this group would be around. The Stewardship Council staff started out with a 6-month contract. David reflected that it feels like the group is entering a new phase. There are more governments participating now than during cleanup. At the site, a baseline has been established in terms of conditions and treatment needs. David asked the group to consider whether the Stewardship Council needed to make any substantive changes to its activities or whether it was on the right trajectory. Bill Fisher said he believed that one of biggest issues was dam breaches. He said he felt like plans were moving forward a bit too quickly and wondered what others thought. Also, he said that issue led him to wonder how the

Board might best deal with similar issues in the future. David Allen responded that, through participation, the community has been able to buy a little more time before final removal of the dams. The site is in a monitoring mode, with a year or so before the two Points of Compliance at Indiana Street are eliminated, and a few years until dam breaches. He said that the communities did not get everything they wanted, but ended up generally supportive of what was put in place. Bill added that he was not so sure that anyone could really understand what will happen at the site in the future yet.

Deb Gardner asked how much influence the Board had over how DOE approached its dam breaching methodology. David Allen said the process was fairly well-defined, although the timeframe was a bit chaotic. David Abelson explained that at a certain point, the Board decided those governments that were most impacted by a particular issue would lead on these issues, and Board as a whole would serve to support them. In terms of dam breaching, the group was able to get DOE to agree to a longer monitoring time prior to physically performing the breaches, which really met the core interests of the local governments.

Tim Plass noted that he saw a lot of 'tracking' activities in the workplan. He felt this was a pretty passive approach and was wondering if there was anything more proactive the group could be working on. David Abelson explained that on all issues except for the Refuge, the Board has to be very careful about how it tackles its activities because of the Federal Advisory Committee Act (FACA). This law governs how federal agencies can and cannot take advice from outside parties. Within the past couple of years, the Board has had to deal with this issue because of claims (later proven to be without merit) from another group that the Board was acting as a FACA group. Also, the Board has decided not to discuss the proposed Northwest Parkway except for issues related to contamination. Scott Surovchak commented that the Board has to be very careful about how letters are drafted (i.e. they cannot be recommendations). The official language creating Local Stakeholder Organizations specified that they were intended to serve as 'conduits' to the agencies from the public.

Bob Briggs asked Joyce Downing for her input as new member. She commented on the learning curve, said the information was enlightening, and felt that questions from other members helped her better understand the issues. Mike Shelton said that he really liked the overview of contaminants and recommended that that presentation be done at beginning of each new Board member term.

Murph Widdowfield asked if there was any update on the Refuge. David Abelson responded that the new discussions regarding a Front Range trail system was the first indication from the Department of the Interior that they might be interested in doing some work at the Refuge. Murph then asked DOE for an update on the Candelas project in Arvada and whether there were any contamination issues. He said he would like to be able to answer questions that have arisen. David Abelson said that while discussion of a particular development was mostly beyond the scope of the Board, they could easily present more information about issues such as the CDPHE health/dose reconstruction studies and OU3/offsite areas contamination. He referred to an existing fact sheet that could be found on the Stewardship Council website. Shelley Cook commented that Arvada looked at all studies regarding contamination, as well as required new studies, prior to approving this development. Deb Gardner noted that she was a member of the

Rocky Mountain Greenways Steering Committee, which has only had one meeting so far, and that she will keep the Board informed as needed.

The board did not offer any changes to the draft work plan as presented.

FY 13 Budget – Initial Review

The Board was required to review the draft FY 13 budget at this meeting. Formal budget hearings will take place at the November 5th meeting. David noted that the budgeted expenses are approximately $20,000-$30,000 greater than projected expenses. This cushion allows for unplanned expenses without requiring additional budget hearings. David emphasized that the Board directly controls all budget decisions, and that this approach follows the approach the Board adopted in prior years. The FY13 budget tracks the current year budget.

The Board's attorney, Barb Vander Wall, explained that since the Stewardship Council is organized under Colorado statutes as a unit of local government, it is subject to the same laws. These requirements include that a notice be published to advertise a public budget hearing, and then the Board must approve and adopt the budget.

The board did not propose any changes to the draft budget as presented.

Host DOE Annual Meeting

DOE briefed on site activities for the first quarter of 2012 (January—March).

Surface Water – George Squibb
George noted that it was a pretty dry spring, with only 0.31 inches of total precipitation, approximately 25% of the 1993-2011 average of this period. Water levels were below the outlets of the ponds, with levels ranging from 0.9-7.4% of average. The site completed breaching two dams in spring, right after the first quarter ended (A-3 and the Present Landfill pond). George showed a couple photos of each. He said that snow precipitation levels are not measured because the samplers are not heated. Hydrologic data showed that flow rates ranged from no flow at GS10 to 101% at SW093. George reported that samples at all Points of Compliance (POCs) were below applicable standards. Reportable 12-month rolling average values for uranium at GS10 continued to be observed through the quarter. The site has determined that the uranium is mostly natural, and will be sending additional samples to LANL for further analysis. He added that it has been difficult to get much data, due to the very dry conditions.

George moved on to a discussion of sampling results at the two landfills. At the Original Landfill (OLF), surface water quality results were all below standards for the quarter. At the Present Landfill (PLF), the arsenic concentration was above the standard in a sample collected in January, which triggered monthly sampling. In the first monthly sample collected in March, the arsenic concentration was below the standard, resulting in the discontinuation of monthly sampling.

Murph Widdowfield asked what the source of the arsenic was. George said that much of it is naturally-occurring, and some could be from the landfill. Shelly Stanley asked if dryness affected the concentrations. George said it did for some constituents. Tim Plass asked if LANL results for uranium would affect management actions. George said he was not sure if this would actually lead to an action, and that they are mostly interested in finding out if something has changed in terms of the ratio of man-made vs. natural uranium. Deb Gardner asked at what point they would decide to mitigate. George said that after groundwater passes through this location, there are still four more places where it is monitored before it leaves the site. Since they have not seen elevated uranium anywhere else, there was no cause for alarm; however the levels do trigger consultation with the regulators. They are also seeing the levels trending down. Mike Shelton asked if the primary expense of maintaining dams was management, and how quickly these costs would be recovered after breaching. George did not know the answer to this question. Murph Widdowfield asked if any selenium was found, and George said not in this quarter. Shelly Stanley asked if George thought the results were being caused by groundwater. He said they are still trying to figure that out, but that because the levels are so low, it is more difficult to trace. George was also asked if the site designed the dams to withstand a 100-year storm event. He said that they did, and they would withstand even more than that.

Groundwater Monitoring – John Boylan
John noted that the first quarter is a light sampling quarter, and includes RCRA wells at both landfills. Extra groundwater sampling was performed at the East Trenches Plume Treatment System (ETPTS) in the 4th quarter (2011) that showed elevated VOCs in the effluent. A confirmatory sample in same quarter showed similar results. In response, the site revised the flow configuration from parallel to series. A sample in the first quarter showed return to normal treatment. Additional (non-RFLMA) monitoring during the quarter included several locations associated with treatment systems.

At the Solar Ponds Plume Treatment System (SPPTS), methods are being evaluated for uranium treatment. Lab tests using zero valent iron (ZVI) worked well, however upon full-scale application (longer residence time) it did not work well. Microcell uses short residence time and small media volume. They are now testing ion exchange (IX) resin ZVI; the results to date are promising.

At the Mound Site Plume Treatment System (MSPTS), the site evaluated air stripper treatment. Observations through the quarter suggested no freezing concerns and minimal maintenance needs.

David Allen asked how the site handles variability in flow tests with microcells. John said that the pump that supplies water maintains a fairly consistent flow, so this has not been an issue. The goal is to make the residence time at or under 50 days. David asked what the effluent nitrate level was. John said it was non-detectable.

Site Operations – Rick Di Salvo
Rick noted monthly inspections at the Original Landfill (OLF) were completed on January 30, February 28, and March 29, 2012. Seep locations produced surface flow temporarily after the melting of precipitation events. Wetland vegetation on the OLF cover was dormant throughout

the first quarter. Settlement monuments were surveyed in March and data were within the expected range per the *Original Landfill Monitoring and Maintenance Plan.* Inclinometers were measured monthly. Very little deflection was noted in the first quarter (and the last 18 months). Previous work to improve drainage and re-grade the west channel, along with routine maintenance, seems effective in mitigating localized instability.

The annual site inspection took place in March. This inspection required several activities. First is an inspection and monitoring for evidence of significant erosion, which includes conducting visual observation for precursors of significant erosion, and evaluating proximity of any significant erosion to subsurface features. Second, the site must inspect the effectiveness of institutional controls (ICs). This includes evaluating any evidence of violation of ICs and determining whether required signs are in place, as well as verifying that the Environmental Covenant is in the Administrative Record and on file with Jefferson County (verified March 19, 2012). This inspection also covers looking for evidence of any adverse biological conditions.

In order to carry out the inspection, the Central Operable Unit (COU) is divided into five areas (see report for map). The SW027 drainage area is also inspected due to the erosion controls added in 2010 as follow-up to elevated plutonium levels in 2010. Landfills, treatment systems, and water monitoring stations are inspected during the year on a routine basis. The team walked down the surface of each area to observe conditions. They did not find any significant problems. No significant erosion was noted, only some holes and surface debris. Holes were filled in and debris and trash was collected or flagged for pickup. No adverse biological conditions were noted. No evidence of IC violations was found. All signs were in place.

CERCLA Five Year Review – Rick DiSalvo
The Five-Year Review, as required by CERCLA. The 2012 review is the third one DOE has conducted. The report, including the EPA concurrence letter, was posted on the Rocky Flats website in July. Public notice also included an email to stakeholders and newspaper notice in early August.

The report concluded that the Central OU is protective of human health and the environment. Surface water concentrations are meeting standards at the points of compliance, and monitoring and maintenance plans and institutional controls are working to prevent unacceptable exposure to site contaminants. The results show that, because conditions in all OUs associated with the site are protective, the Rocky Flats NPL site is protective of human health and the environment. Report recommendations include

1. continuing evaluation of elevated concentrations of uranium, plutonium, and americium at GS10;
2. evaluating the effectiveness of erosion controls and reseeding mitigating actions in the SW027 drainage area (when water flows at SW027);
3. DOE and CDPHE consulting to replace the environmental covenant with a restrictive notice as described in the 2011 CAD/ROD amendment; and
4. discontinuing specific vegetation monitoring in OLF inspections (where they have met success criteria).

The next review report is due August 3, 2017, per the EPA concurrence letter.

Shelly Stanley asked what would happen with a brush fire at the site. Rick said this was covered by the vegetation management plan. Temporary erosion controls would be in place until success criteria were met. The site would inspect the affected area, determine where erosion controls and revegetation were necessary and then implement. Data from a pre-closure controlled burn shows that vegetation came back well.

Briefing on Revegetation Work

Jody Nelson, the sites ecologist, led the briefing. As mentioned in the actinide migration evaluation (AME) briefing at the June Board meeting, establishment of a robust re-vegetation cover in the soil surface is imperative to help minimize the transport of actinide contamination (plutonium, americium, and uranium) into surface water.

Jody started with revegetation efforts on the 903 Pad and Lip Area. The goal was to establish a good stand of native vegetation. Seed mixes used were based on dominant native prairie species (with no exotic, non-native species used). Different mixes were used for different slope positions, moisture regimes, etc. Seeding was conducted by broadcasting and erosion blankets were placed to protect soil while the vegetation was established. Success criteria from both DOE and EPA were incorporated at the site. The 903 pad and lip areas have met both success criteria.

Jody next discussed the SW027 hillside, where the 12-month rolling average for plutonium-239/240 initially exceeded the RFLMA surface water standard in April, 2010. The vegetation and erosion controls on the hillside and South Interceptor Ditch (SID) were evaluated. Inter-seeding of selected locations with lower foliar vegetation cover was conducted on the hillside in June 2010. Additional erosion controls (Filtrexx Siltsoxx wattles – filled with wood chips, compost, and seed) were installed on hillside in December 2010. Sparsely vegetated areas within the SID were reseeded and had erosion mat placed in December 2010. A January 2012 status report showed:

- Increased vegetation cover on hillside
- Filtrexx Siltsoxx wattles in place and holding up.
- Vegetation grown up around wattles and coming up through wattles.
- South Interceptor Ditch (SID) vegetation increasing and erosion mats holding up in place

The status report recommended including the SW027 drainage area in the 2012 annual inspection and revegetation surveys, and to continue interseeding as appropriate.

Jody explained that some areas were sparsely vegetated because the SID was dry. However, even with the drought, vegetation is still doing very well. He explained that dry conditions force roots down further into the soil, which is actually a benefit of drought conditions. Deb Gardner commented that drought may be the “new normal” for this area and asked if there were any plans to address this. Jody said that if conditions were to change, they would re-seed and could even modify the seed mix they use. Vera Moritz noted that some grass seeds being used at Rocky Flats were developed in the New Mexico desert.

Shirley Garcia asked about the status of weed management at the site. Jody said that they conduct weed mapping, spraying, and mechanical control. He added that they released all of the available bio-controls as well, and that these are working really well. He gave an example of a type of weevil doing a very good job of controlling Dalmatian toadflax. Tim Plass asked about climate change resiliency, and commented that he could see an exacerbation of events (drought could be followed by extreme wet conditions). Jody replied that the site is always monitoring and will continue to re-evaluate their plans in light of any new conditions. He added that seed mixes will also help address this, as this provides options for plants that may grow under certain circumstances.

Public comment

There was none

Updates/Big Picture Review

November 5, 2012

Potential Business Items

- Approve 2013 budget
- Approve 2013 work plan

Potential Briefing Items

- DOE Quarterly update
- NRD update
- Original landfill performance

February 4, 2013

Potential Business Items

- Elect 2013 officers
- Adopt resolution re: 2013 meeting dates
- Approve letter re: workers benefits

Potential Briefing Items

- Host LM quarterly public meeting
- NRD update
- Original landfill performance

Issues to watch:

Americium and uranium levels upstream of pond B-3
Adaptive Management Plan water quality testing results
Solar Ponds Performance

Member Updates:

Shelly Stanley commented that she had recently reviewed the citizen sampling report from the health studies done in the 1990's and that she found the information very helpful. David Abelson said he would incorporate this into future Board topics or information.

Bob Briggs asked members to go around the table and provide any relevant updates from their constituencies. Chris Hansen said that Superior was addressing their comprehensive plan, as well plans for an overpass as part of the second phase of Highway 36. Deb Gardner said that the regional trails project was moving forward and that she would provide updates to the Stewardship Council. Ann Lockhart announced an Atomic Photographers Guild exhibit, which would be held at the Rocky Flats Cold War Museum site in Arvada from September through October. She added that they were in the design phase of museum development and that they had just hired a part-time person to help with fundraising efforts. Shelley Cook noted that Arvada had invited Scott Surovchak and Joe Legare to speak with their council on local television about Rocky Flats. She said this was very helpful and would recommend it to other cities. Bill Fisher noted that President Obama was going to be in Golden that week. Thornton has issued a Stage 2 drought warning, which includes mandatory watering restrictions into next year. Tim Plass noted the successful hosting of the Pro Cycling challenge, with minimal damage to open space, even though there were 10,000 people on Flagstaff.

David Abelson noted that a DOE-LM Stakeholder survey was emailed out to various people at national sites. Not all Board members will receive it. It concerns issues related to communication processes. Bob Briggs announced that Westminster has some historical lectures coming up. John Dalton asked if anyone had an update on the Northwest Parkway. Bob Briggs said that he had heard that a judge has lawsuits under advisement at the present time.

The meeting was adjourned at 11:17 a.m.

Respectfully submitted by Erin Rogers.

Rocky Flats Stewardship Council
Check Detail
August 24 through October 20, 2012

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check		**8/27/2012**		**CASH-Wells Fargo-Operating**		**-3.50**
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Check	**1575**	**9/9/2012**	**Century Link**	**CASH-Wells Fargo-Operating**		**-26.58**
				Telecommunications	-26.58	26.58
TOTAL					-26.58	26.58
Bill P...	**1576**	**9/9/2012**	**Crescent Strategies...**	**CASH-Wells Fargo-Operating**		**-7,279.28**
Bill	8/31...	8/31/2012		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-138.85	138.85
				TRAVEL-Local	-65.49	65.49
				Postage	-15.99	15.99
				Printing	-208.95	208.95
TOTAL					-7,279.28	7,279.28
Bill P...	**1577**	**9/9/2012**	**Jennifer A. Bohn**	**CASH-Wells Fargo-Operating**		**-297.50**
Bill	12-61	8/31/2012		Accounting Fees	-297.50	297.50
TOTAL					-297.50	297.50
Bill P...	**1578**	**9/9/2012**	**Seter & Vander Wal...**	**CASH-Wells Fargo-Operating**		**-170.25**
Bill	63913	7/31/2012		Attorney Fees	-105.25	105.25
Bill	64070	8/31/2012		Attorney Fees	-65.00	65.00
TOTAL					-170.25	170.25
Bill P...	**1579**	**10/11/2012**	**Blue Sky Bistro**	**CASH-Wells Fargo-Operating**		**-150.00**
Bill		9/10/2012		Misc Expense-Local Government	-150.00	150.00
TOTAL					-150.00	150.00
Bill P...	**1580**	**10/11/2012**	**Crescent Strategies...**	**CASH-Wells Fargo-Operating**		**-7,113.22**
Bill	9/30...	9/30/2012		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-138.85	138.85
				TRAVEL-Local	-39.41	39.41
				Postage	-15.99	15.99
				Consultants	-52.08	52.08
				Supplies	-16.89	16.89
TOTAL					-7,113.22	7,113.22
Bill P...	**1581**	**10/11/2012**	**Jennifer A. Bohn**	**CASH-Wells Fargo-Operating**		**-170.00**
Bill	12-72	9/30/2012		Accounting Fees	-170.00	170.00
TOTAL					-170.00	170.00
Bill P...	**1582**	**10/11/2012**	**Seter & Vander Wal...**	**CASH-Wells Fargo-Operating**		**-1,489.42**
Bill	64181	9/30/2012		Attorney Fees	-1,489.42	1,489.42
TOTAL					-1,489.42	1,489.42
Bill P...	**1583**	**10/11/2012**	**The Rogers Group, ...**	**CASH-Wells Fargo-Operating**		**-600.00**

Rocky Flats Stewardship Council
Check Detail
August 24 through October 20, 2012

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Bill	10/1...	9/30/2012		Personnel - Contract	-600.00	600.00
TOTAL					-600.00	600.00
Check	**1584**	**10/11/2012**	**Century Link**	**CASH-Wells Fargo-Operating**		**-27.78**
				Telecommunications	-27.78	27.78
TOTAL					-27.78	27.78

ROCKY FLATS STEWARDSHIP COUNCIL

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RESOLUTION
regarding
SUPPORT FOR THE ROCKY FLATS COLD WAR MUSEUM

WHEREAS, the Rocky Flats Stewardship Council is a separate legal, public entity, created by an intergovernmental agreement, as permitted by Colo. Const. Art. XIV, and section 18(2), part 2 of article 1, title 29, C.R.S., among ten Colorado local governments, Boulder County, Jefferson County, City and County of Broomfield, the City of Arvada, the City of Boulder, City of Golden, City of Northglenn, City of Thornton, the City of Westminster, and the Town of Superior (collectively, the "Stewardship Council"); and

WHEREAS, the Stewardship Council was created to allow local governments to work together on the continuing local oversight of the activities occurring on the Rocky Flats site to ensure that government and community interests are met with regards to long term stewardship of residual contamination and refuge management; and

WHEREAS, the site for the Rocky Flats nuclear weapons plant was selected in 1951 in northern Jefferson County and operated until 1992 to mass produce plutonium cores for nuclear weapons for the U.S. Department of Defense as part of the nation's Nuclear Weapons Complex and the cores remain in weapons today around the world; and

WHEREAS, Rocky Flats was an important part of the local, national and international history of the Cold War, the central conflict of the second half of the 20th century, in which two superpowers, the United States and the former Soviet Union, developed nuclear weapons and political alliances to protect their interests; and

WHEREAS, the Rocky Flats plant provided stable jobs and economic development in the northwest Denver Metropolitan Area for more than 50 years during the plant's operation and subsequent decontamination and decommissioning; and

WHEREAS, operations at Rocky Flats produced significant legacies for local communities, the State of Colorado and the United States, but institutional memory of the plant's activities is being lost over time; and

WHEREAS, the Rocky Flats Cold War Museum (RFCWM) formed an independent, not-for-profit 501(c)(3) organization in 2001; collected key artifacts; completed a comprehensive feasibility and scoping study; gathered 150 oral histories of former Rocky Flats workers, activists, government regulators and public officials; leased a building; hired staff; and contracted with an exhibit design team which invited broad input from adult and youth stakeholders to create informative, balanced and compelling exhibits for a museum; and

WHEREAS, the RFCWM board of directors has been collaborating with officials from the U.S. Department of Energy, Office of Legacy Management and U.S. Fish and Wildlife Service, and Rocky Flats-related organizations, as well as civic, community and educational organizations in preserving the history, inviting their involvement and making presentations; and

WHEREAS, interest in Cold War history is increasing, and the RFCWM has the potential to spur local economic development as an atomic tourism site for visitors from the U.S. and abroad.

NOW, THEREFORE, BE IT RESOLVED BY THE MEMBERS OF THE ROCKY FLATS STEWARDSHIP COUNCIL AS FOLLOWS:

Section 1. That we support the RFCWM as a means of documenting the history and legacies (e.g., social, scientific, political, economic and environmental) of Rocky Flats; and

Section 2. That we support the continuing collection of Rocky Flats-related artifacts and oral histories to document the multi-faceted history of this site; and

Section 3. That we acknowledge the potential for such a museum to support the U.S. Department of Energy and local stakeholders in meeting their responsibilities for long-term stewardship at Rocky Flats. That support may include: providing educational programs for local schools, colleges, and community groups; hosting meetings and conferences related to Rocky Flats issues; fostering public dialogue about Rocky Flats; and supporting long-term stewardship of the site; and

Section 4. That we support the RFCWM's efforts in securing the necessary resources from foundations, corporations, governments and individuals in order to open and operate the RFCWM to preserve the history of Rocky Flats.

Passed and adopted this ____ day of November, 2012.

ATTEST:

ROCKY FLATS STEWARDSHIP COUNCIL

_____

_____

By: Lisa Morzel, Chair

DOE Quarterly Briefing

- Cover memo
- Selection from quarterly report

Regulator Briefing

- Cover memo

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
Arthur Widdowfield

MEMORANDUM

TO: Stewardship Council Board
FROM: Rik Getty
SUBJECT: DOE Quarterly Report
DATE: October 27, 2012

We have scheduled 75 minutes for DOE to present its quarterly update for the second quarter of 2012 (April-June).

Note: The full report including appendices (269 pages) can be found at: http://www.lm.doe.gov/Rocky_Flats/Documents.aspx . The electronic copy of this meeting packet contains the report (50 pages), minus the attachments. The printed copy of this meeting packet only includes the table of contents.

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

- surface water monitoring;
- groundwater monitoring;
- ecological monitoring; and,
- site operations (inspections, improvements to groundwater treatment systems, general maintenance, etc.).

SECOND QUARTER 2012 QUARTERLY REPORT

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

Water Monitoring Highlights
During the quarter, water monitoring successfully met the targeted monitoring objectives as required by the Rocky Flats Legacy Management Agreement (RFLMA) and was in conformance with the Rocky Flats Site Operating Guide (RFSOG) implementation guidance. The RFLMA network consists of 10 automated gaging stations, 12 surface water grab-sampling locations, 8 treatment system locations, 97 wells, and 10 precipitation gages. During the quarter, 17 flow-paced composite samples, 4 surface water grab samples, 15 treatment system samples, and 173

groundwater samples were collected (in accordance with RFLMA protocols) and submitted for analysis. Analysis is pending for two flow-paced composites that were initiated during the quarter. Five additional flow-paced composites are still in progress, so analytical data for those composites were not available for this report.

Water quality data at the RFLMA Points of Compliance (POCs) remained well below the applicable standards through the quarter.

Reportable 12-month rolling average uranium concentrations were observed starting on April 30, 2011, in surface water at RFLMA Point of Evaluation (POE) monitoring station GS10, which is located on South Walnut Creek upstream of former Pond B-1. Reportable 12-month rolling average americium (Am) and plutonium (Pu) activities were also observed starting on August 31, 2011, and May 31, 2012, respectively. As of the end of the second quarter of 2012, these three analytes were still reportable. GS10 is evaluated in Section 3.1.3.1 of the report.

Except for the GS10 analytes discussed above, all other analyte concentrations at POEs remained below reporting levels as of the end of the second quarter of CY 2012.

Groundwater monitoring results will be evaluated as part of the annual report for CY 2012.

Landfills

Present Landfill (PLF)

The routine PLF inspection for the quarter was performed on May 30, 2012. No significant problems were observed during this inspection. Copies of the landfill inspection forms are presented in Appendix A.

Original Landfill (OLF)

Routine OLF monthly inspections during the quarter were performed on April 30, May 30, and June 28, 2012. The landfill cover vegetation was evaluated on May 29, 2012. No significant problems were observed during these inspections. The completed inspection forms are presented in Appendix A.

Groundwater Treatment Systems

Mound Site Plume Treatment System (MSPTS)

Routine maintenance activities and optimization of the small effluent-polishing air stripper continued at the MSPTS through the quarter. Although cold temperatures were not observed to cause freezing, the low-light conditions were responsible for reduced solar power that caused the pump to stall. This condition was resolved and a second pump was installed, essentially doubling the flow through the spray nozzles. Preparations were also underway in the second quarter to install a solar-powered ventilation fan. Testing continued to identify adjustments needed to achieve optimal effectiveness. The annual report for 2012 will provide a more detailed discussion of the MSPTS air stripper, including operation and testing results. Refer to Section 3.1.9.1 for information on water quality sampling.

East Trenches Plume Treatment System (ETPTS)
Routine maintenance activities continued at the ETPTS through the quarter. These activities included checking influent and effluent flow conditions, measuring water levels in the cells, and clearing accumulations of biofilm that can lead to clogging. Planning is underway for the installation of an air stripper at the ETPTS that is similar in concept to that at the MSPTS, but which will be installed on the influent manhole rather than the effluent manhole. The ETPTS unit will therefore pre-treat influent to that system, rather than polish its effluent. Refer to Section 3.1.9.2 for information on water quality sampling.

Solar Ponds Plume Treatment System (SPPTS)
Routine maintenance activities continued at the SPPTS. 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. In addition, tests continued on the feasibility of treating uranium with a smaller-scale treatment component, referred to informally as a "microcell." Microcell tests performed in the second quarter included tests of zero-valent iron (ZVI) treatment media, as well as ion exchange resins designed to remove uranium. ZVI is the basis of the existing treatment media at the SPPTS.

A first set of bench-scale tests also began using a "lagoon" approach to nitrate treatment, in which the high-nitrate influent is dosed with nutrients and then stored in a pool (or lagoon) that is rich in bacteria. This style of nitrate treatment is a common municipal approach. These bench scale tests utilize the same nutrients used to dose Phase III Cell A (MicroCg). Trash cans were used as the bench-scale test lagoons, with each trash can containing between 25 and 30 gallons of water. The second-quarter lagoon tests focused on proving the principle (i.e., essentially confirming that this style of treatment is effective), and also compared results from a completely stagnant lagoon to a lagoon that was periodically agitated with a low-volume pump. This first set of lagoon tests was nearing completion at the end of the second quarter.

Both the microcell and lagoon tests are expected to continue for the next several months, and they will be discussed in greater detail in the annual report for 2012. Refer to Section 3.1.9.3 for information on water quality sampling.

Present Landfill Treatment System (PLFTS)
Routine maintenance activities continued at the PLFTS through the quarter. These activities generally consisted of inspecting the system for potential problems. Refer to Section 3.1.9.4 for information on water quality sampling.

Erosion Control and Revegetation
Maintenance of the erosion control features required continued effort throughout the quarter, especially following high-wind or precipitation events. Erosion wattles and matting 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 second quarter of CY 2012. Several areas were interseeded with additional native species to increase vegetation cover.

Please contact me if you have any questions.

LMS/RFS/S09930

Rocky Flats, Colorado, Site

Quarterly Report of Site Surveillance and Maintenance Activities Second Quarter Calendar Year 2012

October 2012

U.S. DEPARTMENT OF ENERGY | Legacy Management

Contents

Figures

Tables

Appendixes

Abbreviations

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
LANL	Los Alamos National Laboratory
LM	Office of Legacy Management
µg/L	micrograms per liter
M&M	monitoring and maintenance
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
RCRA	Resource Conservation and Recovery Act
RFLMA	*Rocky Flats Legacy Management Agreement*
RFSOG	*Rocky Flats Site Operations Guide*
Site	Rocky Flats Site
SPPTS	Solar Ponds Plume Treatment System
USFWS	U.S. Fish and Wildlife Service
ZVI	zero-valent iron

1.0 Introduction

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is responsible for implementing the final response action selected in the *Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit* (CAD/ROD) (DOE, EPA, and CDPHE 2006) issued on September 29, 2006, and amended on September 21, 2011 (DOE, EPA and CDPHE 2011), for the Rocky Flats Site (the Site) in Colorado. DOE, the U.S. Environmental Protection Agency (EPA), and the Colorado Department of Public Health and Environment (CDPHE) have chosen to implement the monitoring and maintenance requirements of the CAD/ROD as described in the *Rocky Flats Legacy Management Agreement* (RFLMA) (DOE 2007a). Attachment 2 of the RFLMA defines the Central Operable Unit (COU) remedy surveillance and maintenance requirements, the frequency for each required activity, and the monitoring and maintenance locations. The requirements include environmental monitoring; maintenance of the erosion controls, access controls (signs), landfill covers, and groundwater treatment systems; and operation of the groundwater treatment systems. The RFLMA also requires that the institutional controls, in the form of use restrictions as established in the CAD/ROD, be maintained.

This report is required in accordance with Section 7.0 of RFLMA Attachment 2. The purpose of this report is to inform the regulatory agencies and stakeholders of the remedy-related surveillance, monitoring, and maintenance activities being conducted at the Site. LM provides periodic communications through several means, such as this report, web-based tools, and public meetings.

LM prepared the *Rocky Flats, Colorado, Site Site Operations Guide* (RFSOG) (DOE 2012a) to serve as the primary internal document to guide work to satisfy the requirements of the RFLMA and to implement best management practices at the Site.

Several other Site-specific documents provide additional detail regarding the requirements described in RFLMA Attachment 2, including all aspects of surveillance, monitoring, and maintenance activities, as well as data evaluation protocols.

Monitoring data and summaries of surveillance and maintenance activities for past quarters are available in the quarterly reports. Extensive discussion and evaluation of surveillance, monitoring, and maintenance activities are presented each calendar year in the annual report of Site surveillance and maintenance activities.

This report addresses remedy-related surveillance, monitoring, and operations and maintenance activities conducted at the Site during the second quarter of calendar year (CY) 2012 (April 1 through June 30). This report describes the following activities:

- Maintenance and inspection of the Original Landfill (OLF) and Present Landfill (PLF)
- Maintenance and inspection of the four groundwater treatment systems
- Erosion control and revegetation activities
- Routine (in accordance with the RFLMA and the RFSOG) water monitoring

2.0 Site Operations and Maintenance

2.1 Landfills

2.1.1 Present Landfill

The PLF is inspected quarterly in accordance with the requirements of the PLF Monitoring and Maintenance (M&M) Plan (DOE 2008a) and the RFLMA (DOE 2007a). Vegetation monitoring has been conducted on the PLF according to the requirements in RFLMA Attachment 2, Table 3.

2.1.1.1 Inspection Results

The routine PLF inspection for the second quarter of CY 2012 was performed on May 30, 2012. No significant problems were observed during this inspection. Copies of the landfill inspection forms are presented in Appendix A.

2.1.1.2 Settlement Monuments

The annual settlement monument surveys were performed on December 13, 2011. The 2012 survey of the PLF settlement monuments will be completed at the end of the calendar year. Additional information on the settlement monuments is included in the *Rocky Flats Site Quarterly Report of Site Surveillance and Maintenance Activities, First Quarter Calendar Year 2008* (DOE 2008b).

2.1.2 Original Landfill

The OLF is inspected monthly, in accordance with the requirements in the OLF M&M 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 that were being planned at the time, no change to the monthly inspection frequency was recommended in the second five-year review of the Site (DOE 2007b).

2.1.2.1 Inspection Results

Routine OLF inspections during the second quarter of CY 2012 were performed on April 30, May 30, and June 28, 2012. The landfill cover vegetation was evaluated on May 29, 2012. The completed inspection forms are presented in Appendix A.

2.1.2.2 Settlement Monuments

The OLF settlement monuments were surveyed on June 21, 2012. Survey data indicate that settling at each monument does not exceed the limits published in the OLF M&M Plan (DOE 2009a). The survey results are presented in Appendix A.

2.1.2.3 Inclinometers

As discussed in the quarterly report for the second quarter of CY 2009 (DOE 2009b), seven inclinometers were installed in boreholes at the OLF in 2008 as part of the geotechnical investigation of localized areas of instability (Figure 1).

Movement of the inclinometers has been monitored approximately monthly since installation. Inclinometers deflect by lateral movement of the ground in which they are located and can deflect enough to cause the inclinometer tubes to break. Once an inclinometer tube breaks, the inclinometer will no longer be monitored. Inclinometer monitoring data provide information on localized soil movement and serve to focus the periodic inspections of the soil cover surface on signs of potential instability, such as cracking, vertical displacement, and slumping. A deflection of more than 1 inch is used as a trigger for evaluation of the data by a qualified geotechnical engineer. The engineer determines the significance of the deflection in relation to recommendations for maintenance or repairs to address potential instability in accordance with the OLF M&M Plan (DOE 2009a).

Inclinometer measurements were taken on April 30, May 31, and June 27, 2012. The readings showed very little deflection for any inclinometer over this quarter. Very little deflection has been noted over the past approximately 2 years. Based on the geotechnical investigation, maintenance and repairs in 2009 were made to minimize the effects of lubrication of a subsurface organic layer by groundwater and precipitation infiltration. As discussed in the annual report for 2011, routine maintenance to fill any surface cracking noted in inspections to minimize infiltration of precipitation appears an effective course of action to address conditions that may lead to localized instability.

2.1.2.4 Slumps

As discussed in the quarterly report for the first quarter of CY 2010 (DOE 2010b), areas where the landfill cover is pushed up or rolling are noticeable on the western end of the OLF between Berms 2 and 3; however, no new slumps were observed during the second quarter of 2012. It has been 2 years since any movement has been observed on the Original Landfill cover.

2.1.2.5 Seeps

Seeps at the OLF were evaluated during the monthly inspections and during unscheduled visits. Individual seep location flow rates can be found in the monthly inspection reports.

2.2 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], East Trenches Plume Treatment System [ETPTS], and 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. 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.

2.2.1 Mound Site Plume Treatment System

Routine maintenance activities and optimization of the small effluent-polishing air stripper continued at the MSPTS through the second quarter of CY 2012. Although cold temperatures were not observed to cause freezing, the low-light conditions were responsible for reduced power that caused the pump to stall. This condition was resolved and a second pump was installed, essentially doubling the flow through the spray nozzles. Preparations were also underway in the second quarter to install a powered ventilation fan. Testing continued to identify adjustments needed to achieve optimal effectiveness. The annual report for 2012 will provide a more detailed discussion of the MSPTS air stripper, including operation and testing results.

Refer to Section 3.1.9.1 for information on water quality sampling.

2.2.2 East Trenches Plume Treatment System

Routine maintenance activities continued at the ETPTS through the second quarter of CY 2012. These activities included checking influent and effluent flow conditions, measuring water levels in the cells, and clearing accumulations of biofilm that can lead to clogging. Planning was underway for the installation of an air stripper at the ETPTS that is similar in concept to that at the MSPTS, but which will be installed on the influent manhole rather than the effluent manhole. The ETPTS unit will therefore pre-treat influent to that system, rather than polish its effluent.

Refer to Section 3.1.9.2 for information on water quality sampling.

2.2.3 Solar Ponds Plume Treatment System

Routine maintenance activities continued at the SPPTS through the second quarter of CY 2012. 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. In addition, tests continued on the feasibility of treating uranium with a smaller-scale treatment component, referred to informally as a "microcell." Microcell tests performed in the second quarter included tests of zero-valent iron (ZVI) treatment media as well as ion exchange resins designed to remove uranium. ZVI is the basis of the existing treatment media at the SPPTS.

A first set of bench-scale tests was also begun using a "lagoon" approach to nitrate treatment, in which the high-nitrate influent is dosed with nutrients and then stored in a pool or lagoon that is rich in bacteria. This style of nitrate treatment is a common municipal approach. These bench-scale tests utilize the same nutrients used to dose Phase III Cell A (MicroCg). Trash cans were used as the bench-scale test lagoons, with each trash can containing between 25 and 30 gallons of water. The second-quarter lagoon tests focused on proving the principle (i.e., essentially confirming that this style of treatment is effective), and also compared results from a completely stagnant lagoon to a lagoon that was periodically agitated with a low-volume pump. This first set of lagoon tests was nearing completion at the end of the second quarter.

Figure 1. Original Landfill Features

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Both the microcell and lagoon tests are expected to continue for the next several months, and they will be discussed in greater detail in the annual report for 2012. Refer to Section 3.1.9.3 for information on water quality sampling.

2.2.4 Present Landfill Treatment System

Routine maintenance activities continued at the PLFTS through the second quarter of CY 2012. These activities generally consisted of inspecting the system for potential problems.

Refer to Section 3.1.9.4 for information on water quality sampling.

2.3 Erosion Control and Revegetation

Maintenance of the Site erosion control features required continued effort throughout the second quarter of CY 2012, especially following high-wind or precipitation events. Erosion wattles and matting 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 second quarter of CY 2012. Several areas were interseeded with additional native species to increase vegetation cover.

3.0 Environmental Monitoring

This section summarizes the environmental monitoring conducted in accordance with the RFLMA.

3.1 Water Monitoring

This section includes:

- A discussion of analytical results for the Point of Compliance (POC), Point of Evaluation (POE), PLF, and OLF surface-water monitoring objectives.
- Summaries of Area of Concern (AOC) well, Evaluation well, Sentinel well, and Resource Conservation and Recovery Act (RCRA) well groundwater monitoring; treatment system monitoring; and Surface Water Support monitoring at the Site.

RFLMA Attachment 2 and the RFSOG offer details about the monitoring locations, sampling criteria, and evaluation protocols for the water monitoring objectives mentioned in the following sections. Appendix B provides analytical water quality data for the second quarter of CY 2012. A more detailed interpretation and discussion will be provided in the annual report for CY 2012.

3.1.1 Water Monitoring Highlights

During the second quarter of CY 2012, water monitoring successfully met the targeted monitoring objectives as required by the RFLMA and was in conformance with RFSOG implementation guidance. The RFLMA network consists of 10 automated gaging stations, 12 surface water grab-sampling locations, 8 treatment system locations, 97 wells, and 10 precipitation gages. During the quarter, 17 flow-paced composite samples, 4 surface water

grab samples, 15 treatment system samples, and 173 groundwater samples were collected (in accordance with RFLMA protocols) and submitted for analysis.[1] Analysis is pending for two flow-paced composites that were started during the quarter and have been retrieved from the field. Five additional flow-paced composites are still in progress, so analytical data for those composites were not available for this report.

Water quality data at the RFLMA POCs remained well below the applicable standards through the second quarter of CY 2012.

Reportable 12-month rolling average uranium concentrations were observed starting on April 30, 2011, in surface water at RFLMA POE monitoring station GS10, which is located on South Walnut Creek upstream of former Pond B-1. Reportable 12-month rolling average americium (Am) and plutonium (Pu) activities were also observed starting on August 31, 2011, and May 31, 2012, respectively. As of the end of the second quarter of CY 2012, these three analytes were still reportable. GS10 is evaluated in Section 3.1.3.1 of this report.

Except for the GS10 analytes discussed above, all other analyte concentrations at POEs remained below reporting levels as of the end of the second quarter of CY 2012.

Groundwater monitoring results will be evaluated as part of the annual report for CY 2012.

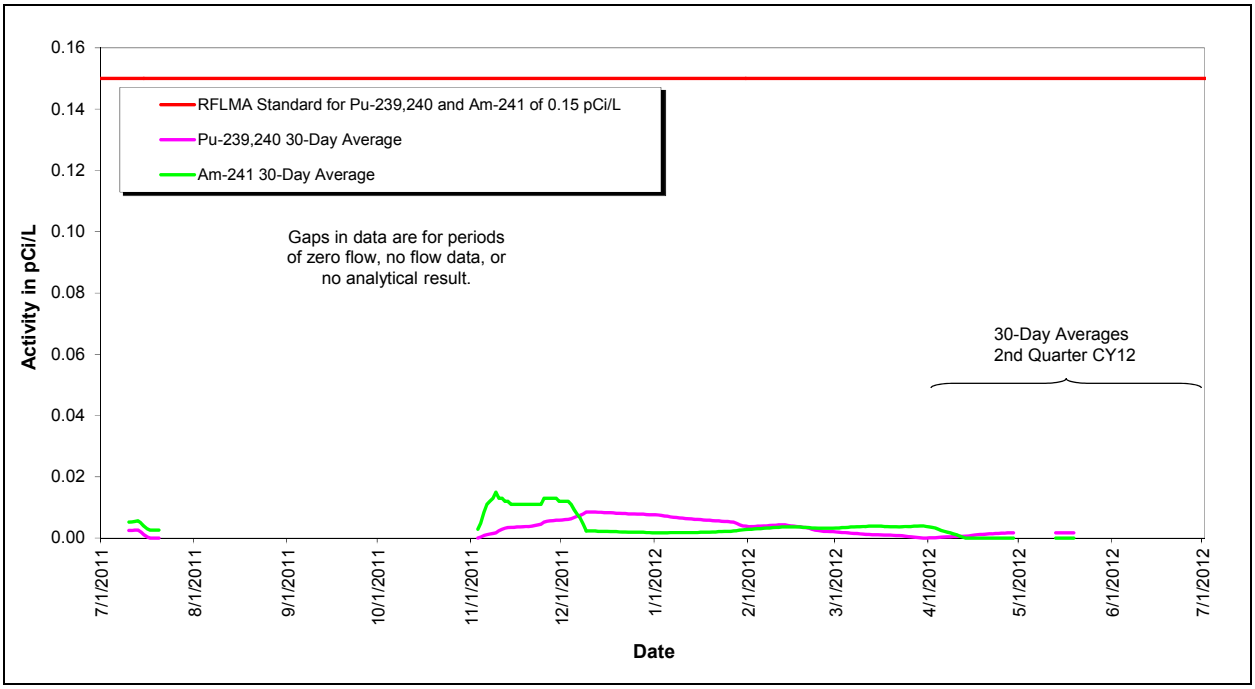
3.1.2 POC Monitoring

The following sections include summary tables and plots showing the applicable 30-day and 12-month rolling averages for the POC analytes.

3.1.2.1 Monitoring Location GS01

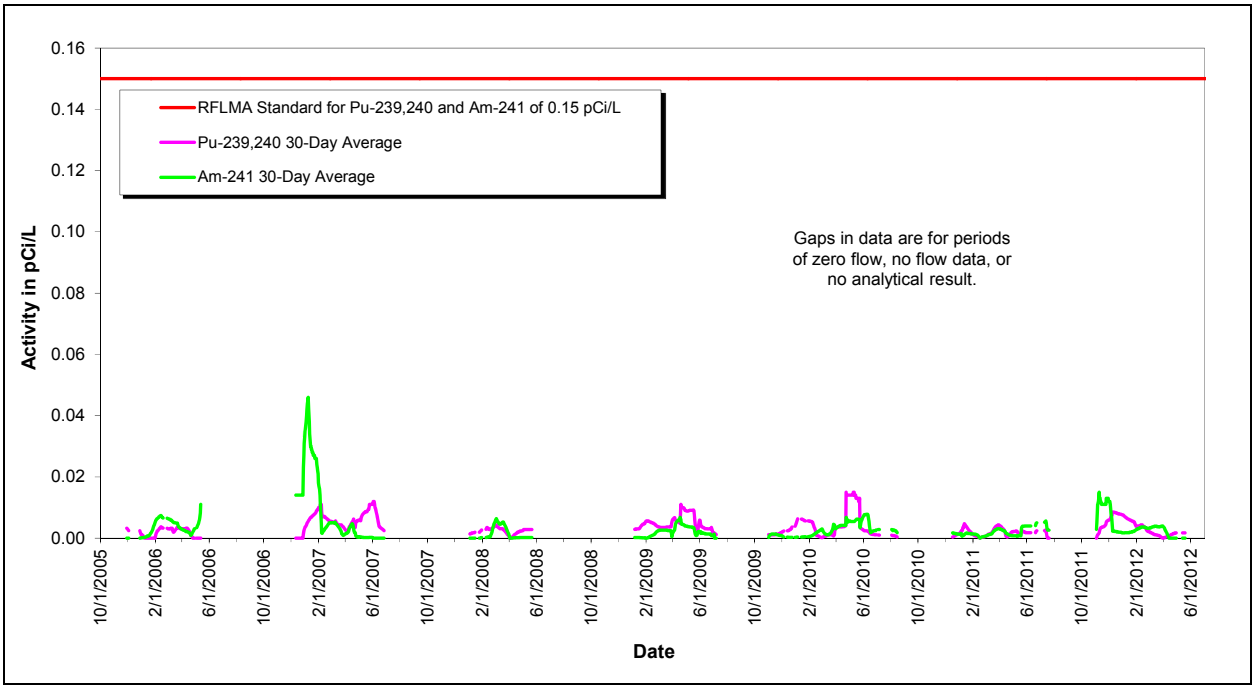
Monitoring location GS01 is on Woman Creek at Indiana Street. Figure 2 and Figure 4 show no occurrences of reportable 30-day averages for the quarter using the available data. Figure 3 and Figure 5 show sampling data from 2005 through the second quarter of CY 2012. There has been no flow at GS01 since May 23, 2012.

[1] Composite samples consist of multiple aliquots ("grabs") of identical volume. Each grab is delivered by the automatic sampler to the composite container at each predetermined flow volume or time interval. During the second quarter of CY 2012, the 17 flow-paced composites comprised 733 individual grabs.



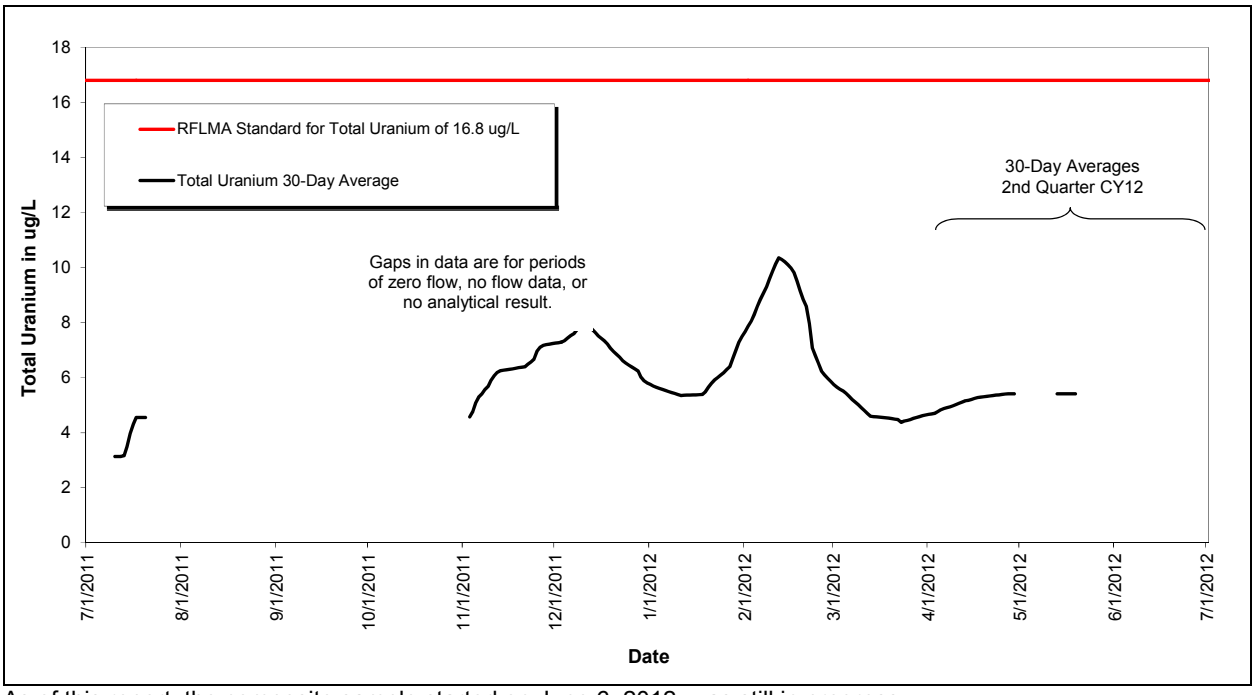
As of this report, the composite sample started on June 6, 2012, was still in progress.
pCi/L = picocuries per liter

Figure 2. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS01: Calendar Year Ending Second Quarter CY 2012



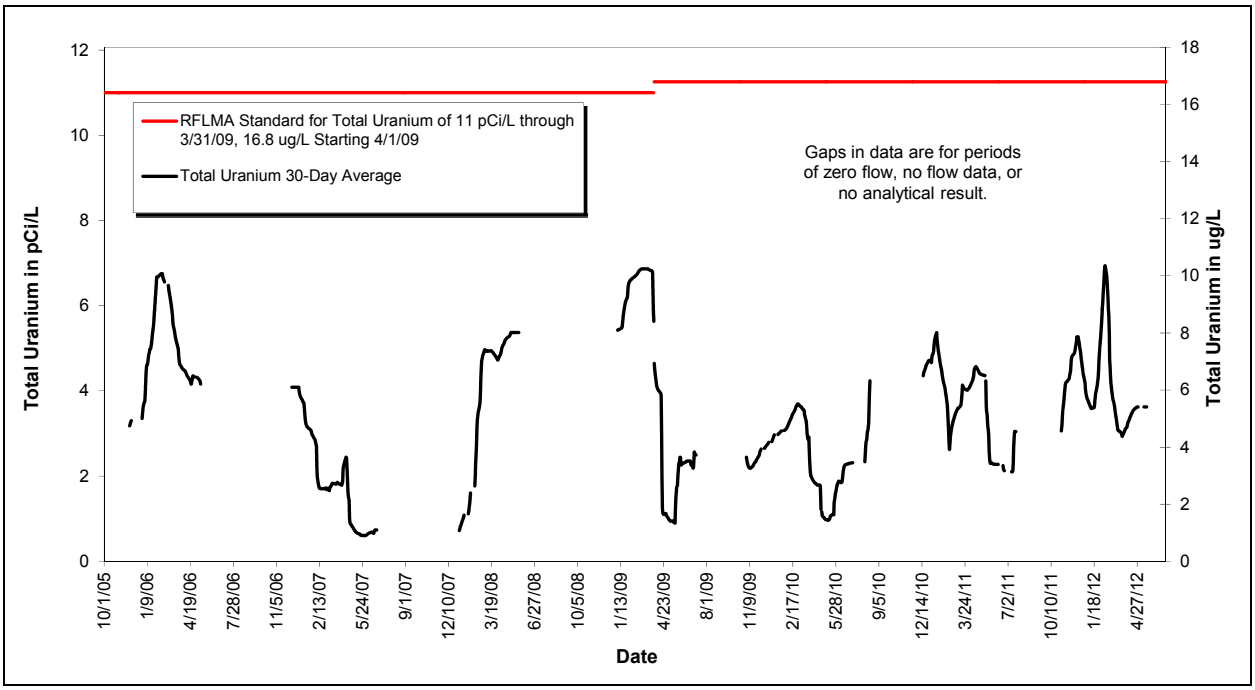
As of this report, the composite sample started on June 6, 2012, was still in progress.
pCi/L = picocuries per liter

Figure 3. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS01: Post-Closure Period Ending Second Quarter CY 2012



As of this report, the composite sample started on June 6, 2012, was still in progress.
µg/L = micrograms per liter

Figure 4. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS01: Calendar Year Ending Second Quarter CY 2012

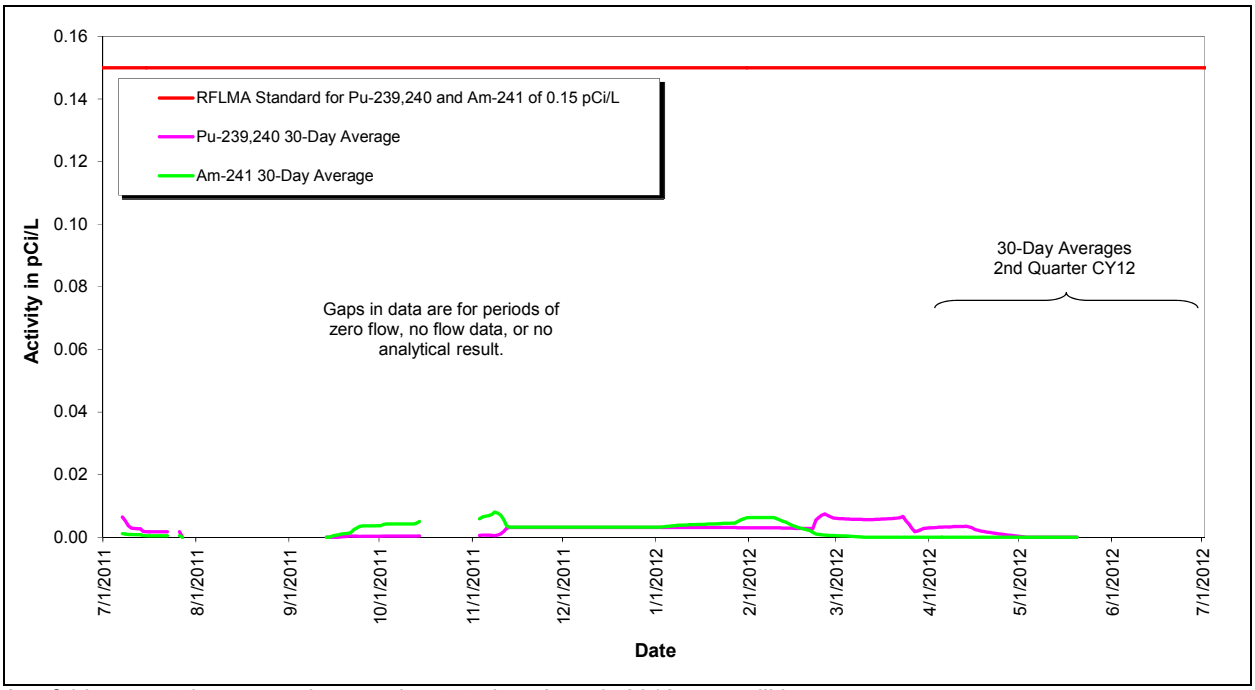


As of this report, the composite sample started on June 6, 2012, was still in progress.
µg/L = micrograms per liter
pCi/L = picocuries per liter

Figure 5. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS01: Post-Closure Period Ending Second Quarter CY 2012

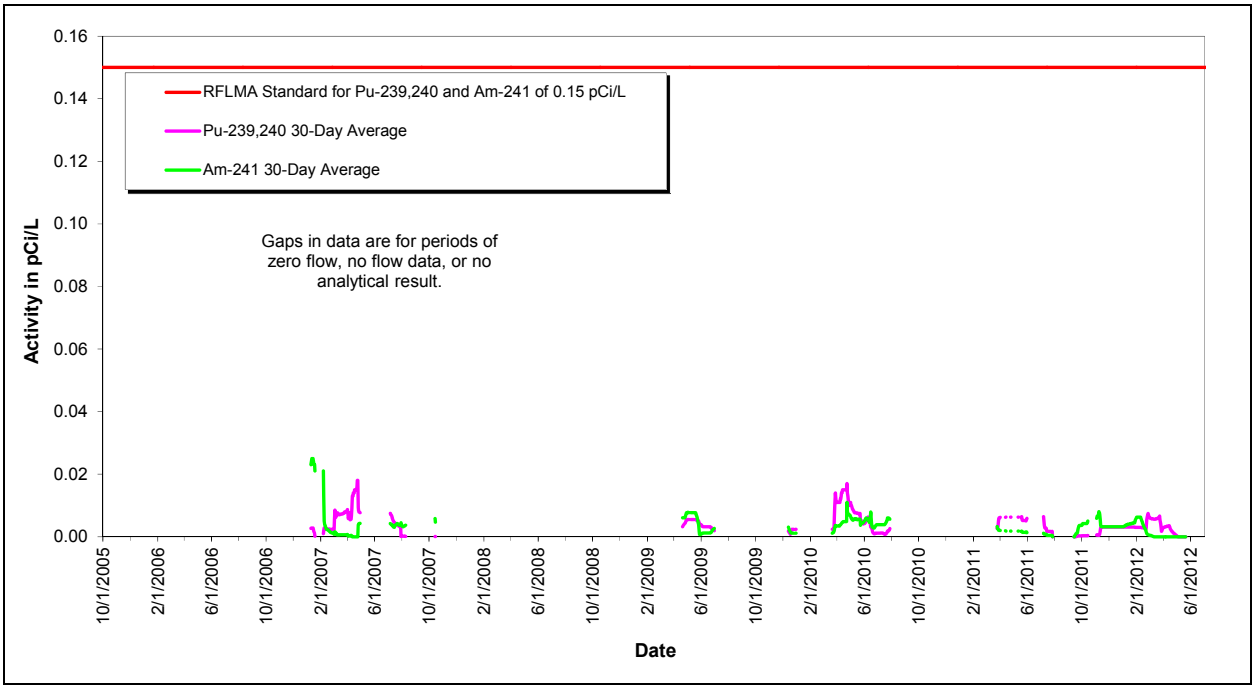
3.1.2.2 Monitoring Location GS03

Monitoring location GS03 is on Walnut Creek at Indiana Street. Figure 6, Figure 8, and Figure 10 show no occurrences of reportable water quality for the quarter using the available data. Figure 7, Figure 9, and Figure 11 show sampling data from 2005 through the second quarter of CY 2012. There has been no flow at GS03 since May 23, 2012.



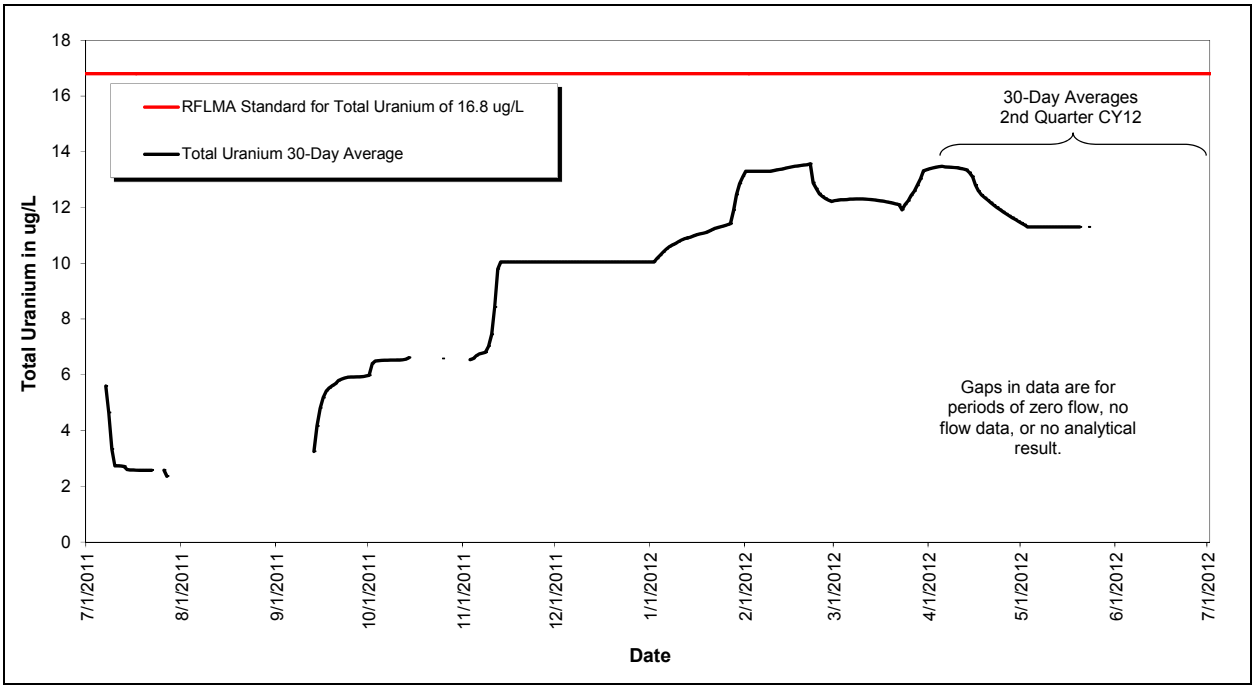
As of this report, the composite sample started on June 6, 2012, was still in progress.
pCi/L = picocuries per liter

Figure 6. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS03: Calendar Year Ending Second Quarter CY 2012



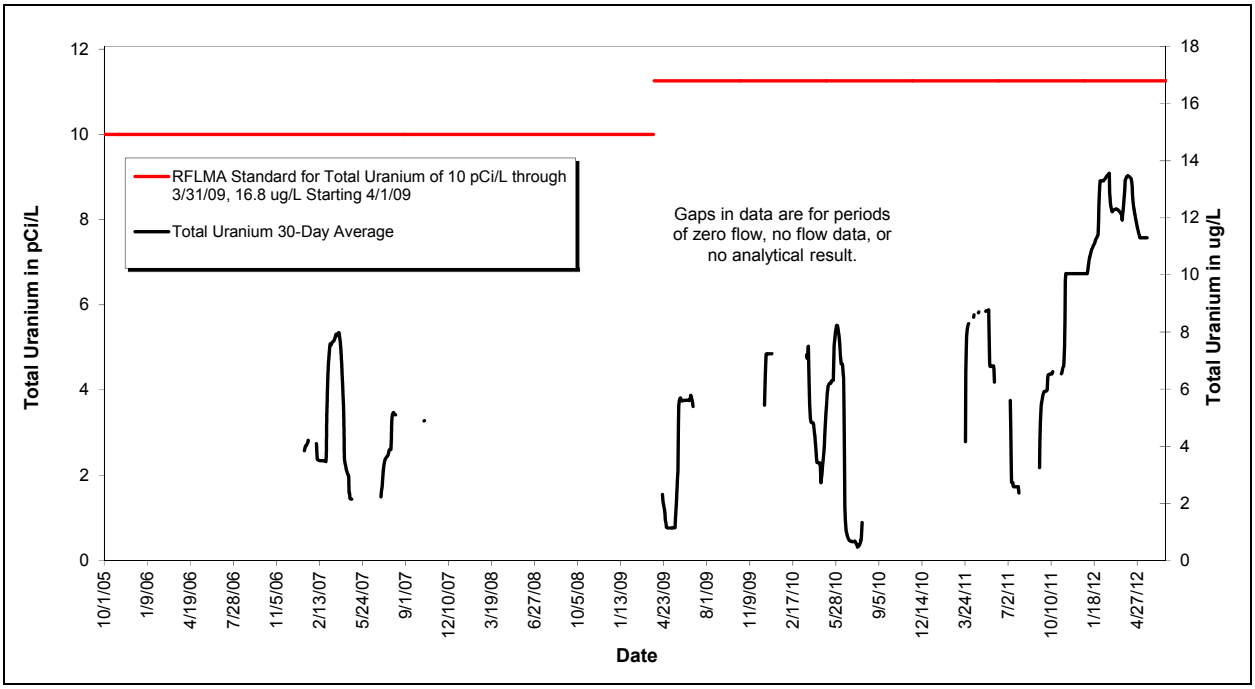
As of this report, the composite sample started on June 6, 2012, was still in progress.
pCi/L = picocuries per liter

Figure 7. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS03: Post-Closure Period Ending Second Quarter CY 2012



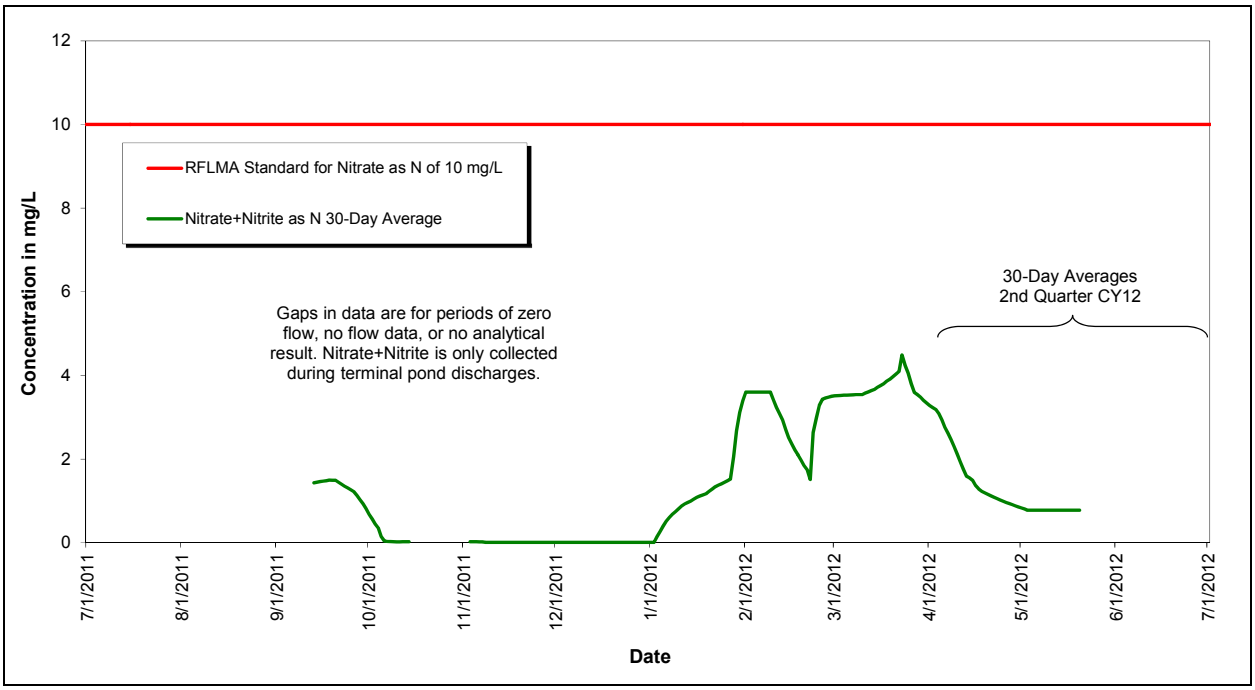
As of this report, the composite sample started on June 6, 2012, was still in progress.
µg/L = micrograms per liter

Figure 8. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS03: Calendar Year Ending Second Quarter CY 2012



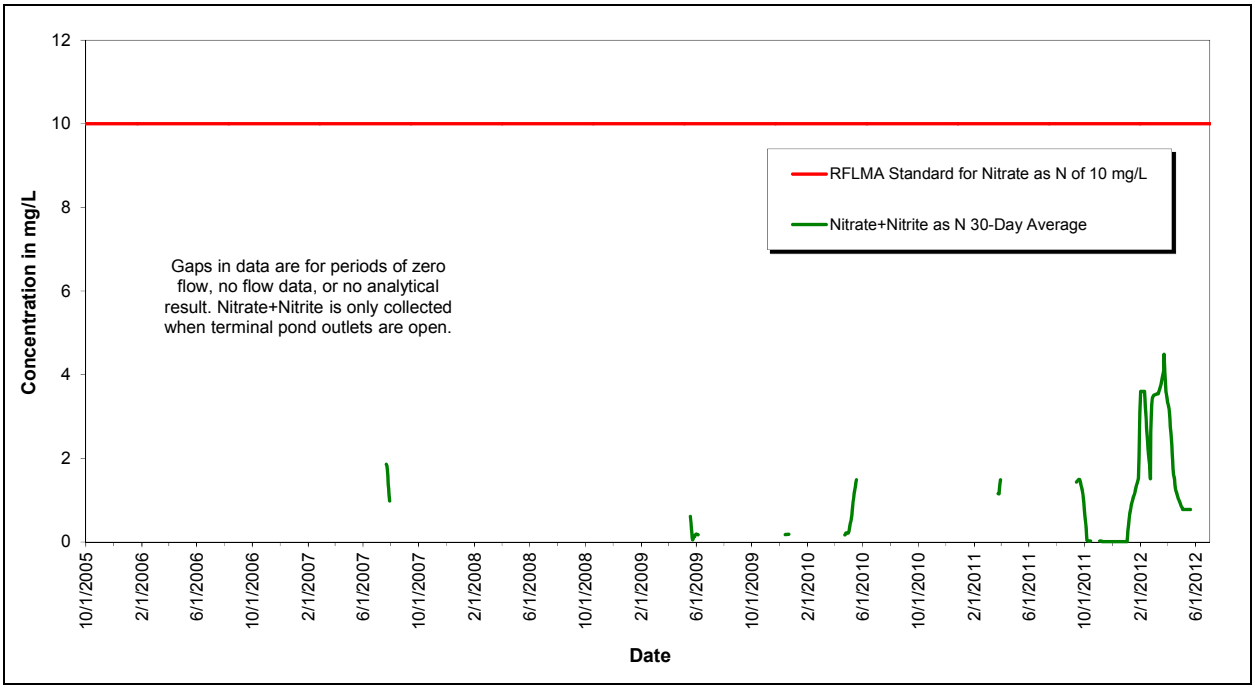
As of this report, the composite sample started on June 6, 2012, was still in progress.
µg/L = micrograms per liter
pCi/L = picocuries per liter

Figure 9. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS03: Post-Closure Period Ending Second Quarter CY 2012



mg/L = milligrams per liter

Figure 10. Volume-Weighted 30-Day Average Nitrate + Nitrite as Nitrogen Concentrations at GS03: Calendar Year Ending Second Quarter CY 2012



mg/L = milligrams per liter

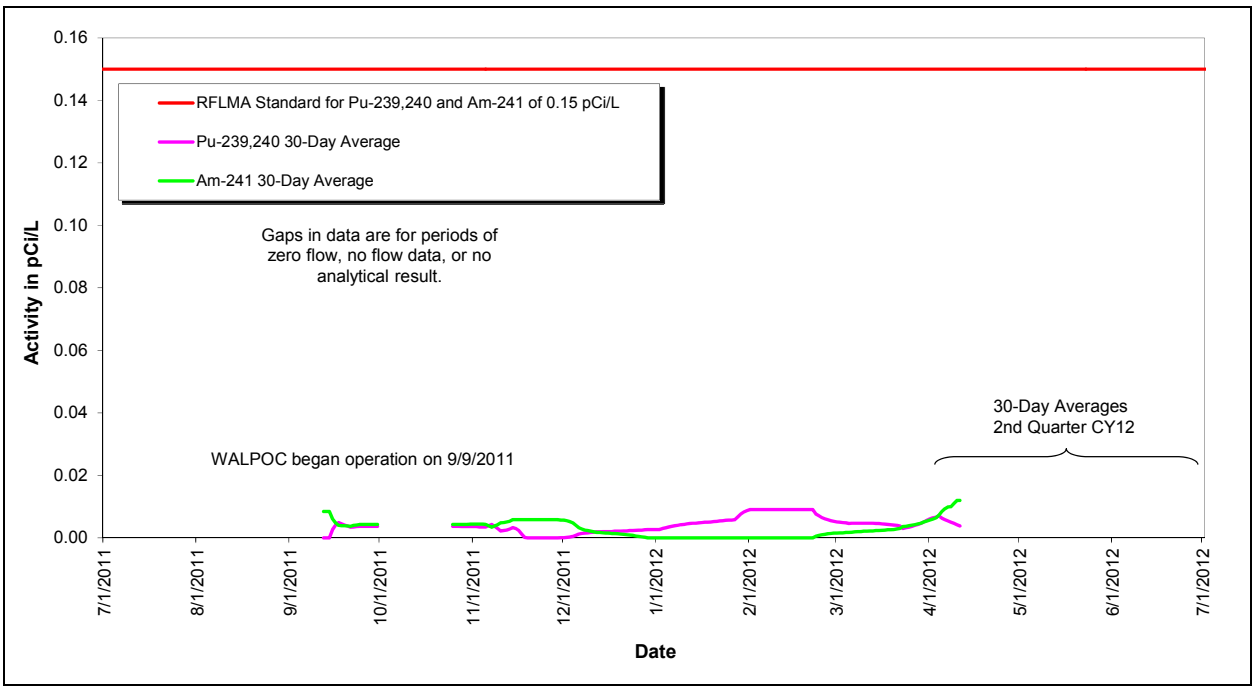
Figure 11. Volume-Weighted 30-Day Average Nitrate + Nitrite as Nitrogen Concentrations at GS03: Post-Closure Period Ending Second Quarter CY 2012

3.1.2.3 Monitoring Location WALPOC

Monitoring location WALPOC is on Walnut Creek at the eastern COU boundary. Figure 12 through Figure 17 show no occurrences of reportable 12-month rolling or 30-day averages for the quarter using the available data. There has been no flow at WALPOC since May 26, 2012.

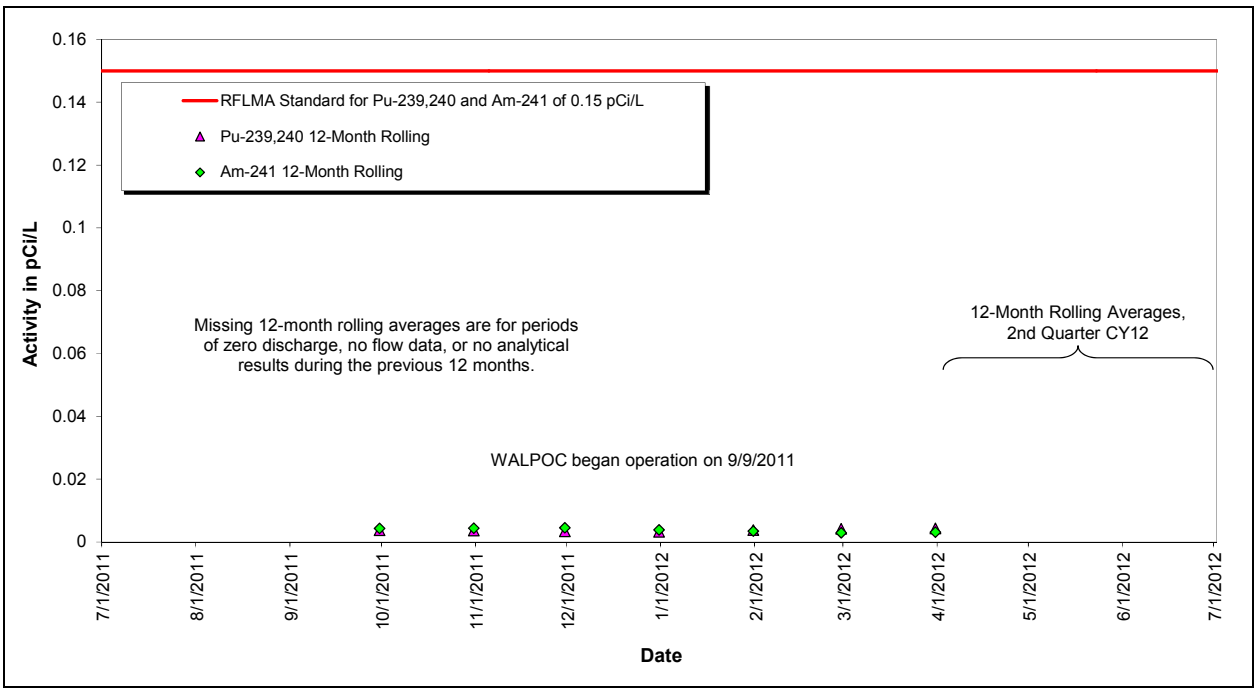
WALPOC began operation as a RFLMA POC on September 9, 2011. The first flow was observed (and sample collection began) at WALPOC on September 12, 2011. Therefore, based on routine data evaluation protocols, a 12-month rolling average cannot be formally calculated until at least 1 calendar year has elapsed from the date WALPOC began operation as a RFLMA POC. Since WALPOC began operation as a POC on September 9, 2011, the first formal 12-month rolling average will be calculated on September 30, 2012.[2] Therefore, the values shown here for WALPOC are for information only and use only the available data.

[2] Individual 12-month rolling average values are only calculated for the last day of each month.



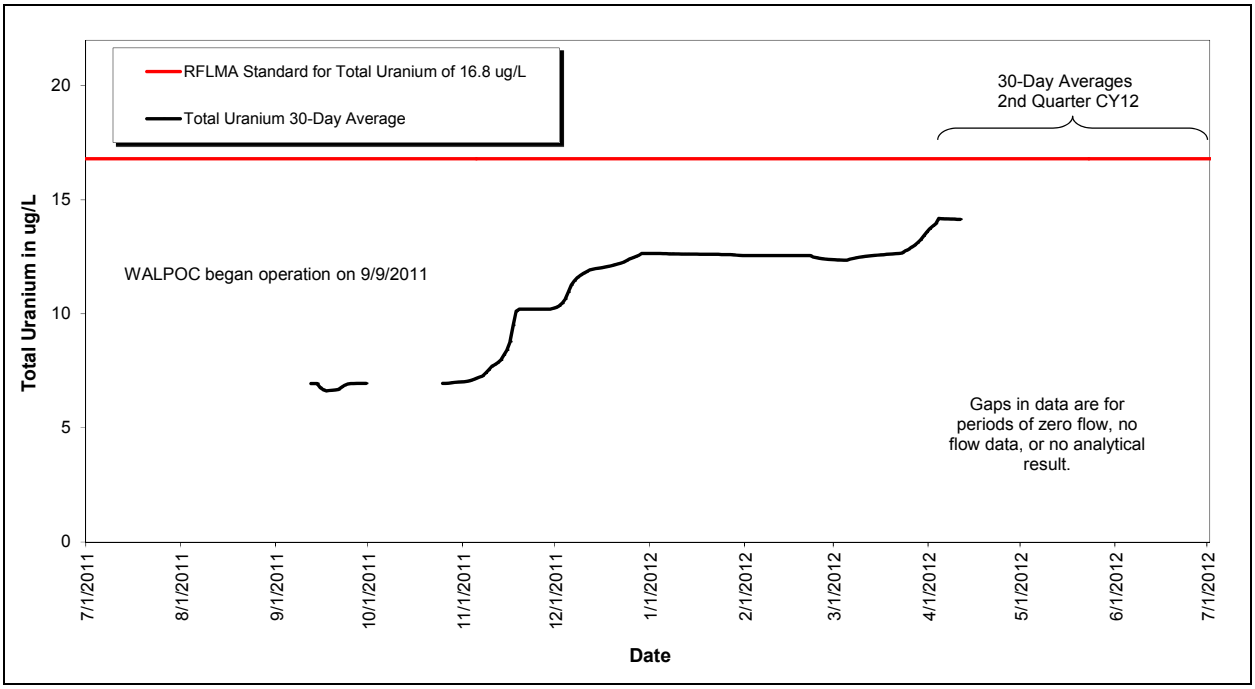
As of this report, the composite sample started on April 13, 2012, was still in progress.
pCi/L = picocuries per liter

Figure 12. Volume-Weighted 30-Day Average Plutonium and Americium Activities at WALPOC: Calendar Year Ending Second Quarter CY 2012



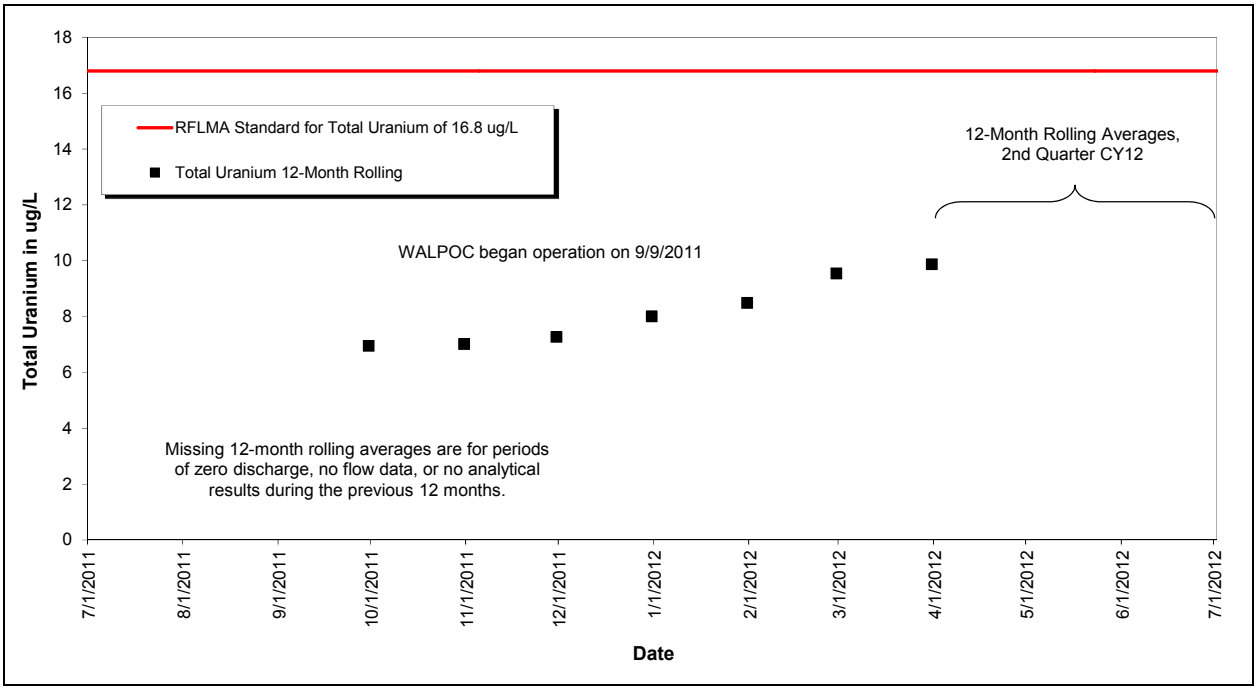
As of this report, the composite sample started on April 13, 2012, was still in progress.
pCi/L = picocuries per liter

Figure 13. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at WALPOC: Calendar Year Ending Second Quarter CY 2012



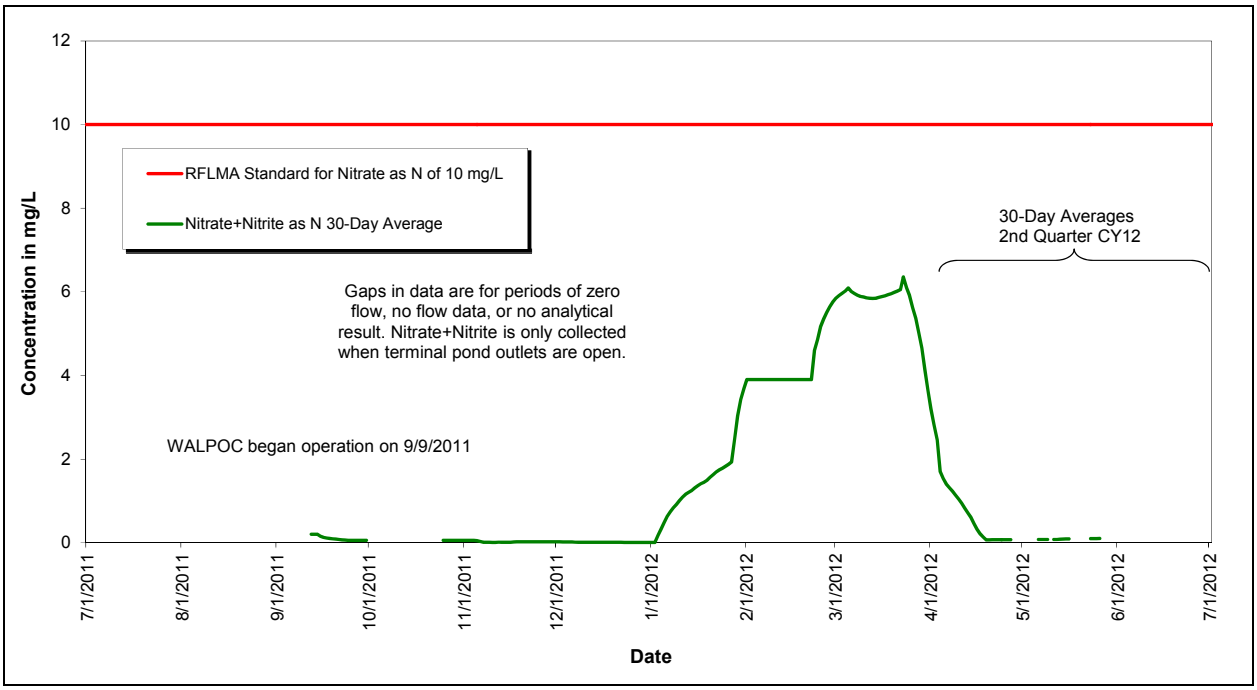
As of this report, the composite sample started on April 13, 2012, was still in progress.
µg/L = micrograms per liter

Figure 14. Volume-Weighted 30-Day Average Total Uranium Concentrations at WALPOC: Calendar Year Ending Second Quarter CY 2012



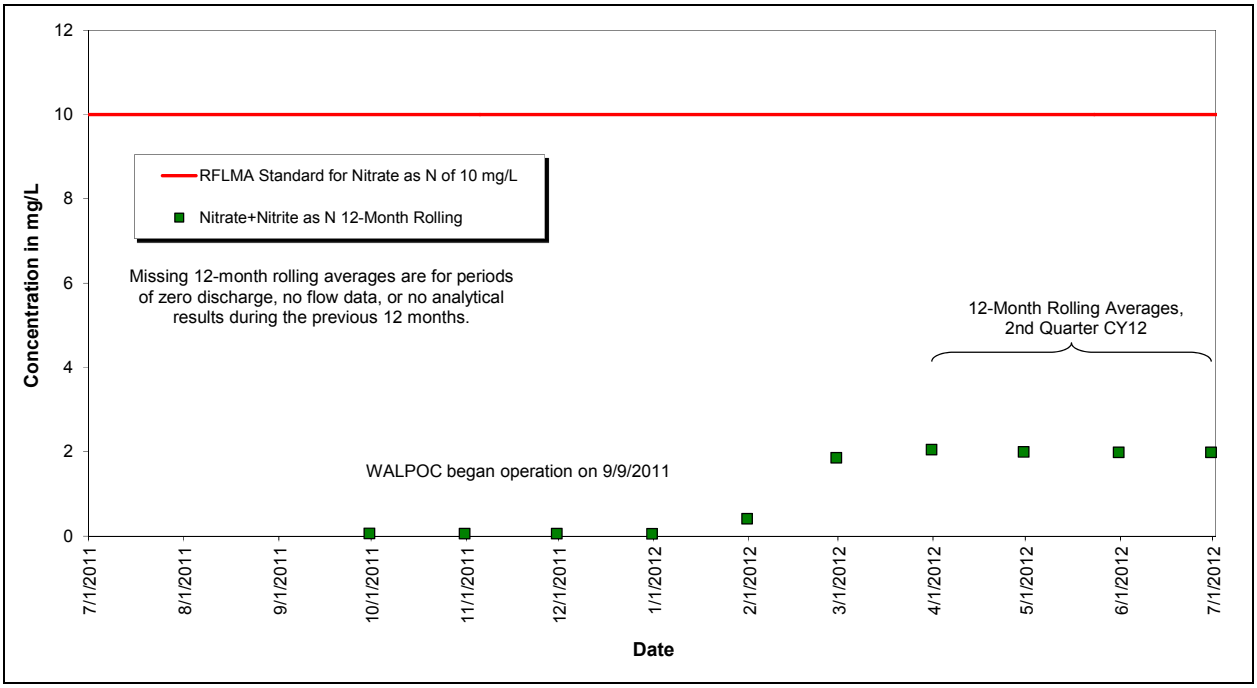
As of this report, the composite sample started on April 13, 2012, was still in progress.
µg/L = micrograms per liter

Figure 15. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at WALPOC: Calendar Year Ending Second Quarter CY 2012



mg/L = milligrams per liter

Figure 16. Volume-Weighted 30-Day Average Nitrate + Nitrite as Nitrogen Concentrations at WALPOC: Calendar Year Ending Second Quarter CY 2012



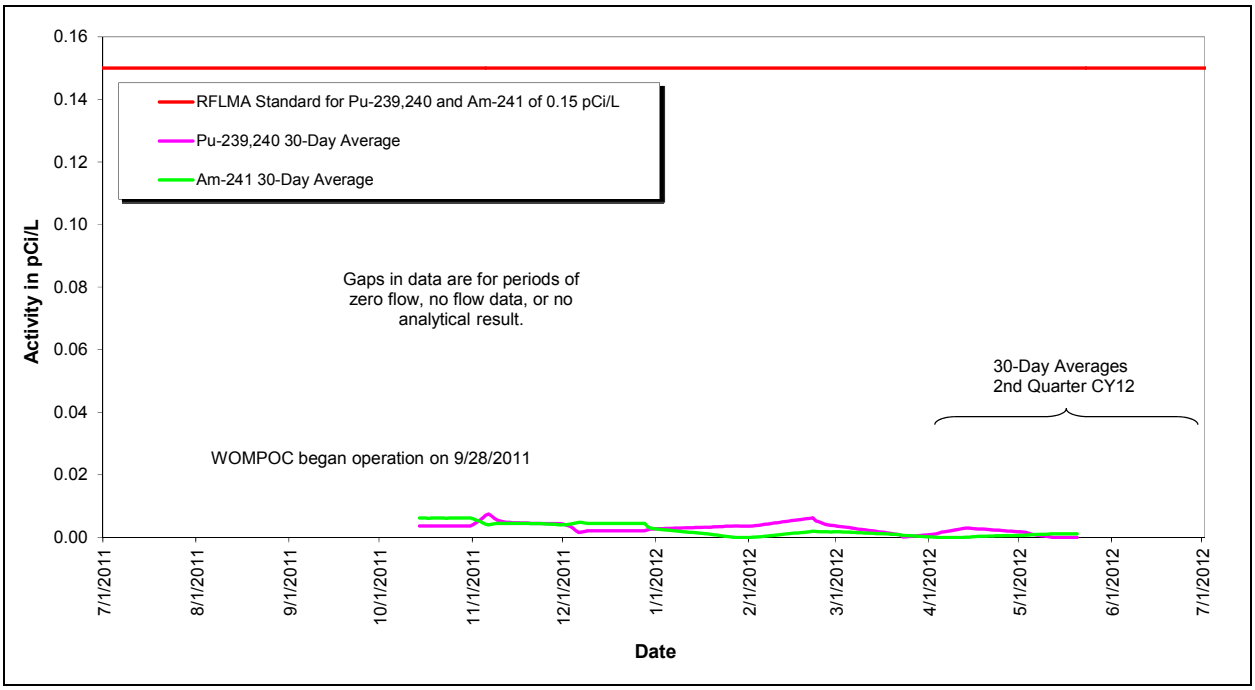
Nitrate + nitrite as nitrogen 12-month averages are conservatively compared to the nitrate standard only.
mg/L = milligrams per liter

Figure 17. Volume-Weighted 12-Month Rolling Average Nitrate + Nitrite as Nitrogen Concentrations at WALPOC: Calendar Year Ending Second Quarter CY 2012

3.1.2.4 Monitoring Location WOMPOC

Monitoring location WOMPOC is on Woman Creek at the eastern COU boundary. Figure 18 through Figure 21 show no occurrences of reportable 12-month rolling or 30-day averages for the quarter using the available data. There has been no flow at WOMPOC since June 10, 2012.

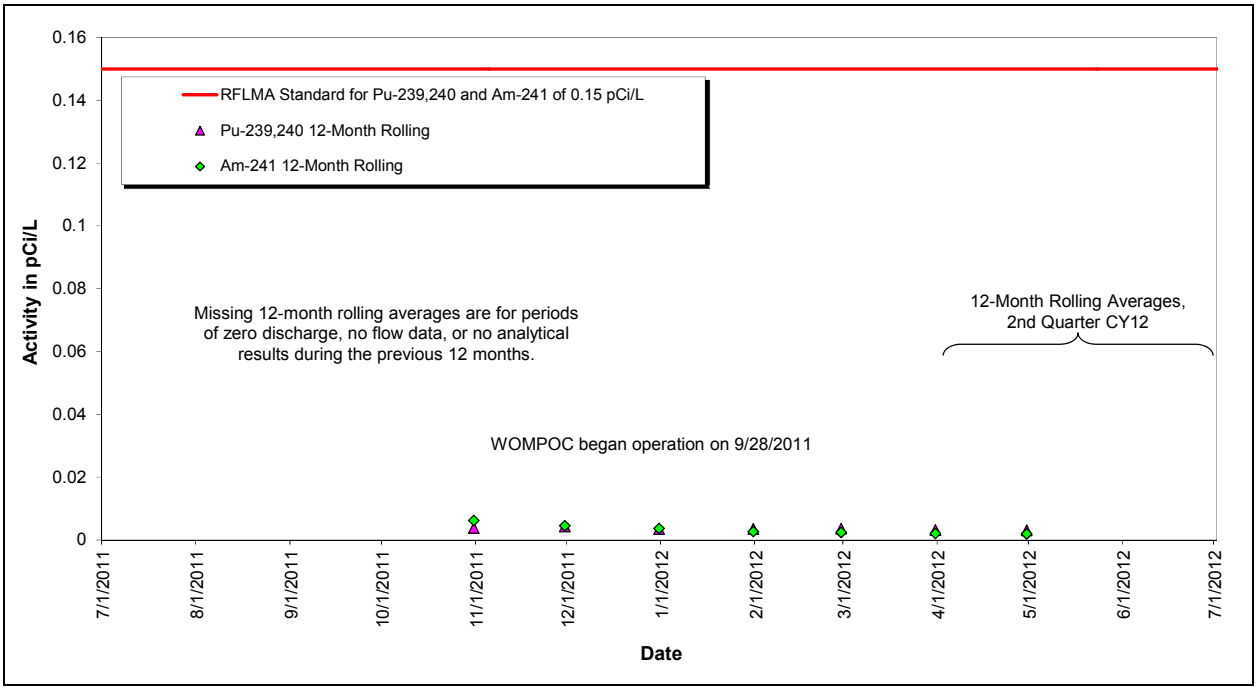
WOMPOC began operation as a RFLMA POC on September 28, 2011. The first flow was observed (and sample collection began) at WOMPOC on October 14, 2011. Therefore, based on routine data evaluation protocols, a 12-month rolling average cannot be formally calculated until at least 1 calendar year has elapsed from the date WOMPOC began operation as a RFLMA POC. Since WOMPOC began operation as a POC on September 28, 2011, the first formal 12-month rolling average will be calculated on September 30, 2012.[3] Therefore, the values shown here for WOMPOC are for information only and use only the available data.



As of this report, the composite sample started on May 21, 2012, was still in progress.
pCi/L = picocuries per liter

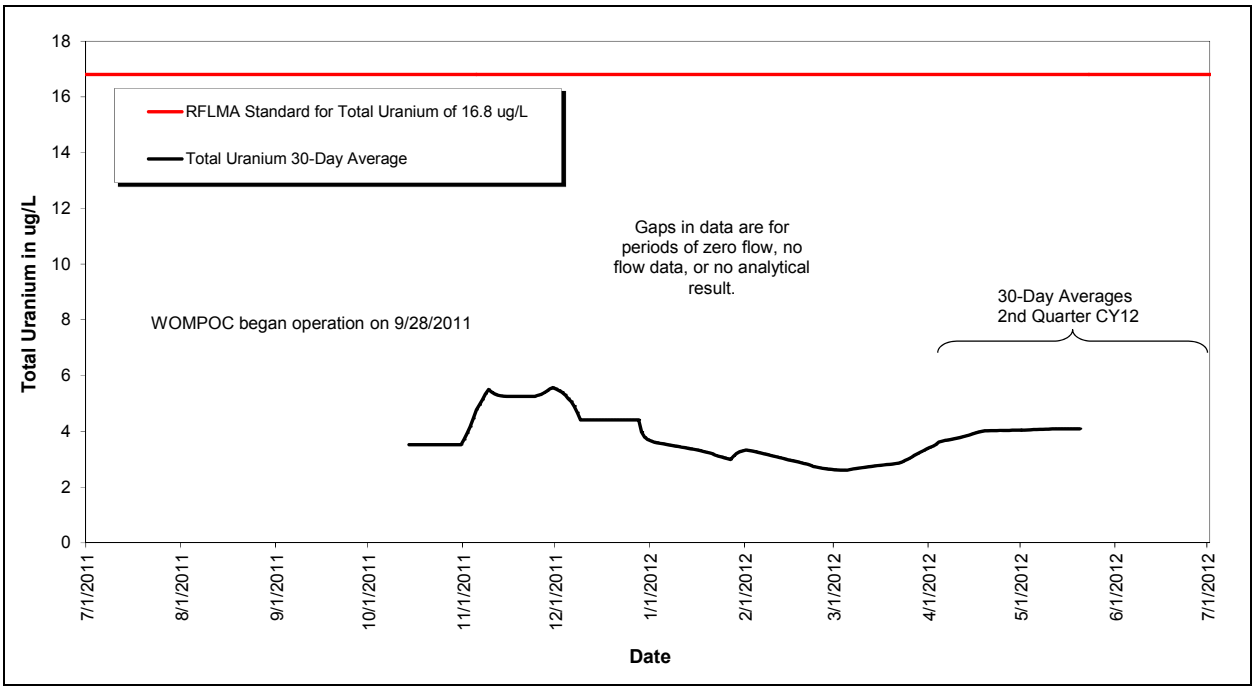
Figure 18. Volume-Weighted 30-Day Average Plutonium and Americium Activities at WOMPOC: Calendar Year Ending Second Quarter CY 2012

[3] Individual 12-month rolling average values are calculated using only the last day of each month.



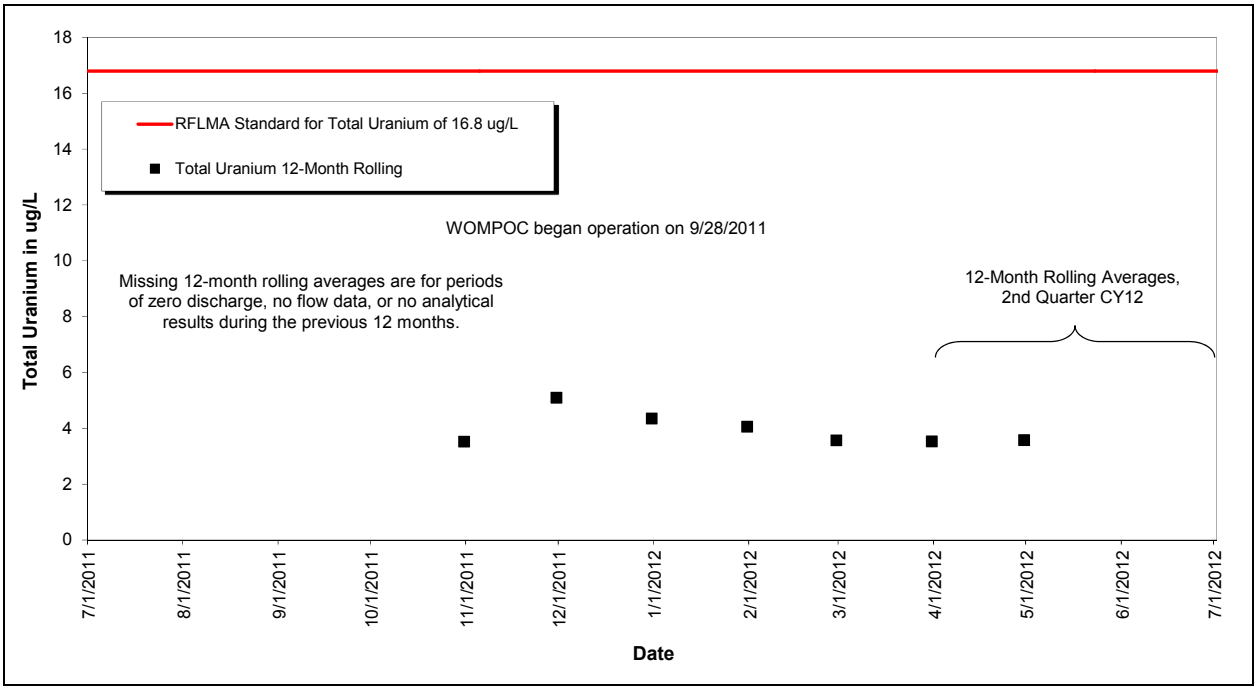
As of this report, the composite sample started on May 21, 2012, was still in progress.
pCi/L = picocuries per liter

Figure 19. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at WOMPOC: Calendar Year Ending Second Quarter CY 2012



As of this report, the composite sample started on May 21, 2012, was still in progress.
µg/L = micrograms per liter

Figure 20. Volume-Weighted 30-Day Average Total Uranium Concentrations at WOMPOC: Calendar Year Ending Second Quarter CY 2012



As of this report, the composite sample started on May 21, 2012, was still in progress.
µg/L = micrograms per liter

Figure 21. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at WOMPOC: Calendar Year Ending Second Quarter CY 2012

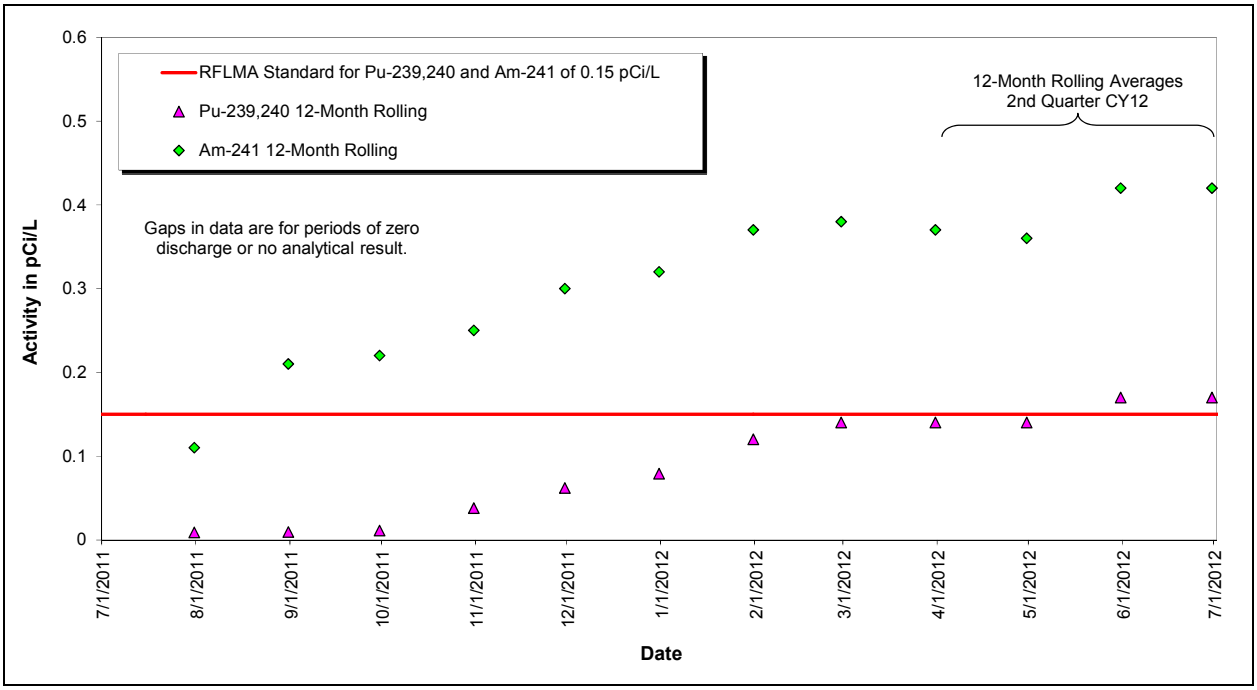
3.1.3 POE Monitoring

The following sections include summary plots showing the applicable 12-month rolling averages for the POE analytes.

3.1.3.1 Monitoring Location GS10

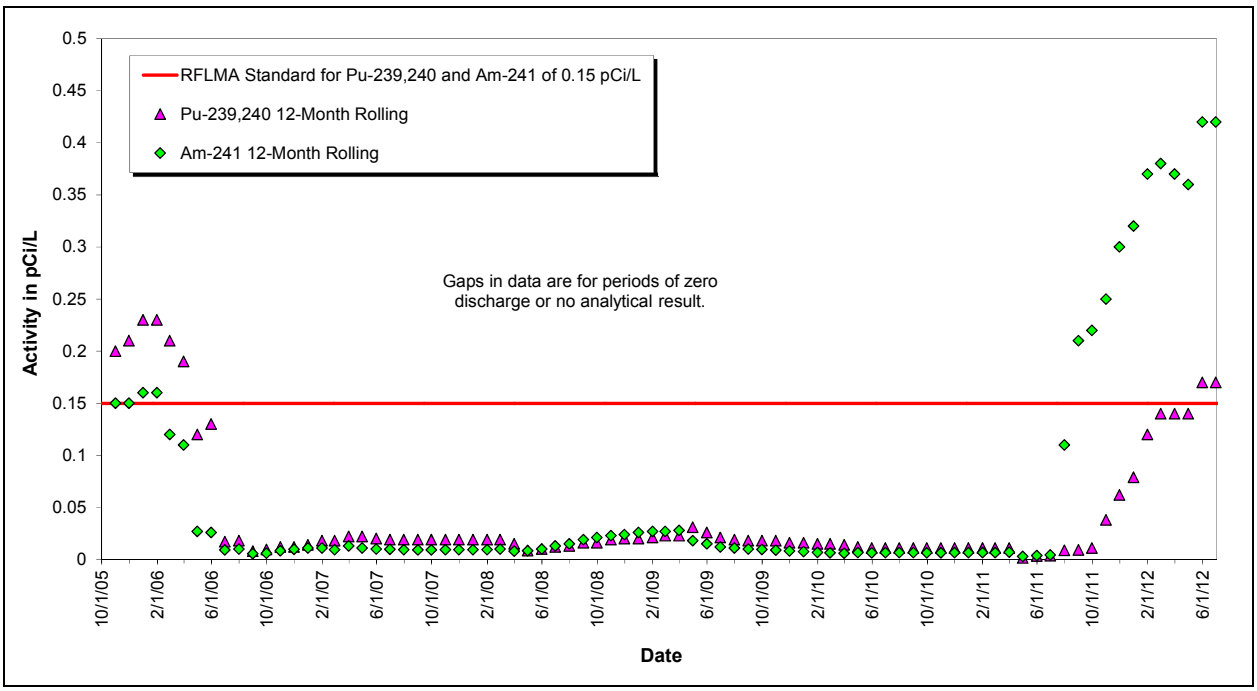
Monitoring location GS10 is on South Walnut Creek just upstream of the B-Series ponds. Figure 22 and Figure 24 show the 12-month rolling averages for Pu, Am, and total uranium values during the quarter. Figure 23 and Figure 25 show sampling data from 2005 through the second quarter of CY 2012.

Reportable 12-month rolling average uranium concentrations were observed starting on April 30, 2011, in surface water at RFLMA POE monitoring station GS10. Reportable 12-month rolling average Am and Pu activities were also observed starting on August 31, 2011, and May 31, 2012, respectively. As of the end of the second quarter of CY 2012, these three analytes were still reportable. No other analytes were reportable during the second quarter of CY 2012.



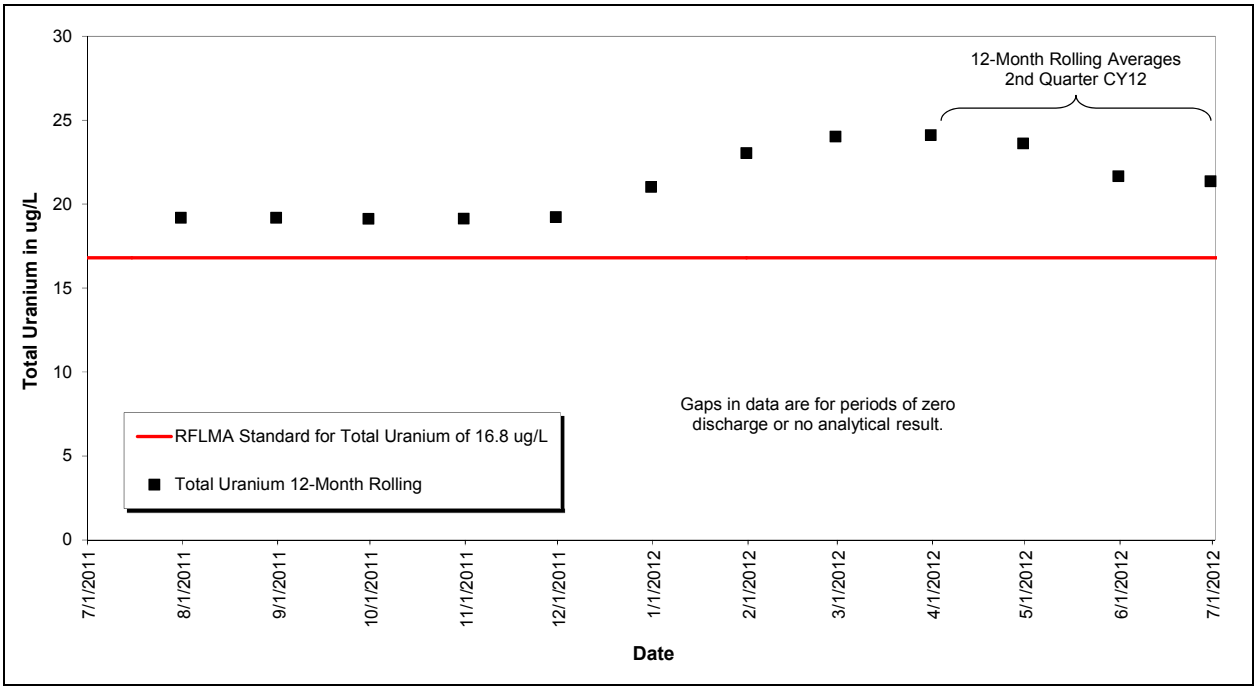
pCi/L = picocuries per liter

Figure 22. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS10: Calendar Year Ending Second Quarter CY 2012



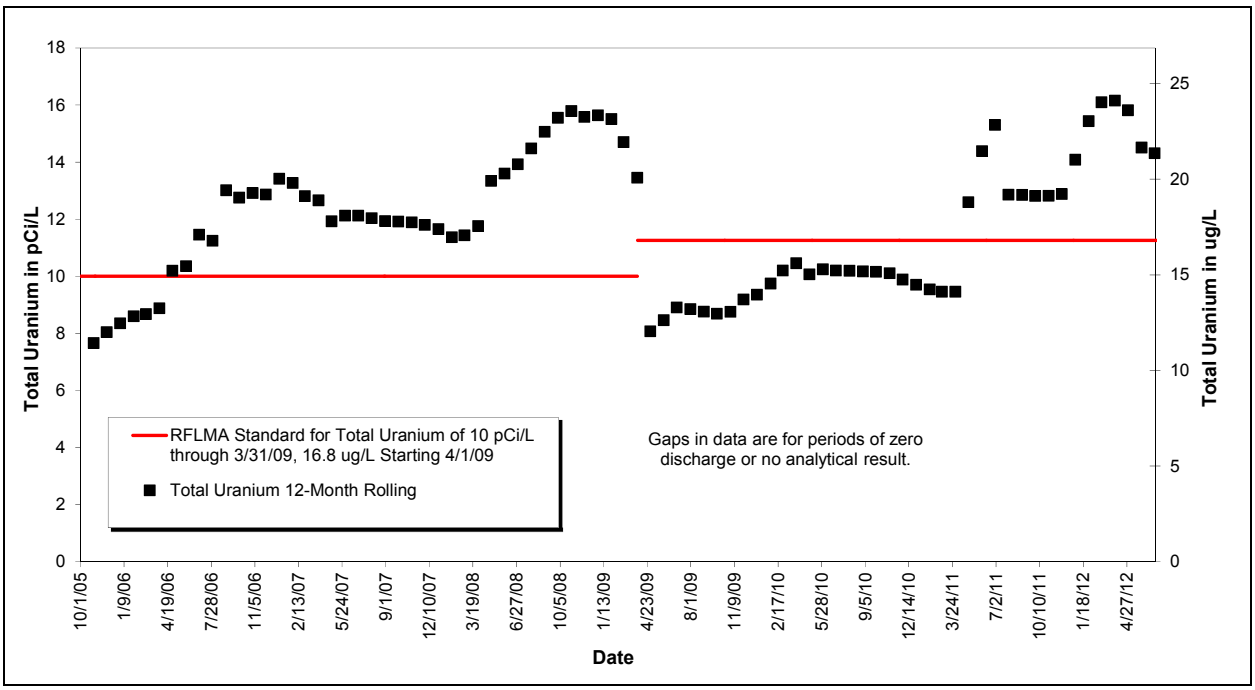
pCi/L = picocuries per liter

Figure 23. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS10: Post-Closure Period Ending Second Quarter CY 2012



µg/L = micrograms per liter

Figure 24. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS10: Calendar Year Ending Second Quarter CY 2012



µg/L = micrograms per liter
pCi/L = picocuries per liter

Figure 25. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS10: Post-Closure Period Ending Second Quarter CY 2012

The composite sampling results for plutonium, americium, and uranium from composite samples collected at GS10 during 2011–2012 are given in Table 1.

Table 1. CY 2012 Composite Sampling Results at GS10

Date-Time Start	Date-Time End	Am-241 Result (pCi/L)	Pu-239, 240 Result (pCi/L)	Uranium Result (µg/L)
1/3/2011–10:25	2/16/2011–9:47	0.000	0.000	21.8
2/16/2011–9:47	4/11/2011–10:50	0.000	0.013	89.2
4/11/2011–10:50	5/4/2011–11:39	0.023	0.021	71.0
5/4/2011–11:39	5/13/2011–12:25	0.019	0.017	46.5
5/13/2011–12:25	5/20/2011–12:03	0.003	0.007	18.6
5/20/2011–12:03	6/3/2011–10:56	0.004	0.001	35.8
6/3/2011–10:56	6/13/2011–10:22	0.015	0.000	20.1
6/13/2011–10:22	7/1/2011–9:00	0.010	0.004	10.6
7/1/2011–9:00	7/8/2011–11:08	0.008	0.008	7.75
7/8/2011–11:08	7/10/2011–11:05	0.015	0.005	4.36
7/10/2011–11:05	7/11/2011–10:59	0.020	0.011	6.06
7/11/2011–10:59	7/21/2011–8:56	0.058	0.037	11.3
7/21/2011–8:56	8/24/2011–9:41	3.490	[a]	7.82
8/24/2011–9:41	9/29/2011–12:35	0.044	0.020	8.16
9/29/2011–12:35	10/25/2011–10:27	0.877	0.658	8.24
10/25/2011–10:27	11/17/2011–10:40	0.904	0.405	16.5
11/17/2011–10:40	12/14/2011–12:17	0.349	0.189	16.4
12/14/2011–12:17	1/5/2012–13:19	0.435	0.238	44.5
1/5/2012–13:19	1/23/2012–10:43	1.140	0.735	49.7
1/23/2012–10:43	2/2/2012–12:36	0.037	0.021	38.3
2/2/2012–12:36	2/21/2012–11:18	0.776	0.466	49.0
2/21/2012–11:18	2/24/2012–9:34	0.214	0.267	25.1
2/24/2012–9:34	3/6/2012–12:04	0.074	0.050	33.9
3/6/2012–12:04	3/21/2012–9:37	0.150	0.114	38.7
3/21/2012–9:37	4/4/2012–10:20	0.318	0.246	35.5
4/4/2012–10:20	4/25/2012–9:31	0.052	0.034	27.6
4/25/2012–9:31	5/9/2012–13:36	0.478	0.264	16.1
5/9/2012–13:36	5/23/2012–9:37	0.159	0.107	12.9
5/23/2012–9:37	6/14/2012–10:08	0.034	0.033	8.98
6/14/2012–10:08	7/9/2012–11:53	0.085	0.049	4.68
7/9/2012–11:53	7/26/2012–8:58	0.224	0.173	7.07
7/26/2012–8:58	in progress	[b]	[b]	[b]

Recent results from the third quarter of CY 2012 are not yet validated and are subject to revision.
[a] Through data validation, results determined to be unusable
[b] Sample in progress
mg/L = milligrams per liter
pCi/L = picocuries per liter

Reportable Americium and Plutonium Activities at GS10

Formal notification of a reportable condition for 12-month rolling average americium values at GS10 was made on December 12, 2011. Formal notification of a reportable condition for 12-month rolling average plutonium values at GS10 was made on July 24, 2012.

The above notifications were triggered by routine data evaluation performed in accordance with RFLMA Attachment 2, Figure 6, "Points of Evaluation," which resulted in 12-month rolling

average values for Am of 0.21 picocuries per liter (pCi/L) on August 31, 2011, and 0.22 pCi/L on September 30, 2011. As of June 30, 2012, using validated data, the 12-month rolling average for Am remained above the standard at 0.42 pCi/L. Similarly, data evaluation resulted in a 12-month rolling average value for Pu of 0.17 pCi/L on May 31, 2012. As of June 30, 2012, using validated data, the 12-month rolling average for Pu remained above the standard at 0.17 pCi/L. The applicable RFLMA Table 1 standard for Am and Pu is 0.15 pCi/L.

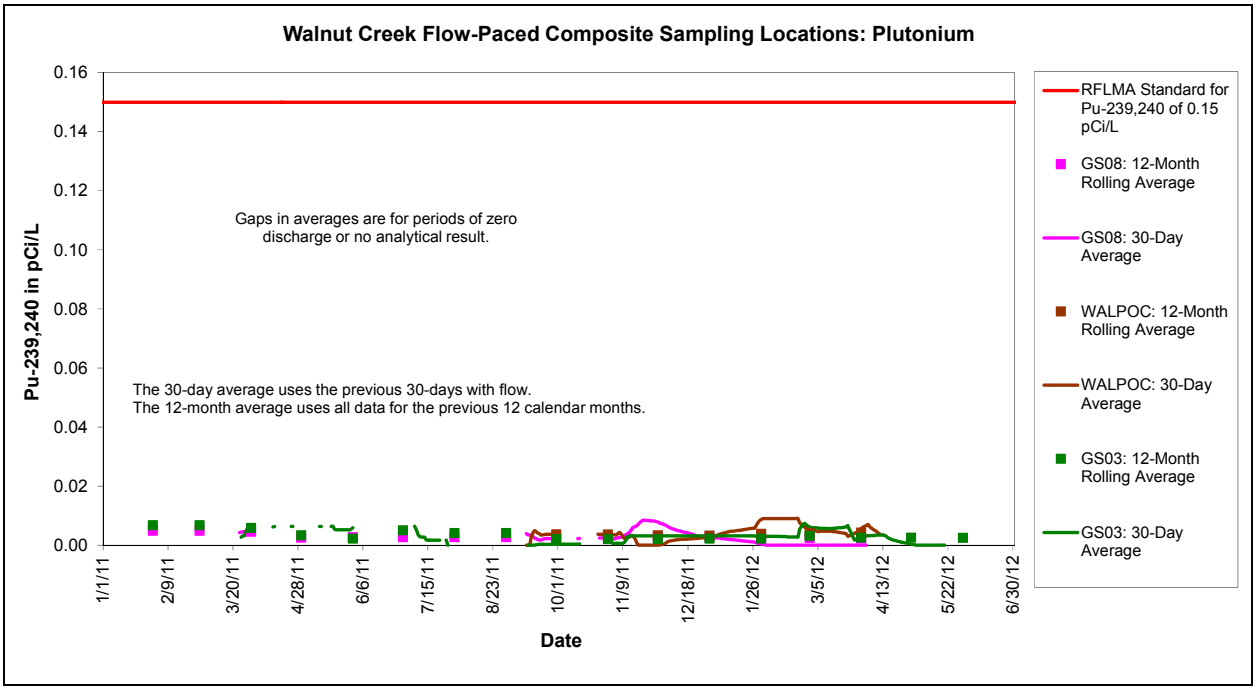
Downstream monitoring at GS08, WALPOC, and GS03 continue to show Pu and Am activities well below the RFLMA standard of 0.15 pCi/L. Recent analytical results at downstream locations are given in Table 2. The latest available 12-month rolling and 30-day average Pu/Am activities calculated from flow-paced composite samples are shown on Figure 26 and Figure 27.

An aliquot from each flow-paced composite sample routinely being collected at B5INFLOW (supporting the GS10 uranium evaluation; Figure 28) is also being held for Pu and Am analysis if upstream sample results at GS10 suggest analysis would inform the evaluation. To date, five Pu/Am results have been obtained and all results are well below the RFLMA standard of 0.15 pCi/L. The highest single result is 0.01 pCi/L Pu for the April 13–May 21, 2012, composite sample.

Table 2. Recent Pu and Am Flow-Paced Composite Sample Results

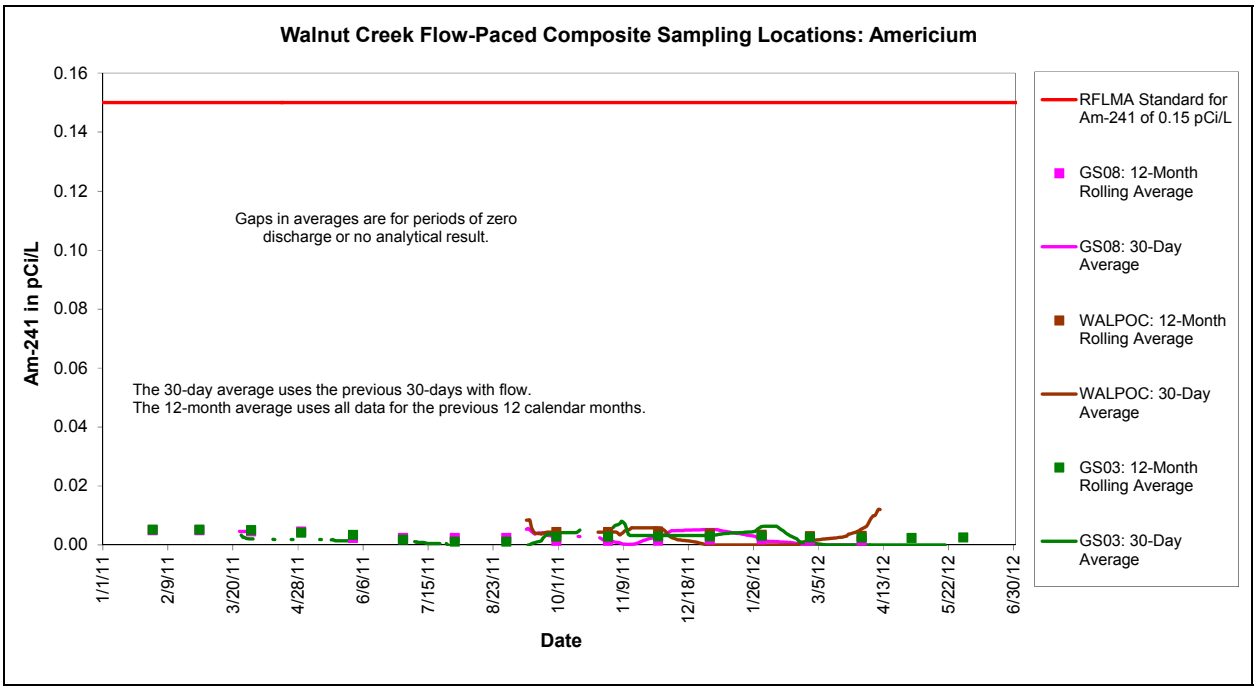
GS08		WALPOC		GS03	
Sample Period	**Result Am/Pu (pCi/L)**	**Sample Period**	**Result Am/Pu (pCi/L)**	**Sample Period**	**Result Am/Pu (pCi/L)**
3/24–3/26/11	0.002/0.003			3/24–3/26/11	0.0/0.002
3/26–3/28/11	0.002/0.004			3/26–3/28/11	0.002/0.003
3/28–3/30/11	0.003/0.0			3/28–3/31/11	0.001/0.011
				3/31–5/20/11	0.002/0.007
				5/20–9/12/11	0.0/0.0
9/12–9/15/11	0.002/0.002	9/12–9/15/11	0.008/0.0	9/12–9/15/11	0.0/0.0
9/15–9/18/11	0.001/0.0	9/15–9/18/11	0.0/0.009	9/15–9/18/11	0.002/0.0
9/18–9/21/11	0.0/0.0	9/18–9/22/11	0.003/0.0	9/18–9/22/11	0.003/0.001
9/21–9/27/11	0.0/0.005	9/22–9/27/11	0.006/0.004	9/22–9/27/11	0.009/0.0
9/27–11/9/11	0.0/0.009	9/27–11/30/11	0.006/0.0	9/27/11–1/3/12	0.003/0.003
11/9–11/29/11	0.005/0.008				
11/29/11–1/5/12	0.005/0.003	11/30/11–1/3/12	0.0/0.003		
1/5–2/1/12	0.001/0.0	1/3–2/23/12	0.0/0.009	1/3–2/10/12	0.006/0.003
2/1–4/4/12	0.0/0.0			2/10–2/23/12	0.0/0.003
		2/23–3/6/12	0.003/0.001	2/23–2/27/12	0.0/0.012
				2/27–3/1/12	0.0/0.0
		3/6–3/21/12	0.004/0.009	3/1–3/15/12	0.0/0.002
		3/21-4/13/12	0.018/0.0	3/15–4/4//12	0.0/0.005
4/4/12–	[a]	4/13/12–	[a]	4/4–6/6/12	0.0/0.0
				6/6/12–	[a]

Some results are preliminary and subject to revision; negative results are set to zero.
[a] Sample in progress



Plot includes data that are preliminary and subject to revision.
Values for 12-month and 30-day averages shown here are presented for comparison purposes only.

Figure 26. Average Plutonium Activities at Locations Downstream of GS10



Plot includes data that are preliminary and subject to revision.
Values for 12-month and 30-day averages shown here are presented for comparison purposes only.

Figure 27. Average Americium Activities at Locations Downstream of GS10

The very dry conditions observed during late spring and summer of 2012 have made it all but impossible to collect additional water samples. Although further evaluation and consultation is ongoing, the following list summarizes action to date:

- Rocky Flats staff walked down the GS10 drainage on November 16, 2011, to see if any obvious conditions were promoting potential soil erosion. Some thin vegetation spots were noted on the north side of the riprap upstream of GS10. Some reseeding/erosion matting could be applied in spots, and a map of the areas to be addressed will be prepared. A closer examination of the drainage to focus on seeps and former utility corridors was conducted on November 22, 2011; representatives from DOE and EPA were in attendance. Additional seed was spread and raked into the ground along the riprap areas upstream of GS10 in FC-4 and at the confluence of FC-4/FC-5 on November 29, 2011.
- Historical Pu and Am well data from wells in the drainage have been reviewed. The review gave no indication that additional well sampling would be informative at this stage.
- The previous GS10 evaluation reports have been reviewed for information that may aid this current evaluation.
- Several of the sampling locations already designated for evaluation of the reportable condition for uranium at GS10 (FC4991, GS10, and B3OUTFLOW; Figure 28) were grab-sampled on November 25, 2011. Several seep sampling locations (SEEP995, SEEP995A, SEEP995B, and SEEP995C; Figure 28) were also grab-sampled on November 25, 2011. The Seep 995 area was chosen for sampling for the following reasons:
  - GS10 samples with elevated Pu/Am were collected during low-flow conditions, not during high-flow conditions when soil/sediment would be expected to be transported.
  - Visible surface flow from this seep was observed reaching FC-4.
  - This seep, which has increased in size since closure, is in the same location of the former Wastewater Treatment Plant outfall and a former utility corridor that included Original Process Waste Lines.

  The results in Table 3 suggest that the SEEP995 locations could be contributing Pu and Am to GS10. However, activities at GS10 for this grab sample are low.

Table 3. Grab Sampling Results Upstream of GS10: November 25, 2011

Location Code	SEEP995	SEEP995A	SEEP995B	SEEP995C
Pu [pCi/L]	0.096	0.156	0.157	0.105
Am [pCi/L]	0.066	0.127	0.035	0.052

	Upstream	➡	**Downstream**
Location Code	FC4991	GS10	B3OUTFLOW
Pu [pCi/L]	0.006	0.030	0.005
Am [pCi/L]	0.005	0.012	0.005

The arrow from the upper table indicates the relative location of the SEEP995 locations along FC-4.

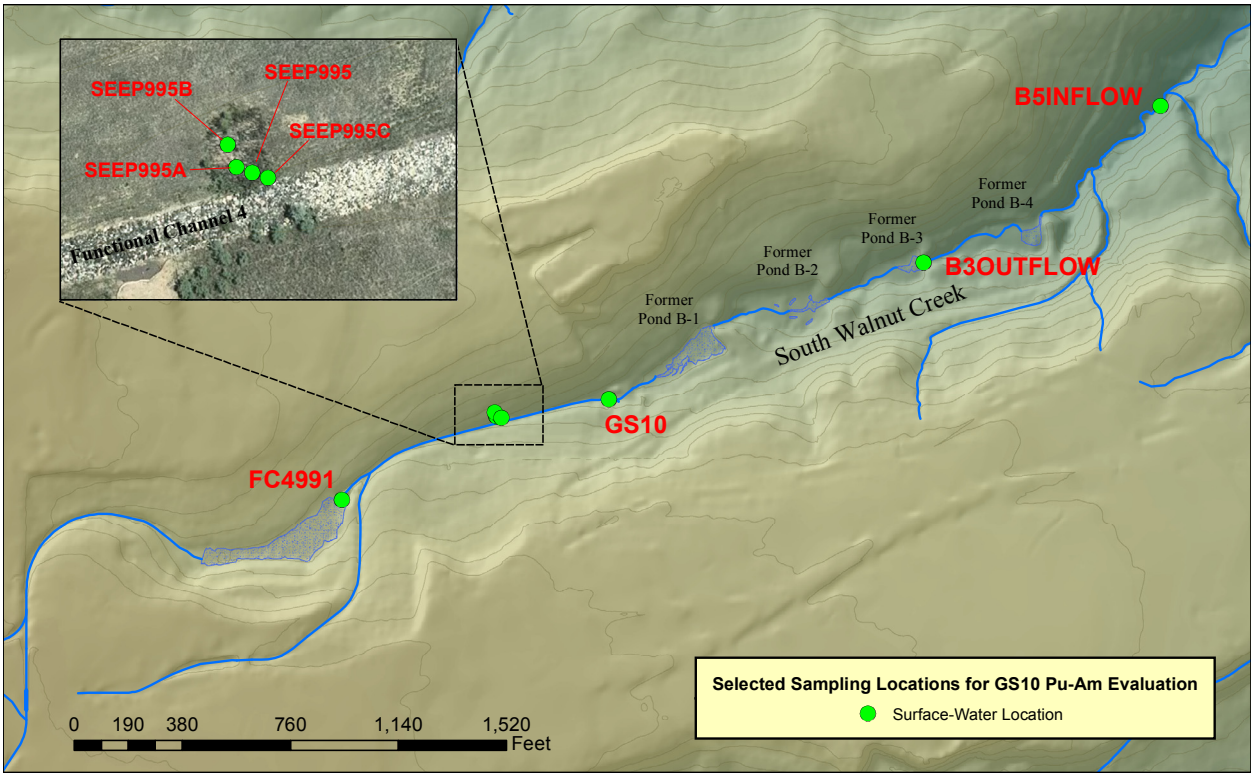


Figure 28. Pu/Am Evaluation Sampling Location Map for GS10 Drainage Area

- Additional samples have been periodically collected at SEEP995A when water was available (i.e., unfrozen seep flow not affected by surface flow such as snowmelt). Samples were collected on January 6, January 24, and April 13, 2012. For the January 24 sample, analysis was performed for total Pu/Am (unfiltered) and also for filtered Pu/Am (sample filtered with 0.45-micron filter) to evaluate for the possibility of colloidal transport. Table 4 shows some measurable activity for the January 6 and April 13 samples. However, the low activities for the January 24 samples do not provide additional insight into the possibility of colloidal transport.

Table 4. Grab Sampling Results from SEEP995A

SEEP995A	1/6/12 (total)	1/24/12 (total)	1/24/12 (filtered)	4/13/12 (total)
Pu [pCi/L]	0.079	0.007	0.000	0.052
Am [pCi/L]	0.052	0.000	0.000	0.040
U [ug/L]	12.3	13.7	NA	7.8

NA = not analyzed

- To evaluate whether there could be other seep-related contributions along FC-4 that are not visible due to the thick riprap, several sampling locations were established along FC-4 where water could be reached between the rock (Figure 29). These locations were grab-sampled on March 6, 2012, for both total and filtered analytes.

  The results in Table 5 show low Pu and Am activities and no significant spatial trends for any of the analytes.

Table 5. Grab Sampling Results in FC-4 Upstream of GS10: March 6, 2012

Location Code	SEEP995A
Pu [pCi/L]	0.004
Am [pCi/L]	0.003
U [ug/L]	11.2
Alk as CaCO3 [mg/L]	143
Hardness as CaCO3 [mg/L]	384
pH	7.84@4.1C
TSS [mg/L]	6

	Upstream	➡	➡	Downstream
Location Code	FC4988	FC4995	FC4997	FC4EFF
Pu [pCi/L]	0.026	0.000	0.007	0.004
Am [pCi/L]	0.002	0.001	0.002	0.000
U [ug/L]	19.0	19.1	18.7	18.7
Alk as CaCO3 [mg/L]	261	256	246	246
Hardness as CaCO3 [mg/L]	478	468	464	462
pH	7.74@3.5C	7.62@3.2C	7.64@3.5C	7.71@3.7C
TSS [mg/L]	113	2	1	5

The arrow from the upper table indicates the relative location of SEEP995A along FC-4.

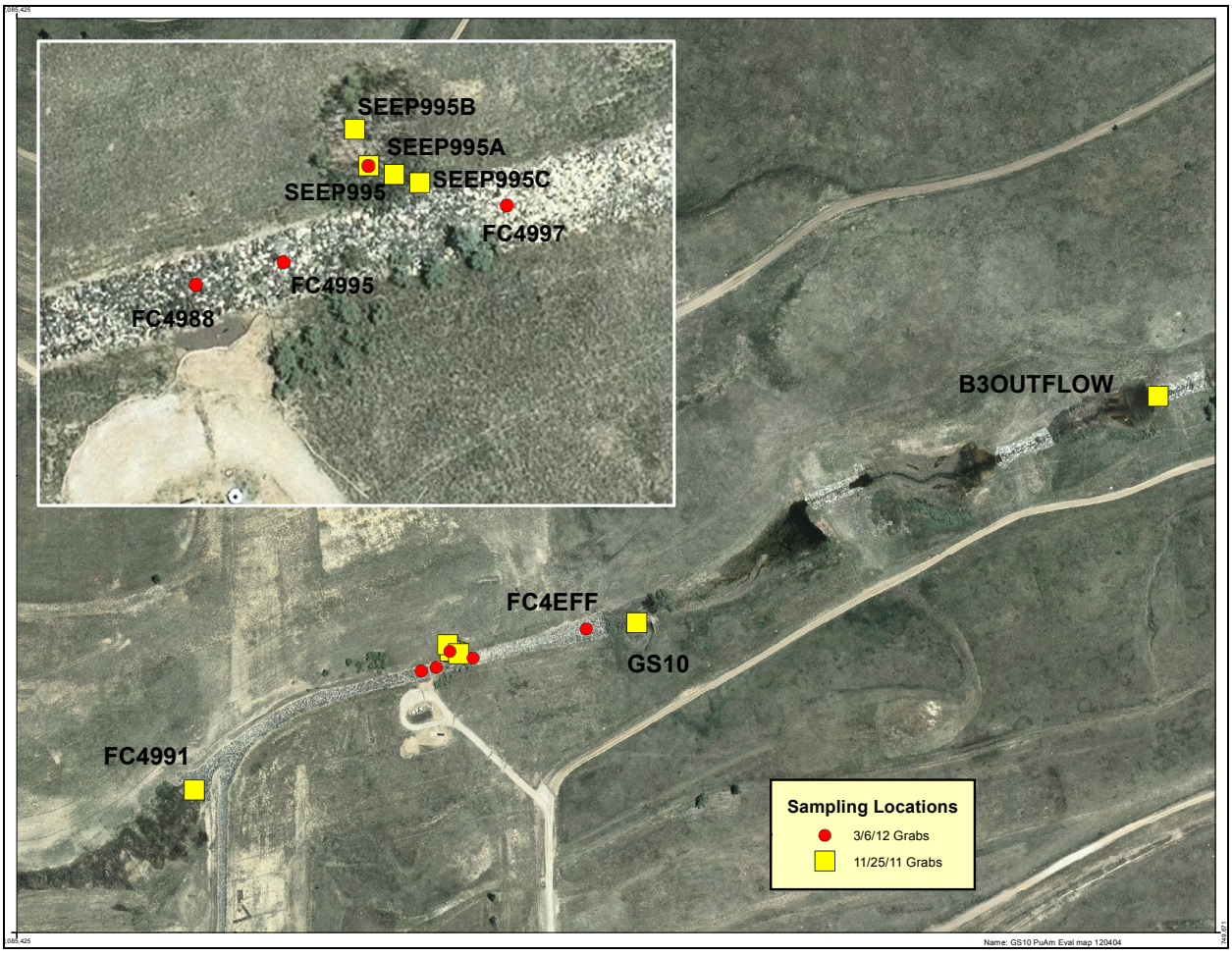


Figure 29. Pu/Am Evaluation Sampling Location Map in FC-4 Upstream of GS10

- To evaluate for any Pu and Am transport characteristics specifically related to the dissolved, colloidal, and particulate mechanisms, water from the routine GS10 composite samples is periodically being analyzed after filtration with a 0.45-micron filter.

  A filtered sample is prepared from each composite carboy collected at GS10. The routine RFLMA sample is analyzed for total (unfiltered) Pu, Am, uranium, beryllium, chromium, and hardness. If the analytical results show Pu and Am concentrations above the 0.15 pCi/L standard, then the corresponding filtered sample may be submitted for analysis. To date, two GS10 composite samples have been analyzed as filtered and unfiltered (Table 6).

Table 6. Results for Filtered and Unfiltered Sample Pairs at GS10: 3/21/12 and 4/25/12 Composites

Analyte	3/21–4/4/12 Flow-Paced Composite		4/25–5/9/12 Flow-Paced Composite	
	Unfiltered	Filtered	Unfiltered	Filtered
Am-241 (pCi/L)	0.318	0.00	0.478	0.00
Pu-239, 240 (pCi/L)	0.246	0.00	0.264	0.026
Uranium (µg/L)	35.5	34.2	16.1	not analyzed

  Table 6 shows that nearly all of the Pu and Am was removed by the 0.45-micron filter. Additionally, nearly all of the uranium passed through the filter. These results support the conclusions of previous research showing that Pu and Am move in association with particulates, while uranium is dissolved. However, these results only indicate that the Pu and Am is associated with particles larger than 0.45 micron once they reach GS10 and are processed for submittal to the laboratory. It is still possible that Pu and Am could reach surface water in association with sub-0.45 micron colloids, but then adsorb to other geologic materials or simply aggregate.

  Additional unfiltered-filtered sample pairs are planned to be collected from seeps and surface water upstream of GS10 once the current extremely dry conditions end and water is available for sampling.

- Numerous grab samples have been collected upstream of GS10 from both seeps and surface water in an attempt to define the spatial variability of Pu and Am activities. However, grab samples have failed to show activities similar to those measured in flow-paced composites collected at GS10. This suggests either that the source of the GS10 Pu/Am is not affecting the grab sample locations, the source could be very close to GS10, the Pu and Am follow a pathway that is difficult to sample (e.g., below the riprap and fill in FC-4), or the source is intermittent, such that grabs have missed the Pu/Am, while the flow-paced composites at GS10 (with up to 100 individual grabs) have been more successful.

  Therefore, time-paced automated samplers were deployed at FC4997 and GS10 (Figure 29; the latter is a secondary sampler located at GS10) to collect 72 grabs (200 ml each) at 2-hour intervals over the course of 6 days. Table 7 presents the results, which show very low Pu/Am activities and give practically no indication of spatial variability.

Table 7. Results for Time-Paced Composites at GS10 and FC4997: 5/22/12 to 5/28/12

Analyte	FC4997 (upstream)	GS10 (downstream)
Am-241 (pCi/L)	0.005	0.005
Pu-239, 240 (pCi/L)	0.00	0.00
Uranium (µg/L)	10.4	10.6
Alkalinity as CaCO3 (mg/L)	205	246
Hardness as CaCO3 (mg/L)	492	517

CaCO3 = calcium carbonate
mg/L = milligrams per liter

- Flow-paced composite samples routinely being collected at WALPOC will continue to be requested to be analyzed on a 2-week turnaround. Analyses for flow-paced composite samples routinely being collected at GS10 and GS08 are also currently being requested to be analyzed on a 2-week turnaround.

Updates to the ongoing evaluation for GS10 will periodically be communicated through public meetings, routine reports, and contact records. For additional information go to http://www.lm.doe.gov/Rocky_Flats/ContactRecords.aspx.

Reportable Uranium Concentrations at GS10

The routine GS10 uranium data evaluation is performed in accordance with RFLMA Attachment 2, Figure 6, "Points of Evaluation," which resulted in a calculated 12-month rolling average concentration for uranium on April 30, 2011, of 18.8 micrograms per liter (µg/L). More recent 12-month rolling averages using validated data through June 30, 2012, continue to exceed the RFLMA applicable Table 1 standard of 16.8 µg/L.

Initial notification to the regulatory agencies and the public, in accordance with RFLMA Attachment 2, Figure 6, was made by e-mail on June 16, 2011. RFLMA Contact Record 2011-04 (July 8, 2011), "Reportable Condition for Uranium at Point of Evaluation GS10," provides a discussion of the monitoring results and recaps the outcome of the RFLMA Parties consultation regarding the evaluation steps to be taken. RFLMA Contact Record 2011-05 (October 4, 2011), "Update for Reportable Condition for Uranium at Point of Evaluation GS10," provides an update of the monitoring results and provides further discussion of the path forward. Both contact records are available on the Rocky Flats website, http://www.lm.doe.gov/Rocky_Flats/ContactRecords.aspx.

Figure 30 shows the locations sampled during CY 2011–2012 in support of the uranium evaluation for GS10. GS03 is not shown, but is the current POC on Walnut Creek at Indiana Street.

The following is an update to the ongoing GS10 uranium evaluation:

- Downstream monitoring at B5INFLOW, GS08, WALPOC, and GS03 (Figure 30) continue to show uranium concentrations below 16.8 µg/L. Recent analytical results at downstream locations are given in Table 8. The latest available 12-month rolling and 30-day average uranium concentrations calculated from flow-paced composite samples are shown in Figure 31.

- Additional sampling and analysis for uranium within the GS10 drainage continues. Following the initial consultation, two temporary surface-water sample locations upstream of GS10 were established for biweekly uranium grab sampling (FC4991 and FC4750; Figure 30). Biweekly sampling at these locations was initiated on June 30, 2011.

  These new locations supplement GS10, B3OUTFLOW, B5INFLOW, and B5 POND (Figure 30), which have been sampled biweekly for uranium since January 27, 2010. Data from these six locations are summarized in Table 9. The averages are shown on Figure 32.

- As noted in previous RFLMA quarterly reports, the following samples were sent to Los Alamos National Laboratory (LANL) for isotopic analysis during the spring of 2011. LANL determines the percentages of natural and anthropogenic uranium to compare with percentages in pre-closure and post-closure samples previously analyzed by LANL. The locations described below are shown on Figure 30:

  — Flow-paced surface-water sample from GS10 for the period June 3 to June 13, 2011. (Historically, GS10 has shown approximately 70 percent natural uranium.)

  — Groundwater sample from upgradient well 99405. (Historically, 99405 has shown uranium concentrations that typically exceed 100 µg/L and have been 99.9 to 100 percent natural uranium.)

  The results of the LANL analysis have been reported by LANL to S.M. Stoller Corporation (Stoller) staff. The following highlights are noted:

  — The signature results for GS10 do not match the historical natural uranium percentage of approximately 70 percent. Natural uranium was reported as 50.6 percent. The uranium concentration was 21.6 µg/L. The previous LANL sample, taken on March 17, 2010, was 24.1 µg/L and 72.3 percent natural uranium.

  — The results for well 99405 were 411.1 µg/L uranium, with a 100 percent natural uranium signature. These results are consistent with historical data.

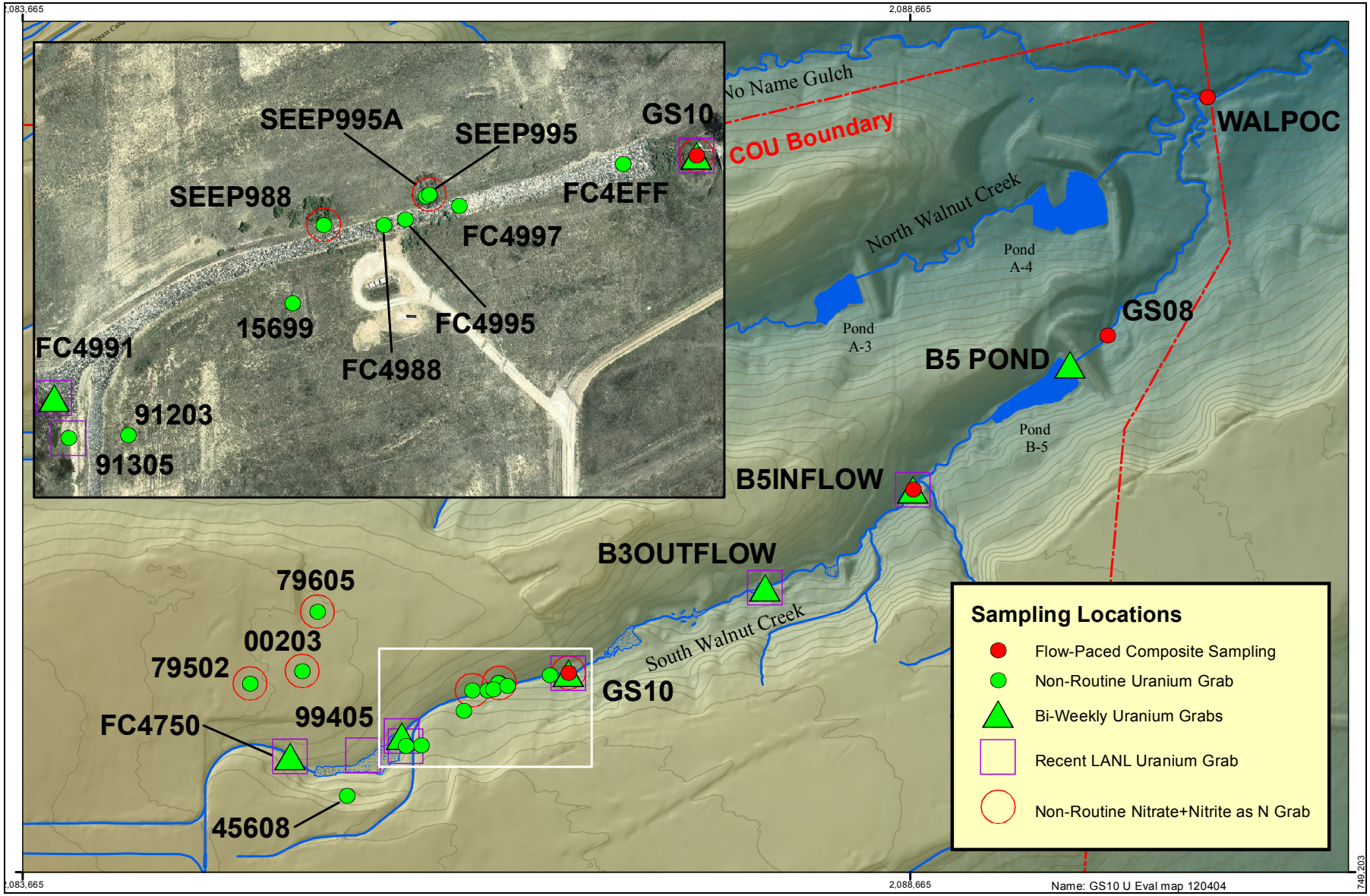
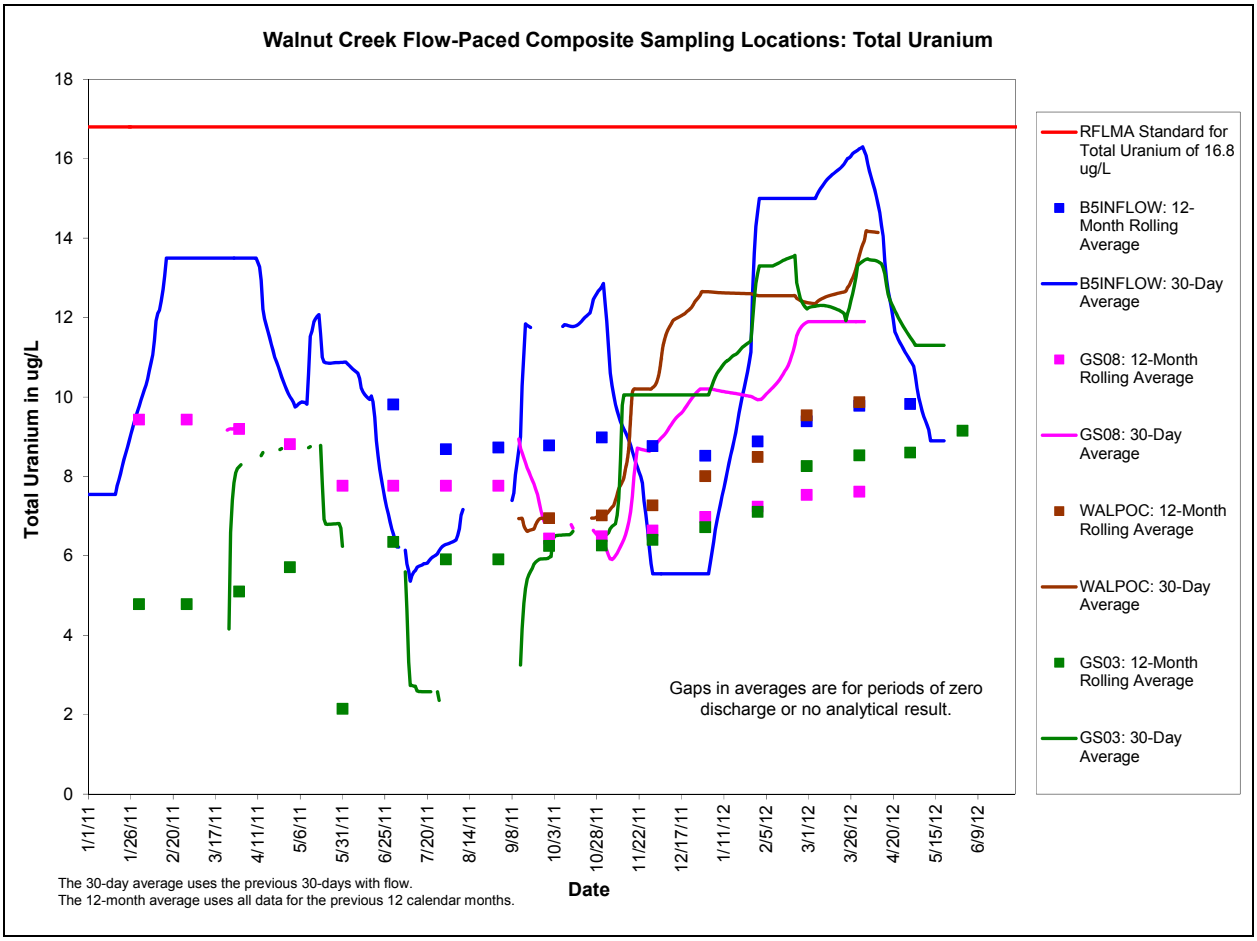


Figure 30. Uranium Evaluation Sampling Location Map for GS10 Drainage Area

Table 8. Recent Uranium Flow-Paced Composite Sample Results

B5INFLOW		GS08		WALPOC		GS03	
Sample Period	**Result (µg/L)**	**Sample Period**	**Result (µg/L)**	**Sample Period**	**Result (µg/L)**	**Sample Period**	**Result (µg/L)**
1/18–4/11/11	13.5	3/24–3/26/11	7.9			3/24–3/26/11	8.0
4/11–5/4/11	9.1	3/26–3/28/11	7.5			3/26–3/28/11	9.1
5/4–5/13/11	14.6	3/28–3/30/11	7.9			3/28–3/31/11	9.2
5/13–5/18/11	11.9					3/31–5/20/11	3.3
5/18–5/19/11	8.0					5/20–9/12/11	2.4
5/19–5/20/11	10.3						
5/20–6/3/11	10.5						
6/3–7/1/11	6.2						
7/1–7/10/11	5.3						
7/10–7/11/11	4.7						
7/11–7/21/11	6.2						
7/21–8/24/11	12.2	9/12–9/15/11	5.6	9/12–9/15/11	6.9	9/12–9/15/11	6.1
8/24–9/29/11	11.2	9/15–9/18/11	5.4	9/15–9/18/11	6.3	9/15–9/18/11	6.9
		9/18–9/21/11	5.7	9/18–9/22/11	6.8	9/18–9/22/11	6.7
9/29–11/1/11	13.3	9/21–9/27/11	6.0	9/22–9/27/11	7.6	9/22–9/27/11	6.2
11/1/11–1/3/12	5.6	9/27–11/9/11	8.8	9/27–11/30/11	10.2	9/27/11–1/3/12	10.1
		11/9–11/29/11	8.5				
		11/29/11–1/5/12	10.2	11/30/11–1/3/12	12.7		
1/3–3/6/12	15.0	1/5–2/1/12	9.9	1/3–2/23/12	12.6	1/3–2/10/12	13.3
		2/1–4/4/12–	11.9			2/10–2/23/12	13.7
				2/23–3/6/12	12.2	2/23–2/27/12	11.2
						2/27–3/1/12	11.4
3/6–3/23/12	17.4			3/6–3/21/12	14.2	3/1–3/15/12	13.1
3/23–4/13/12	13.2			3/21–4/13/12	14.1	3/15–4/4//12	14.2
4/13–5/21/12	8.90	4/4/12–	[b]	4/13/12–	[a]	4/4–6/6/12	11.3
5/21/12–	[b]					6/6/12–	[b]

Some results are preliminary and subject to revision.
[a] Analysis pending
[b] Sample in progress



Plot includes unvalidated analytical data that are preliminary and subject to revision.

Figure 31. Average Uranium Concentrations at Locations Downstream of GS10

Table 9. Summary of Biweekly Uranium Grab Sampling in South Walnut Creek

South Walnut Creek		Uranium (ug/L)			
	Location Code	Average	Sample Count	85th Percentile	50th Percentile
Upstream	FC4750	21.5	21	25.0	19.0
⬇	FC4991	13.7	23	22.7	11.0
⬇	GS10	15.4	66	22.0	14.5
⬇	B3OUTFLOW	15.7	57	23.0	17.0
⬇	B5INFLOW	12.3	54	18.0	11.0
Downstream	B5 POND	8.48	68	11.0	7.45

µg/L = micrograms per liter

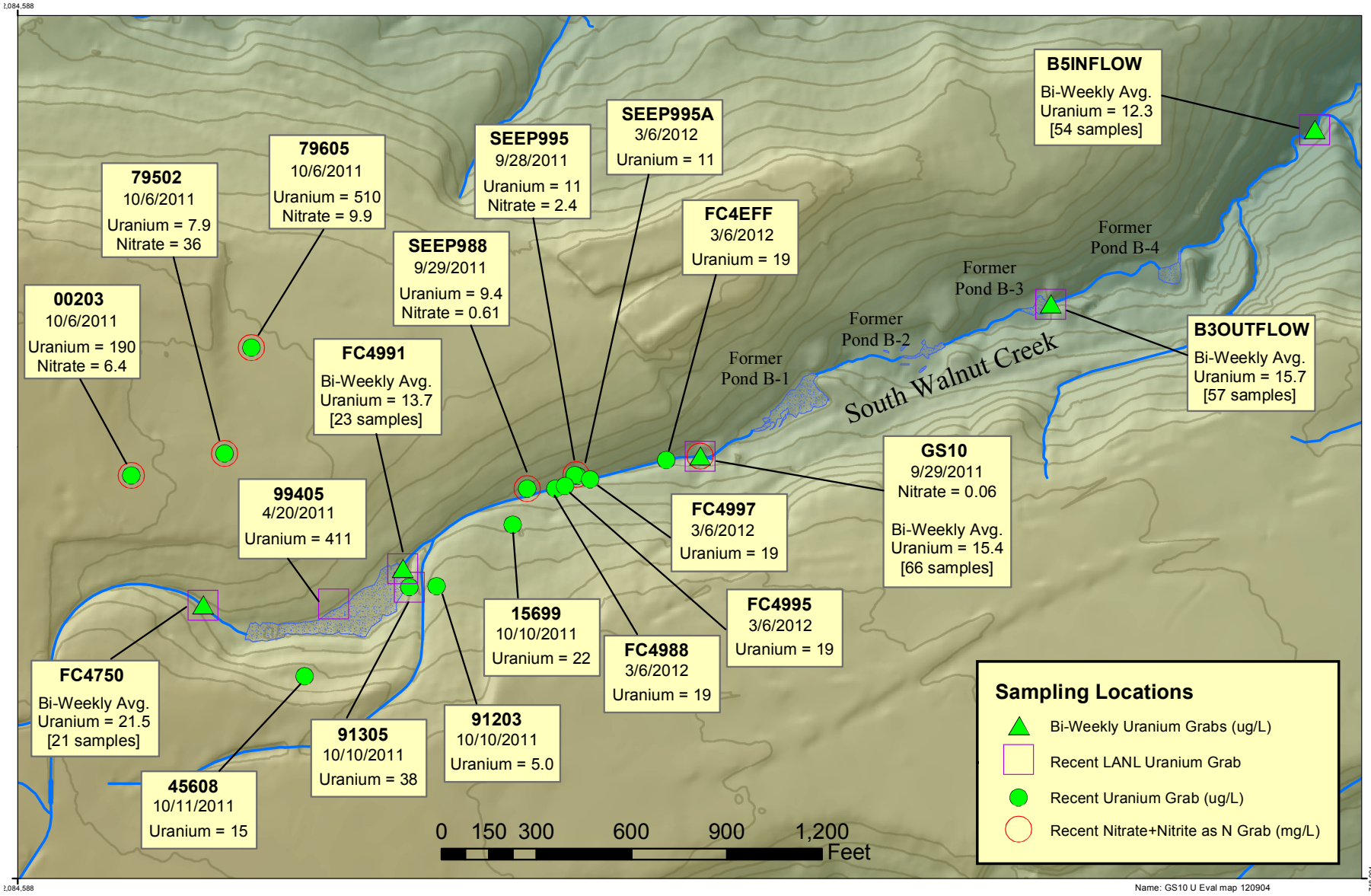


Figure 32. Uranium and Nitrate + Nitrite as N Results for Grab Samples Collected in South Walnut Creek

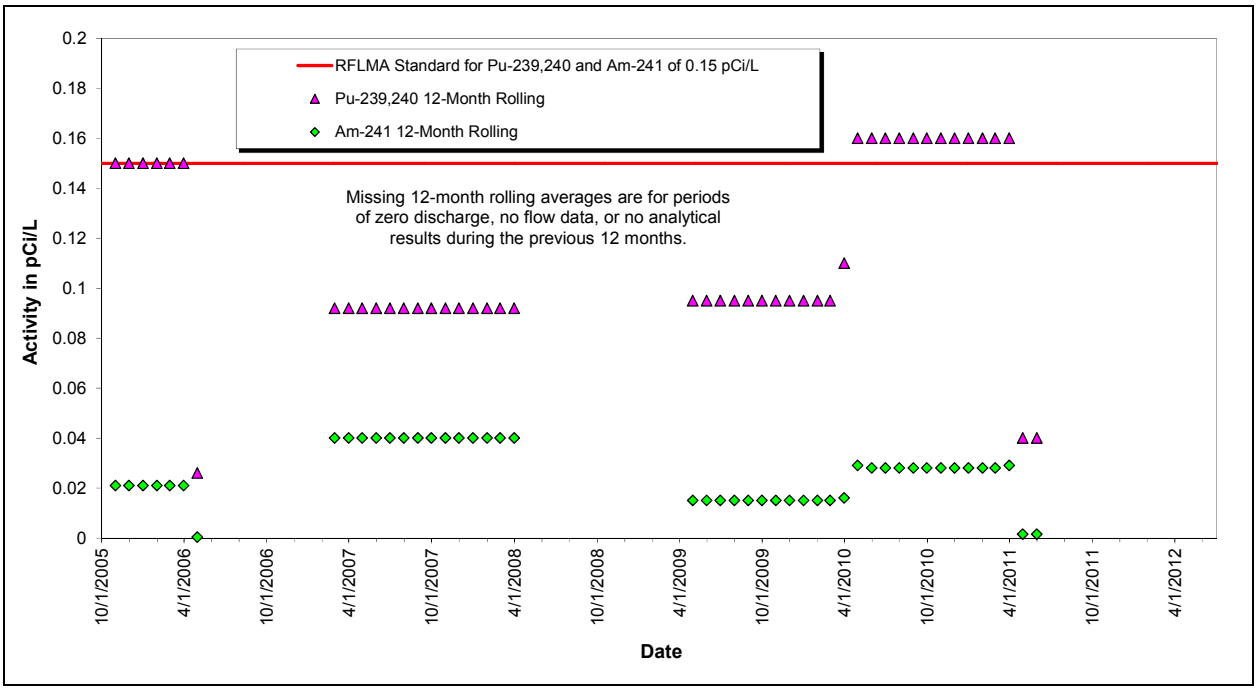
- Based on the above LANL results for GS10, the following additional samples were collected in the fall of 2011 and sent to LANL for isotopic analysis (the locations are shown on Figure 30):
  - Water from the routine flow-paced composite sample collected at GS10 during the period August 24–September 29, 2011, to help confirm the previous sample results.
  - Grab samples at FC4750 and FC4991 collected on September 28, 2011.
  - Water from the routine flow-paced composite sample collected at B5INFLOW during the period August 24–September 29, 2011. This location does not have previous LANL results.
  - A grab sample at B3OUTFLOW collected on September 27, 2011. One post-closure LANL sample has been collected at B3OUTFLOW. The result was a 74.7 percent natural uranium signature.
  - A grab sample at well 91305, which is upgradient of GS10, collected on October 10, 2011.

  The results of the LANL analysis have been reported by LANL to Stoller staff. The following highlights are noted:
  - The signature results for GS10 have returned to the historical natural uranium percentage of approximately 70 percent. Natural uranium was reported as 70.2 percent. The uranium concentration was 8.9 µg/L.
  - The results for all of the other locations show natural uranium signatures between 70.9 and 90.8 percent. These results are consistent with historical data (where said data exist).
- Additional nonroutine grab samples have been collected to assist in the possible identification of a source that may have contributed to elevated uranium levels at GS10. The results are shown on Figure 32. These additional samples included the following:
  - Wells 15699, 45608, 91305, and 91203 were grab-sampled for uranium on October 10–October 11, 2011.
  - Wells 00203, 79502, and 79605 were grab-sampled for uranium and nitrate + nitrite as N on October 6, 2011.
  - GS10 and hillside seep locations SEEP988 and SEEP995 were also grab-sampled for uranium and nitrate + nitrite as N on September 28–September 29, 2011.
- Additional samples are scheduled to be sent to LANL for isotopic analysis in the near future. The locations are shown on Figure 30 and are described below:
  - Flow-paced surface-water sample from GS10 for the period March 6–21, 2012.
  - Flow-paced surface-water samples from WALPOC for the periods September 22–27, 2011; January 3–February 23, 2012; February 23–March 6, 2012; and March 6–21, 2012. Water from WALPOC has not been previously analyzed at LANL.

Updates to the ongoing evaluation for GS10 will periodically be communicated through public meetings, routine reports, and contact records. For additional information go to http://www.lm.doe.gov/Rocky_Flats/ContactRecords.aspx.

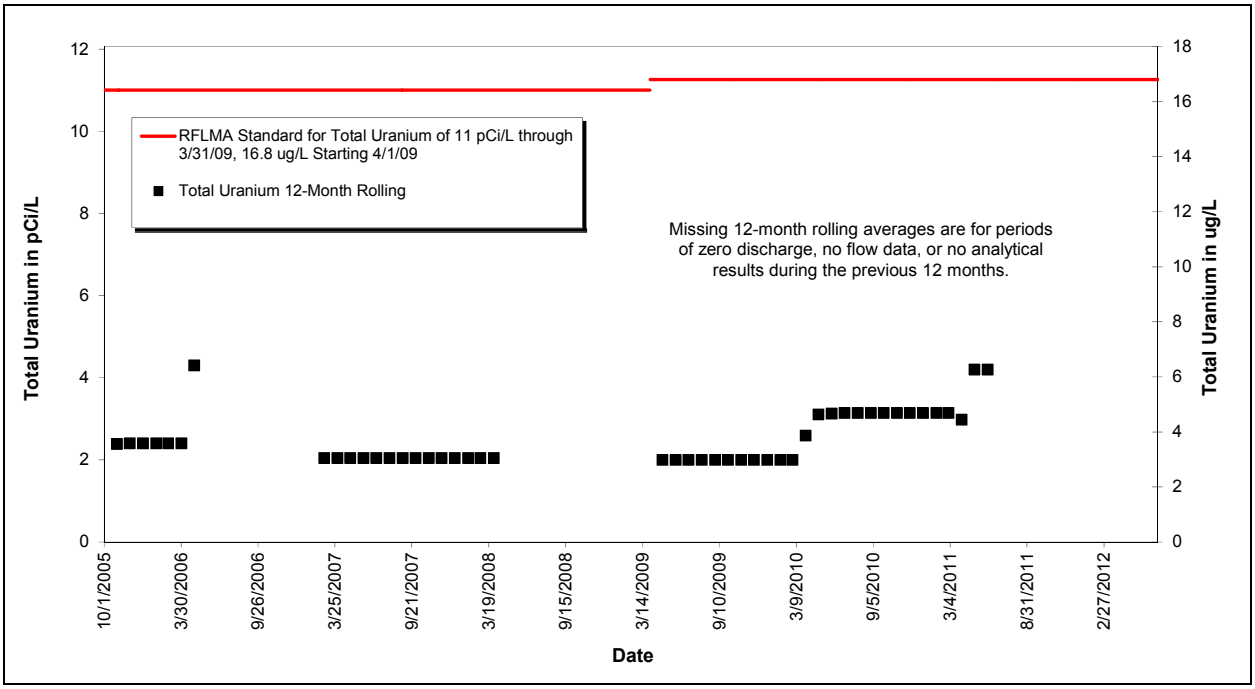
3.1.3.2 Monitoring Location SW027

Monitoring location SW027 is at the end of the South Interceptor Ditch at the inlet to Pond C-2. Since no samples have been successfully collected since 2010 (only 4,033 gallons of flow have been recorded at SW027 in the last 2 years), no 12-month rolling averages can be calculated for the calendar year ending on June 30, 2012. Figure 33 and Figure 34 show sampling data for plutonium, americium, and uranium from 2005 through the second quarter of CY 2012. All other analytes were also not reportable for the quarter.



No samples have been successfully collected since 2010; only 4,033 gallons of flow have been recorded in the last 2 years.

Figure 33. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at SW027: Post-Closure Period Ending Second Quarter CY 2012



No samples have been successfully collected since 2010; only 4,033 gallons of flow have been recorded in the last 2 years.
µg/L = micrograms per liter;

Figure 34. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at SW027: Post-Closure Period Ending Second Quarter CY 2012

3.1.3.3 Monitoring Location SW093

Monitoring location SW093 is on North Walnut Creek 1,300 feet upstream of the A-Series ponds. Figure 35 and Figure 37 show no reportable plutonium, americium, or total uranium values during the quarter. Figure 36 and Figure 38 show sampling data from 2005 through the second quarter of CY 2012. All other analytes were also not reportable for the quarter.

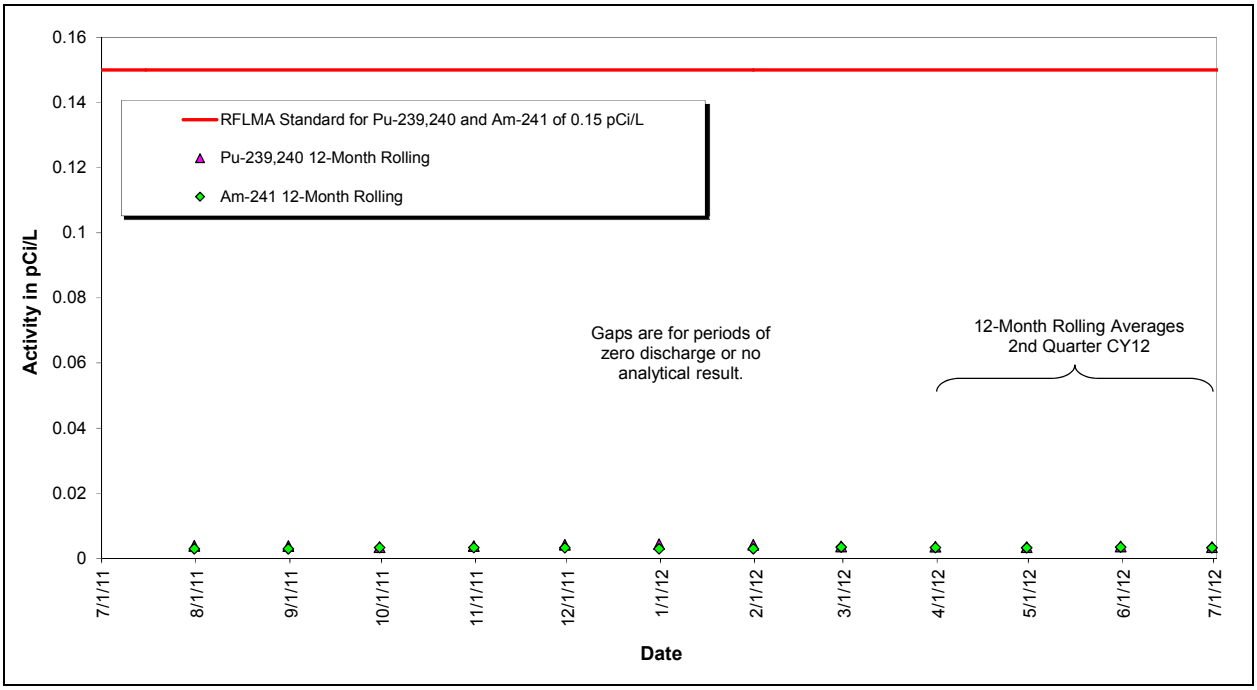


Figure 35. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at SW093: Calendar Year Ending Second Quarter CY 2012

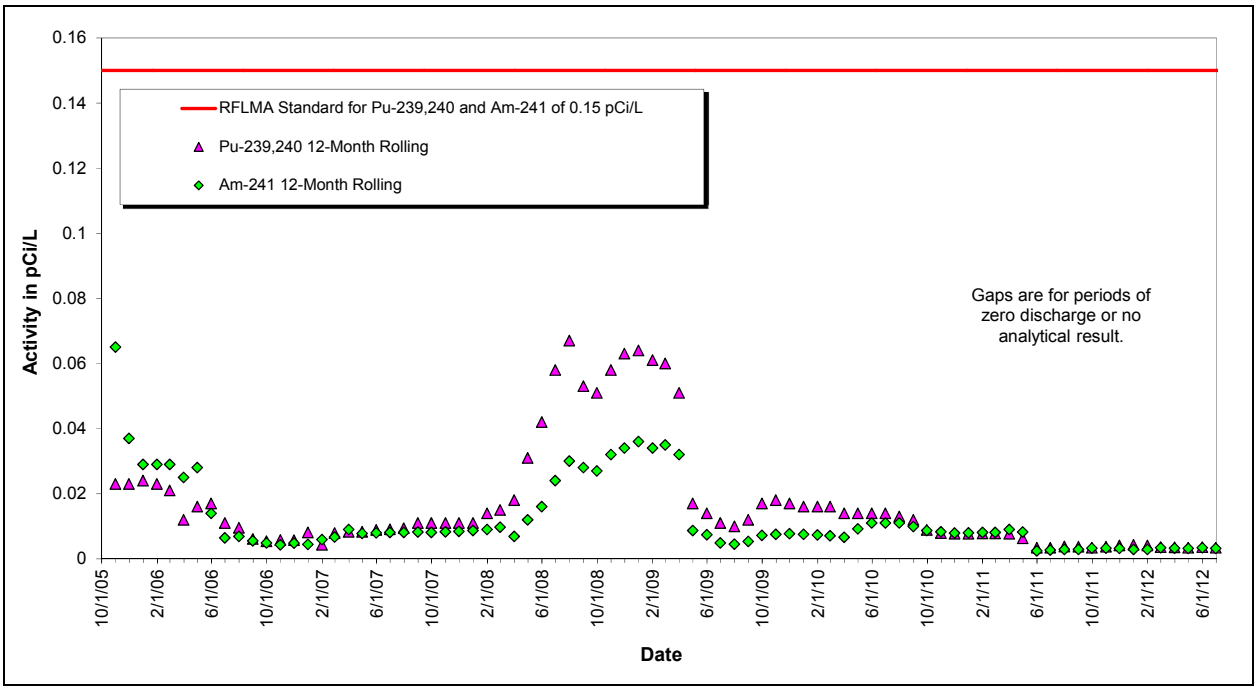
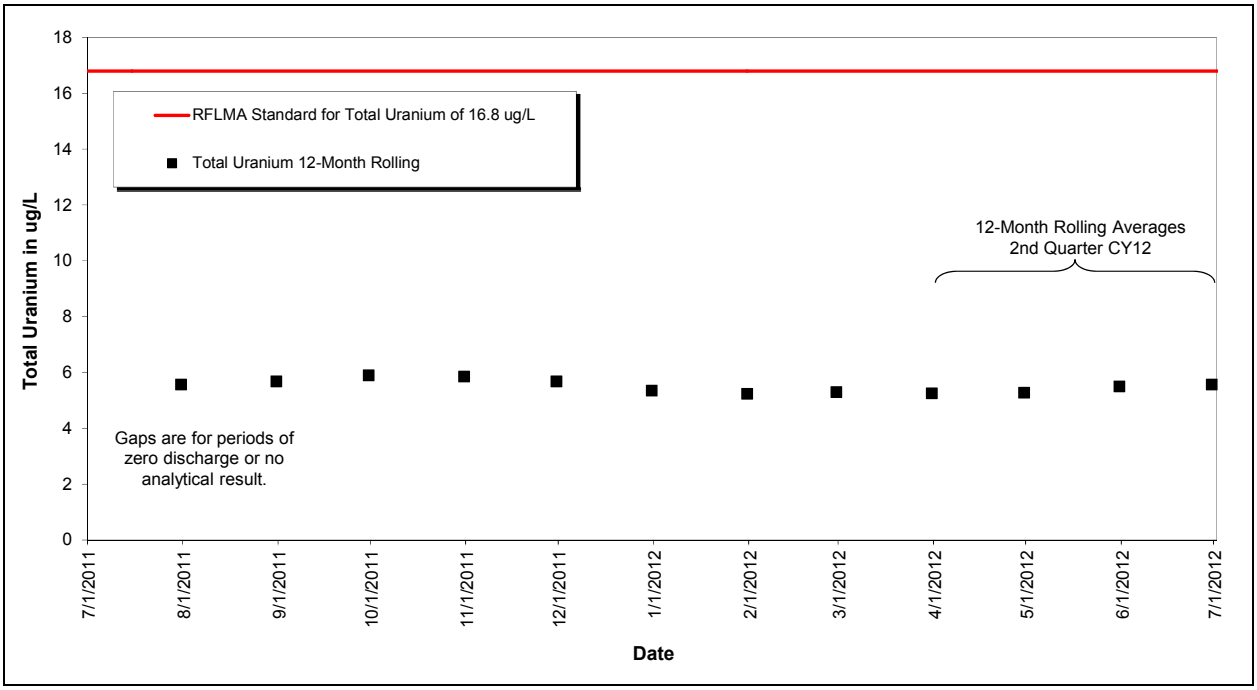
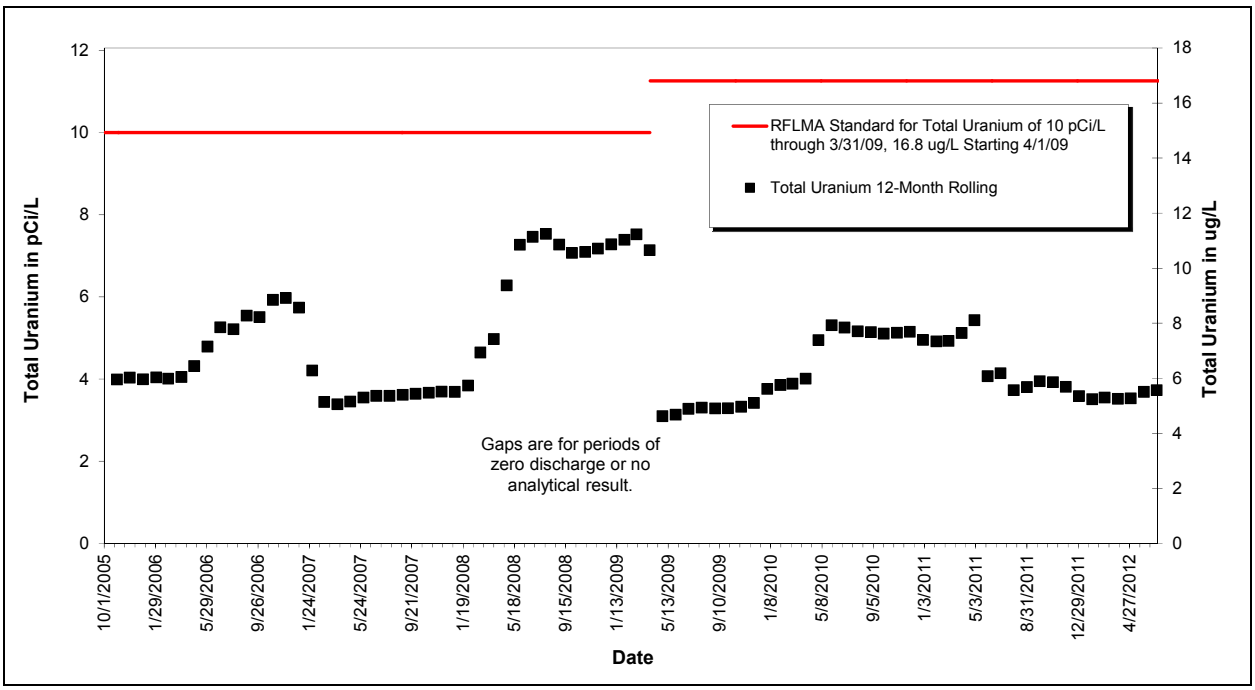


Figure 36. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at SW093: Post-Closure Period Ending Second Quarter CY 2012



µg/L = micrograms per liter

Figure 37. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at SW093: Calendar Year Ending Second Quarter CY 2012



µg/L = micrograms per liter

Figure 38. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at SW093: Post-Closure Period Ending Second Quarter CY 2012

3.1.4 AOC Wells and Surface Water Location SW018

All AOC wells and SW018 were scheduled for RFLMA monitoring in the second quarter of CY 2012. Each of these locations was successfully sampled. The resulting analytical data (Appendix B) indicated no new reportable conditions existed at these locations. A more detailed discussion of the data will be provided in the annual report for 2012.

3.1.5 Sentinel Wells

All Sentinel wells were scheduled for RFLMA monitoring in the second quarter of CY 2012. One location was dry: well 95299, located near the ETPTS, is consistently dry and was again dry during the second quarter.

Analytical results from the second-quarter samples (Appendix B) were comparable to those obtained in previous sampling events. Data will be evaluated and discussed as part of the annual report for 2012.

3.1.6 Evaluation Wells

All Evaluation wells were scheduled for RFLMA monitoring in the second quarter of CY 2012. Analytical results from the second-quarter samples (Appendix B) were comparable to those obtained in previous sampling events. Data will be evaluated and discussed as part of the annual report for 2012.

3.1.7 PLF Monitoring

All RCRA groundwater monitoring wells at the PLF were sampled during the second quarter of CY 2012. Analytical results (Appendix B) were generally consistent with past samples and will be discussed and statistically evaluated as part of the annual report for CY 2012. Section 3.1.9.4 discusses monitoring the PLFTS.

3.1.8 OLF Monitoring

All RCRA groundwater monitoring wells at the OLF were sampled during the second quarter of CY 2012. Analytical results (Appendix B) were generally consistent with past samples and will be discussed and statistically evaluated as part of the annual report for CY 2012.

During the second quarter of CY 2012, when routine surface water sampling was performed in Woman Creek downstream of the OLF (GS59), all analytical results were less than the applicable surface water standards.

3.1.9 Groundwater Treatment System Monitoring

As described in Section 2.2, contaminated groundwater is intercepted and treated in four areas of the Site. The MSPTS, ETPTS, and SPPTS include a groundwater intercept trench. Groundwater entering the trenches is routed through a drainpipe into one or more treatment cells, where it is treated and then discharged to the subsurface. The PLFTS treats water from the northern and southern components of the Groundwater Intercept System and flow from the PLF seep.

3.1.9.1 Mound Site Plume Treatment System

MSPTS monitoring locations were scheduled for RFLMA sampling in the second quarter of CY 2012. Both RFLMA and non-RFLMA samples were collected at the MSPTS, the latter intended to support optimization of the air stripper. The associated results (Appendix B) will be discussed in the annual report for 2012.

3.1.9.2 East Trenches Plume Treatment System

ETPTS monitoring locations were scheduled for RFLMA sampling in the second quarter of CY 2012. Samples were collected and the associated results (Appendix B) will be discussed in the annual report for 2012.

3.1.9.3 Solar Ponds Plume Treatment System

SPPTS monitoring locations were scheduled for RFLMA sampling in the second quarter of CY 2012. Both RFLMA and non-RFLMA samples were collected at the SPPTS, some to support the Adaptive Management Plan and others to support testing of a small-scale uranium treatment component (referred to as a "microcell") or small-scale nitrate treatment via lagoons. Both of these testing efforts will continue for some time. Additional information and discussion on these tests will be provided in the annual report for 2012. Appendix B contains the RFLMA results from the second quarter samples.

3.1.9.4 PLF Treatment System

During collection of the April 19, 2012, sample at the system influent (monitoring location PLFSEEPINF), the flow rate was 1.7 gallons per minute. As of June 30, 2012, breaching of the PLF Dam was complete and any PLFTS effluent currently flows through the remaining wetland area. This flow configuration is now essentially equivalent to the historic open valve configuration.

During the second quarter of CY 2012, routine sampling of the treated effluent exiting the system (monitoring location PLFSYSEFF) showed selenium above the RFLMA standard. In accordance with the RFLMA data evaluation protocols, sampling frequency was increased to monthly.

In the first monthly sample collected on May 23, 2012, selenium was not detected. Therefore, the sampling frequency returned to quarterly.

No other analyte concentrations were greater than the applicable surface water standards during the routine quarterly sampling.

3.1.10 Pre-Discharge Monitoring

Pre-discharge samples are collected prior to opening the valves to initiate a discharge period at Ponds A-4, B-5, and C-2 on North Walnut Creek, South Walnut Creek, and Woman Creek, respectively.

No pre-discharge samples were collected at Ponds A-4, B-5, or C-2 during the second quarter of CY 2012. All three ponds were operated in a flow-through configuration during the entire quarter.

3.1.11 Additional Monitoring

In addition to the RFLMA-required monitoring discussed in the previous sections, nonregulatory monitoring is performed at the Site to further describe the fate and transport of selected constituents at the Site. Data in this section are not limited to the current quarter but include all available data.

3.1.11.1 High-Resolution Inductively Coupled Plasma/Mass Spectrometry and Thermal Ionization Mass Spectrometry Analyses

Prior to and after Site closure, groundwater and surface water samples from select locations were sent to LANL for high-resolution inductively coupled plasma/mass spectrometry and/or thermal ionization mass spectrometry analyses. These analytical methods measure mass ratios of four uranium isotopes (masses 234, 235, 236, and 238). Isotopic ratios provide a signature that indicates whether and to what extent the uranium content is natural or anthropogenic (manmade).

Several samples were collected in the second quarter of CY 2012 for analysis by LANL, but have not yet been submitted because of administrative and contractual changes with that facility. Samples will be submitted as soon as the LANL laboratory confirms their readiness to receive these samples. Following submission, the specific samples and associated results will be itemized in the corresponding RFLMA quarterly report.

4.0 Adverse Biological Conditions

No evidence of adverse biological conditions (e.g., unexpected mortality or morbidity) was observed during monitoring and maintenance activities in the second quarter of CY 2012.

5.0 Ecology Monitoring

During the second quarter of CY 2012, ecological monitoring consisted of weed mapping, PLF/OLF quarterly vegetation surveys, nest box surveys, prairie dog surveys, wetland water level surveys, and wetland weed surveys. Preparations were also underway for revegetation monitoring, and for Preble's meadow jumping mouse and wetland mitigation monitoring surveys that are scheduled to take place during the third quarter of CY 2012. Spring herbicide applications were made during the second quarter. Approximately 167 acres were treated to control noxious weeds within the COU.

6.0 References

DOE (U.S. Department of Energy), 2007a. *Rocky Flats Legacy Management Agreement*, Rocky Flats Environmental Technology Site, Golden, Colorado, March 14.

DOE (U.S. Department of Energy), 2007b. *Second Five-Year Review Report for the Rocky Flats Site, Jefferson and Boulder Counties, Colorado*, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

DOE (U.S. Department of Energy), 2008a. *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan*, Rocky Flats Environmental Technology Site, Golden, Colorado, March.

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DOE (U.S. Department of Energy), 2009a. *Original Landfill Monitoring and Maintenance Plan, Rocky Flats Site,* Office of Legacy Management, Westminster, Colorado, September.

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DOE (U.S. Department of Energy), 2012a. *Rocky Flats, Colorado, Site Site Operations Guide,* Revision 5.0, LMS/RFS/S03037-5.0, Office of Legacy Management, Westminster, Colorado, April.

DOE (U.S. Department of Energy), 2012b. *Third Five-Year Review Report for the Rocky Flats Site, Jefferson and Boulder Counties, Colorado*, July.

DOE, EPA, and CDPHE (U.S. Department of Energy, U.S. Environmental Protection Agency, and Colorado Department of Public Health and Environment), 2006. *Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit*, EPA/541/R-06/197, September 29.

DOE, EPA, and CDPHE (U.S. Department of Energy, U.S. Environmental Protection Agency, and Colorado Department of Public Health and Environment), 2011. *Corrective Action Decision/Record of Decision Amendment for Rocky Flats Plant (USDOE) Central Operable Unit,* U.S. Department of Energy, U.S. Environmental Protection Agency, and Colorado Department of Public Health and Environment, September 21.

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MEMORANDUM

TO: Stewardship Council Board
FROM: Rik Getty
SUBJECT: Regulator roles during cleanup and post-closure at Rocky Flats
DATE: October, 25, 2012

We have scheduled 30 minutes for CDPHE and EPA to discuss their roles in regulating site activities.

Both agencies' roles are defined in the 2007 Rocky Flats Legacy Management Agreement (RFLMA) (http://www.lm.doe.gov/Rocky_Flats/Regulations.aspx). These agencies, along with DOE, are the signors to the RFLMA. As part of the RFLMA, CDPHE and EPA signed a memorandum of understanding which assigned the day-to-day regulatory oversight role to CDPHE. EPA agreed to make resources available for consultations with CDPHE and DOE, as needed.

Before delving into the post closure regulator roles, it is important to first review the two agencies' extensive roles during the cleanup (1995-2006).

Regulator Roles during Cleanup (1995-2006)
I have chosen 1995 as the jumping-off point for the cleanup period because it corresponds to DOE awarding Kaiser-Hill, LLC (K-H) its first remediation contract. Some cleanup activities were performed before K-H, but they pale in comparison to what K-H accomplished during their contract. Although physical closure of Rocky Flats occurred in October 2005, regulatory closure cumulated in September 2006 with the approval of the Corrective Action Decision/Record of Decision (CAD/ROD).

Under the Rocky Flats Cleanup Agreement (RFCA), the regulatory cleanup document, both EPA and CDPHE regulated the site. The EPA, which was charged with implementing CERCLA, served as the lead regulator on environmental restoration (ER) activities. ER included remediating the 903 Pad, closing landfills, and other activities outside the former core of the site known as the Industrial Area. CDPHE's responsibilities were primarily overseeing hazardous waste operations and building decontamination and demolition (D&D) activities within the Industrial Area. Their authority was rooted in the federal hazardous waste law [Resource

Conservation Recovery Act (RCRA)] which is regulated in Colorado by the state under the Colorado Hazardous Waste Act. Importantly, like the current regulatory framework, the RFCA process was collaborative, requiring formal consultation amongst the regulators and DOE.

The regulators' duties included:

- reviewing, discussing, modifying, and approving thousands of cleanup workplan documents related to ER and D&D activities;
- verifying compliance with approved workplans as ER and D&D projects were implemented;
- taking thousands of air and water samples which were subsequently analyzed for compliance with federal and state standards;
- interacting with local communities on a broad range of cleanup topics;
- maintaining an extensive collection of cleanup documentation for reference and other purposes; and
- providing day-to-day regulatory guidance as cleanup work progressed.

Post Closure Regulator Roles (2007 - present)

The RFLMA, which was signed in March 2007, established a new regulatory framework for Rocky Flats. Among other provisions, DOE's Office of Legacy Management (LM) assumed site responsibilities, taking over from DOE's Office of Environmental Management (EM). CDPHE also assumed the role of the lead regulator, implementing (but not assuming as a legal matter) some of EPA's regulatory authorities. Importantly, both EPA and CDPHE maintain their enforcement authority. (This shift in EPA-CDPHE responsibilities is found in the aforementioned MOU between the two agencies.)

As the MOU describes, CDPHE and EPA work in a consultative manner. One of CDPHE's primary responsibilities is approving Contact Records for site activities. Contact Records are official regulatory approvals to perform certain work which has the potential to come in contact with residual contamination or violate certain provisions in the RFLMA. Some recent examples of Contact Records (CRs) are:

- dam breaching activities;
- installation of new points of compliance on Walnut and Woman Creeks;
- evaluation of surface water and ground water with elevated contaminant levels;
- repairs to the Original Landfill;
- repairs and upgrades to the Solar Ponds Plume Treatment System, Mound Site Plume Treatment System, and East Trenches Plume Treatment System; and
- road maintenance activities.

The following are the number of CRs by year:

- 2006, 3 CRs
- 2007, 8 CRs
- 2008, 9 CRs
- 2009, 5 CRs

- 2010, 7 CRs
- 2011, 8 CRs
- 2012, 1 CR to date.

The CR approval process has served as a good example of regulatory oversight and a way to keep the local communities updated on site activities in a timely manner. The fact that only one contact record has been issued in 2012 (a relatively simple road maintenance project) is notable. While we do not know exactly what it signifies, I suspect that DOE's issues which require regulatory approval are diminishing towards a "steady-state" condition when most activities become routine and there are only regulatory issues occasionally.

CDPHE also performs field inspections on a wide range of site activities. That work includes landfill inspections and developing along with DOE remedial responses. Given the problems DOE has encountered at the Original Landfill, CDPHE has been intensely involved in the full suite of activities. The same hold true for analyses and modifications to the Solar Ponds Plume Treatment System.

One responsibility which EPA has not delegated to CDPHE is implementation of the CERCLA five-year reviews. Since the Central Operable Unit (DOE-retained lands) has not been de-listed from the EPA's National Priority List of CERCLA sites, a five-year Review of site conditions must be performed by DOE and approved by EPA. The last review was performed in 2012 and the next will be 2017.

In addition to the five-year review, EPA Region 8 in Denver has a vegetation consultant who performs evaluations at various locations in Region 8 for the EPA. EPA uses the consultant's expertise to evaluate the effectiveness of the re-vegetation efforts and overall site vegetation condition in the DOE-retained lands.

Big Picture

Since LM assumed management responsibilities in 2007, they have encountered more work requiring regulatory oversight, primarily by CDPHE, than they anticipated at closure. DOE, CDPHE and EPA staff have stated in conversation that the post closure site has posed more challenges than originally anticipated. Time will tell though whether the aforementioned "steady-state" condition will prevail.

Please contact me if you have any questions.

2013 Work Plan

- Cover memo
- Draft work plan

2013 Budget

- Cover memo
- Draft budget
- Budget Resolution and Notice

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MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Approval of 2013 Work Plan
DATE: October 25, 2012

I have scheduled 15 minutes for the board to review and approve the attached draft 2013 work plan. The plan is the same one the board reviewed at the September meeting as no changes were offered at that time. In preparation for the discussion, please review the minutes from the September meeting.

As always, please let me know what questions, if any, you have.

Action Item: Approve 2013 Work Plan

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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
Arthur Widdowfield

2013 Work Plan

Draft #1, September 2013

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.

Deleted: Preface: 2012 Challenges and Opportunities¶

In 2012, the Stewardship Council will complete its 7th year of operations. At the start of the year, membership will expand to include the City of Thornton. ¶

¶

Some of the challenges and opportunities to address in 2012 will likely include:¶

<#>Incorporating Thornton into the organization.¶
<#>Participating in the CERCLA five-year review.¶
<#>Addressing growing concerns amongst members and citizens with DOE management decisions.¶
<#>Developing and circulating accurate information about protectiveness of Rocky Flats cleanup.¶
<#>Maintaining public awareness and interest in the ongoing management needs at Rocky Flats.¶
<#>Reviewing and modifying as necessary organizational systems to ensure members remain engaged and the Stewardship Council functions efficiently.¶

¶

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.

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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.

2013 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. Work with DOE on implementing its Legacy Management Closure Public Involvement Plan (LMPIP), including the meetings DOE identified in the LMPIP.
3. Review DOE budgets for implementation of DOE responsibilities.
4. Participate in DOE, CDPHE and/or EPA assessment(s) of remedy operations and effectiveness.
5. 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.
6. 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.
7. Transmit to appropriate officers and employees of the DOE questions and concerns of governments, persons and entities regarding Rocky Flats.
8. Continue to participate in Adaptive Management Plan meetings, including technical evaluations of data.
9. 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.
10. 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.
11. Track the development of Jefferson County Parkway as it relates to Rocky Flats.

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Deleted: <#>Participate in the CERCLA five-year review.¶

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.

2013 Activities:

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

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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, USFWS 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.

2013 Activities:

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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:
    - Periodic reports
    - 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.

2013 Activities:

1. Track agency and Congressional action affecting funding for USFWS.
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.

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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.

2013 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.

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Deleted: <#>Conclude the Stewardship Council's triennial review¶
<#>Amend bylaws to account for expansion of organizational membership.¶
<#>Appoint non-governmental members to the Stewardship Council. ¶

Success Measurement Criteria

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.

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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
Arthur Widdowfield

MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Fiscal Year 2013 Budget Hearing
DATE: October 25, 2012

As we discussed at the September meeting, at this meeting the board will hold a budget hearing on the fiscal year 2013 Stewardship Council budget. The board will also approve a budget resolution adopting the budget. As a unit of local government under the Colorado Constitution, the Stewardship Council must hold this hearing prior to adopting a final budget.

The budget I am presenting is the same one the Board reviewed at the September meeting. The actual/projected expenses have been updated to include actual expenses through September. The initial draft reflected actual expenses through July.

Also attached are the hearing notice and budget resolution that will be submitted to the State of Colorado. The notice will be published in the Denver Post.

Please let me know what questions, if any, you have.

Action Item: Hold fiscal year 2013 budget hearing and approve resolution adopting budget.

ROCKY FLATS STEWARDSHIP COUNCIL

2013 Budget -- Draft #2

			2012 Budget	2012 Actual/ Projected Expenses*
A. Personnel		**$ 93,000.00**	**$ 93,000.00**	**$ 82,200.00**
Executive Director and Technical Advisor ($7750/month for 12 months)				
B. Fringe Benefits		**$ -**	**$ -**	**$ -**
Benefits	**$ -**			
Staff are contract employees				
C. Travel		**$ 5,700.00**		
Out of State	**$ 4,500.00**		**$ 4,500.00**	**$ 3,164.00**
National DOE-related trips $1500/trip X 3 trips				
Local Travel	**$ 1,200.00**		**$ 1,200.00**	**$ 840.00**
$100/month for 12 months				
D. Computer Equipment		**$ 500.00**		
Purchase misc. hardware, software	**$ 500.00**		**$ 500.00**	**$ -**
E. Supplies		**$ 1,200.00**		
Supplies ($100/month for 12 months)	**$ 1,200.00**		**$ 1,200.00**	**$ 400.00**
F. Contractual		**$ 40,100.00**		
Attorney & Accounting Services	**$ 33,500.00**			
Legal Services ($1400/ month for 12 months)	$ 16,800.00		**$ 16,800.00**	**$ 15,753.00**
Accounting ($850/month for 12 months)	$ 10,200.00		**$ 10,200.00**	**$ 4,862.00**
Audit Report	$ 6,500.00		**$ 6,500.00**	**$ 4,059.00**
Admin. Services	**$ 4,600.00**			
Misc. Services: budget notices, etc.	$ 1,000.00		**$ 1,000.00**	**$ 900.00**
Minutes Preparation (6 meetings)	$ 3,600.00		**$ 3,600.00**	**$ 2,475.00**
Local Government Expenses	**$ 2,000.00**		**$ 2,000.00**	**$ 1,000.00**
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**	**$ 1,181.00**
Postage	**$ 1,500.00**		**$ 1,500.00**	**$ 812.00**
$125/month for 12 months				
Liability Insurance	**$ 4,000.00**		**$ 4,000.00**	
Property Contents/General Liability	$ 500.00			**$ 500.00**
Board Members	$ 3,500.00			**$ 2,856.00**
Telephone, email, etc.	**$ 2,700.00**		**$ 2,700.00**	**$ 2,021.00**
Website	**$ 2,000.00**		**$ 2,000.00**	**$ 500.00**

Hosting	$ 500.00				
Web master	$ 1,500.00				
Subscriptions/Memberships		**$ 2,100.00**		**$ 2,100.00**	
ECA membership	$ 950.00				**$ 950.00**
Conference registration fees	$ 500.00				**$ 500.00**
Newspapers	$ 650.00				**$ 650.00**
J. Indirect Costs			**$ -**		
N/A					
TOTAL PROPOSED BUDGET			**$ 154,800.00**	**$ 154,800.00**	**$ 123,523.00**

REVENUE FOR 2013

Local government contributions	$ 10,000.00
Department of Energy grant	$ 125,000.00
RFCLOG carry-over	$ 19,800.00
TOTAL	$ 154,800.00

*2012 Actual/Projected Expenses = actual January through September; projected October through December

STATE OF COLORADO

ROCKY FLATS STEWARDSHIP COUNCIL

The Board of Directors of the Rocky Flats Stewardship Council ("Stewardship Council"), State of Colorado, held a meeting at the Rocky Mountain Metropolitan Airport (formerly Jefferson County Airport), Mt. Evans Room, 11755 Airport Way, in Broomfield, Colorado 80021, on November 5, 2012, at the hour of 8:30 A.M., at which a quorum of the Board of Directors was present.

The Executive Director reported that prior to the meeting he had notified each of the Directors of the date, time and place of this meeting and the purpose for which it was called. He further reported that Notice of the Board Meeting has been posted in accordance with the Bylaws of the Stewardship Council and, to the best of his knowledge, remains posted to the date of this meeting.

Thereupon, Director _____, introduced and moved the adoption of the following Resolution:

RESOLUTION

A RESOLUTION SUMMARIZING EXPENDITURES AND REVENUES FOR THE GENERAL FUND AND ADOPTING A BUDGET AND APPROPRIATING SUMS OF MONEY TO THE GENERAL FUND IN THE AMOUNTS AND FOR THE PURPOSES SET FORTH HEREIN FOR THE ROCKY FLATS STEWARDSHIP COUNCIL, STATE OF COLORADO, FOR THE CALENDAR YEAR BEGINNING ON THE 1ST DAY OF JANUARY, 2013, AND ENDING ON THE LAST DAY OF DECEMBER, 2013.

WHEREAS, the proposed budget has been submitted to the Board of Directors of the Stewardship Council for its consideration; and

WHEREAS, upon due and proper notice, published in accordance with law as attached at Exhibit A, said proposed budget was open for inspection by the public at a designated place, a public hearing was held on November 5, 2012, and interested electors were given the opportunity to file or register any objections to said proposed budget; and

WHEREAS, the budget being adopted by the Board has been prepared based on the best information available to the Board regarding the effects of Article X, Section 20 of the Colorado Constitution; and

WHEREAS, whatever increases may have been made in the expenditures, like increases were added to the revenues so that the budget remains in balance, as required by law.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE

ROCKY FLATS STEWARDSHIP COUNCIL, STATE OF COLORADO:

Section 1. Summary of 2013 Revenues and 2013 Expenditures. That the estimated revenues and expenditures for the general fund for fiscal year 2013, as more specifically set forth in the budget attached hereto, are accepted and approved.

Section 2. Adoption of Budget. That the budget as submitted, amended, attached hereto and incorporated herein, is approved and adopted as the budget of the Rocky Flats Stewardship Council for fiscal year 2013.

Section 3. Appropriations. That the amounts set forth as expenditures and balances remaining, as specifically allocated in the budget, attached hereto, are hereby appropriated from the revenue of the general fund, to the general fund, for the purposes stated and no other.

Section 4. Budget Certification. That the budget shall be certified by Lisa Morzel, Chair of the Board, and made a part of the public records of the Rocky Flats Stewardship Council.

The foregoing Resolution was seconded by Director _____.

RESOLUTION APPROVED AND ADOPTED THIS 5th DAY OF NOVEMBER, 2012.

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2013 Budget Resolution

ROCKY FLATS STEWARDSHIP COUNCIL

By: _____
Lisa Morzel, Chair

ATTEST:

_____
Secretary

STATE OF COLORADO
ROCKY FLATS STEWARDSHIP COUNCIL

I, Lisa Morzel, hereby certify that I am a Director and qualified Chair of the Rocky Flats Stewardship Council, and that the foregoing constitutes a true and correct copy of the record of proceedings of the Board of Directors of said Stewardship Council, adopted at a meeting of the Board of Directors of the Rocky Flats Stewardship Council held on November 5, 2012, at the Rocky Mountain Metropolitan Airport (formerly Jefferson County Airport), Mt. Evans Room, 11755 Airport Way, in Broomfield, Colorado, as recorded in the official record of the proceedings of the Stewardship Council, insofar as said proceedings relate to the budget hearing for fiscal year 2013; that said proceedings were duly had and taken; that the meeting was duly held; and that the persons were present at the meeting as therein shown.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the official seal of the Stewardship Council this 5th day of November, 2012.

_____
Lisa Morzel, Chair

EXHIBIT A

NOTICE AS TO PROPOSED 2013 BUDGET

NOTICE IS HEREBY GIVEN that a proposed budget has been submitted to the **ROCKY FLATS STEWARDSHIP COUNCIL** for the fiscal year 2013. A copy of such proposed budget has been filed in the office Seter & Vander Wall, P.C. 7400 East Orchard Road, Suite 3300, Greenwood Village, Colorado, where same is open for public inspection. Such proposed budget will be considered at a meeting of the Rocky Flats Stewardship Council to be held at 8:30 A.M. on Monday, November 5, 2012. The meeting will be held at 11755 Airport Way, Mt. Evans Room, in Broomfield, Colorado. Any interested party may inspect the proposed budget and file or register any objections at any time prior to the final adoption of the 2013 budget.

BY ORDER OF THE EXECUTIVE COMMITTEE:
ROCKY FLATS STEWARDSHIP COUNCIL

By: /s/ SETER & VANDER WALL, P.C.
Attorneys for the District

Publish in: The Denver Post
Publish on: November 5, 2012

ROCKY FLATS STEWARDSHIP COUNCIL
2013 BUDGET MESSAGE

SUMMARY OF SIGNIFICANT ASSUMPTIONS

Services Provided

The purpose of the Rocky Flats Stewardship Council, consistent with public health, safety and welfare, is to provide an effective mechanism for local governments in the vicinity of Rocky Flats and their citizens to work together on issues of mutual concern relating to the future use and long-term protection of Rocky Flats, and to serve as a focal point for local government communication and advocacy with state and federal agencies regarding Rocky Flats issues.

Revenue

The Stewardship Council receives its revenues from the Department of Energy; Rocky Flats Coalition of Local Governments; and Local Government contributions (Boulder County, Jefferson County, City and County of Broomfield, Cities of Arvada, Boulder, Golden, Northglenn, Thornton, and Westminster and Town of Superior).

Expenditures

The funds are used for G&A, overhead expenses, as well as costs incurred with buffer zone and stewardship planning processes.

The Stewardship Council prepares its budget on the modified accrual basis of accounting.