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 Westminster -- Town of Superior
League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders
Arthur Widdowfield

Board of Directors Meeting – Agenda

Monday, February 7, 2011, 8:30 – 11:45 AM

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

8:30 AM Convene/Introductions/Agenda Review

8:35 AM Business Items (briefing memo attached)

1. Election of Stewardship Council Officers for 2011

Action Item: Elect officers

2. Consent Agenda
   - Approval of meeting minutes and checks

3. Approval of Resolution Re: 2011 Meeting Dates and Notice Provisions

Action item: Adopt resolution and meeting notice provisions

4. Executive Director's Report

9:05 AM Public Comment

9:15 AM Host DOE Quarterly Meeting (briefing memo attached)

- DOE will brief the Stewardship Council on site activities for the third quarter of 2010 (July – September).
- 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 Review and Approve Draft Washington, D.C. Talking Points (briefing memo attached)

- In the coming months Board members will meet in Washington, D.C. with Congress and DOE.

- To ensure that the message these members will carry reflect the position and policies of the Stewardship Council Board, the board will approve talking points for their meetings.

Action Item: Approve talking points

10:30 AM Update on Dam Breach EA and Changes to RFLMA Points of Compliance (briefing memo attached)

- Since the November meeting, DOE has hosted two public meetings to discuss development of an Adaptive Management Plan (AMP). The AMP focuses solely on the dam breach EA.
- Stewardship Council members have actively participated in this process.
- We will discuss both decision documents, identifying outstanding issues and concerns.
- The goal of the conversation is to chart a path forward to resolving these issues.

11:10 AM Briefing on History of Rocky Flats Stewardship Council (briefing memo attached)

- With changes to the Board composition since the group's inception in 2006, we will take a step back and discuss the reasons for the Stewardship Council – our legislative roots, mission, and focus since 2006.

11:35 AM Public comment

11:45AM Updates/Big Picture Review

1. Member Updates
2. Review Big Picture

Adjourn

Next Meetings: April 4 (proposed date; actual date to be determined at this meeting)
June 6 (proposed date; actual date to be determined at this meeting)

Business Items

- Cover memo
- November 8, 2010, draft board meeting minutes
- List of Stewardship Council checks
- 2011 meeting dates resolution

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MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Business Items
DATE: January 26, 2011

In addition to approving the consent agenda (approval of minutes and checks), the board will need to appoint officers for 2011 and adopt a resolution regarding 2011 meeting dates.

Election of officers
In accordance with the Stewardship Council bylaws, "the Chair, Vice Chair, and Secretary/Treasurer shall be elected annually by the Board of Directors. The terms shall commence at the first meeting of the Board held on or after February 1 of each year." There are no limitations as to the number of terms one can serve.

If you are interested in serving as an officer and have not yet let me know of your interest, please email or call me ASAP. That way I can notify your fellow board members of your interest. As of the drafting of this memo, the following people expressed interest in serving on the executive committee:

Bob Briggs (Westminster) – Chairman
Jeannette Hillery (League of Women Voters) – Vice Chairman or Secretary/Treasurer
Lisa Morzel (City of Boulder) – Vice Chairman or Secretary/Treasurer (and Chairman if Bob decides he does not want the position)
Sheri Paiz (Northglenn) – Vice Chairman or Secretary/Treasurer

Action Item: Elect officers

Resolution Re: 2011 Meeting Dates and Notice Provisions
Each year the Board is required to adopt a resolution establishing the meeting dates for the given year. In 2010 we met in February, April, June, September (second Monday of the month) and November (second Monday of the month). We also had a special meeting in August.

If we followed this schedule in 2011, we would meet:

February 7
April 4
June 6
September 12 (second Monday of the month)
November 14 (second Monday of the month)

I will be out of town on November 7 (first Monday of the month) and cannot make that meeting. I thus request that we meet on November 14 (second Monday of the month). The draft 2011 budget and work plan would be presented at the September meeting with formal approval at the November meeting.

The attached notice provisions track the Stewardship Council's bylaws.

Action item: Adopt resolution and meeting notice provisions

ROCKY FLATS STEWARDSHIP COUNCIL
Monday, November 8, 2010, 8:30 AM – 11:45 AM
Rocky Mountain Metropolitan Airport, Terminal Building, Mount Evans Room
11755 Airport Way, Broomfield, Colorado

Board members in attendance: Marc Williams (Director, Arvada), Maria VanderKolk (Alternate, Arvada), Lisa Morzel (Director, City of Boulder), Carl Castillo (Alternate, City of Boulder), Meagan Davis (Alternate, Boulder County), Lori Cox (Director, Broomfield), David Allen (Alternate, Broomfield), Greg Stokes (Alternate, Broomfield), Bill Fisher (Director, Golden), Kate Newman (Alternate, Jefferson County), Shelley Stanley (Alternate, Northglenn), Chris Hanson (Alternate, Superior), Jeannette Hillery (Director, League of Women Voters), Shirley Garcia (Director, Rocky Flats Cold War Museum), Ann Lockhart (Alternate, Rocky Flats Cold War Museum), Sue Vaughan (Alternate, League of Women Voters), Roman Kohler (Director, Rocky Flats Homesteaders), Arthur Widdowfield (citizen).

Stewardship Council staff members and consultants in attendance: David Abelson (Executive Director), Rik Getty (Technical Program Manager), Barb Vander Wall (Seter & Vander Wall, P.C.), Jennifer Bohn (RFSC accountant), Erin Rogers (consultant).

Attendees: Vera Moritz (EPA), Carl Spreng (CDPHE), Scott Surovchak (DOE-LM), Joe Legare (Stoller), Bob Darr (Stoller), Rick DiSalvo (Stoller), Jeremiah McLaughlin (Stoller), George Squibb (Stoller), John Boylan (Stoller), Jody Nelson (Stoller), Linda Kaiser (Stoller), Lynn Bowdidge (Stoller), Tom Pauling (DOE-LM), Jane Powell (DOE-LM), Ray Reling (Northglenn), Cathy Shugarts (Westminster), Doug Young (Sen. Udall).

Convene/Agenda Review

Chair Lori Cox convened the meeting at 8:36 a.m. The first item was the consent agenda. In reviewing the minutes, two small changes were suggested. Shelley Stanley should be listed as an Alternate, and Jennifer Bohn should be moved to the staff category. Roman Kohler moved to approve the September Board meeting minutes as corrected. The motion was seconded by Bill Fisher. The motion to accept the minutes passed 11-0. Marc Williams moved to approve the checks. The motion was seconded Jeannette Hillery. The motion passed 11-0.

Executive Director's Report

David Abelson provided several updates to the Board. First, he spoke about a letter that the Colorado Congressional delegation sent to the Secretary of Health and Human Services regarding the status of Rocky Flats worker compensation. In this letter, which David had emailed to the Board, the delegation requested a reconsideration of the Department's denial of Special Cohort Status for Rocky Flats workers as part of the Energy Employees Occupational Illness Compensation Program. David noted that Special Cohort status had been granted to limited groups of workers at Rocky Flats and most other major nuclear weapons complex sites, but additional classes of workers, the Congressman noted, have been improperly denied. This status allows workers to bypass the requirement to document their exposure which is a huge challenge

because of data gaps and misinformation in existing historical records. This situation has led to widespread frustration throughout the complex, as the previous administration denied claim in order to save costs. David will keep the Board updated on any future developments.

David next spoke about the first DOE-LM Stakeholder conference that was scheduled for the following week in Grand Junction. David is participating on a panel called 'Stakeholder Perspectives'. His message will touch on several points, such as the fact that commenting on official documents is the bare minimum necessary for substantive stakeholder involvement. He will advise that groups wanting to really participate in decisions must move beyond this regulatory minimum and engage in true dialogue. David next reported that met with Leroy Moore with the Rocky Mountain Peace and Justice Center to discuss the Peace Center's attempts to convince government entities that the Stewardship Council should be considered a FACA group. David they had agreed to share information about what each group was doing. David said he explained that the fundamental role of this group was to provide substantive engagement of community members, and provide a forum for dialogue. David said that Leroy had a different idea about the activities of the Stewardship Council. They also spoke about the Stewardship Council's positions regarding the McKinley bill, which Leroy supports. Rather than working against the bill, David explained that the Board had not taken a position over the last couple of years. Also, individual members of the Stewardship Council had testified both for and against the bill. David said he was hopeful that this meeting had made some progress and opened a forum for dialogue.

David said there had been some progress regarding projects funded through the Rocky Flats Natural Resource Damage (NRD) fund. He provided an update on a package of work that has been developed. These projects include the Spicer mineral acquisition by the Trust for Public Lands, and seed collection by Boulder and Boulder County. Also, Westminster is in the process of taking steps to secure a 26-acre parcel east of Indiana Street, and has grant request in to GOCO. Regarding the parcel at Section 16, there has been ongoing dialogue and negotiation, as well as a proposal to acquire additional mineral rights. David concluded his updates by noting that he had recently distributed the Board's quarterly finance report.

Scott Surovchak, DOE-LM, added some information regarding the purchase of mineral rights onsite. The owner, Charlie McKay, is open to negotiations regarding two remaining parcels for the first time, so DOE is putting together a letter of intent to purchase these mineral rights. This will need to be signed by the NRD trustees. These negotiations also include the lessee (Lafarge), so that the agreement may ensure that minerals are not mined after the purchase. If successful, this will leave two non-DOE owned parcels that are being actively mined. The parties are negotiating new access routes for these parcels. Carl Spreng noted that Charlie McKay had previously given a deadline for his participation. Scott said this is not an issue at present and that McKay has remained interested as long as the negotiations are serious. Lisa Morzel noted that in the past these parcels were priced higher than their appraised value, and asked Scott if DOE will be getting a new appraisal. Scott said they will do appraisal once a deal is reached, but DOE's determination of value will also consider the value to the Refuge. This process is also working within the existing NRD timeline.

Roman Kohler addressed the issue regarding the renewed request for Rocky Flats special cohort status and noted that part of the problem is that the Charlie Wolf Act has not been enacted. The letter sent by the delegation is another way to accomplish same thing. Jeannette Hillery asked David if Leroy Moore indicated whether Rep. McKinley was planning to introduce another Rocky Flats bill this year. David said he did not ask. He added that since the State House will be controlled by the Republicans, the bill would probably have a lesser chance of proceeding and probably would not get out of committee. David also noted that former Stewardship Council member Matt Jones was elected as a State Representative, and would be able to provide his knowledge to any future discussions in the legislature.

Public Comment

Doug Young with Senator Udall's office offered an update on Rocky Flats worker health issues. He emphasized that the delegation is still trying to push the Charlie Wolf Act. However, the challenge is that this bill needs a 'score' because of budget needs. They have received some preliminary information from the Congressional Budget Office that the cost will probably be in the multiple billions of dollars. Because of this, they are looking at other options. They have asked for an administrative rulemaking change. Also, the entire Colorado delegation (except Rep. Lamborn) sent the letter David Abelson spoke about regarding the Rocky Flats special exposure cohort petition. Doug noted that the new administration has been granting these petitions throughout the country, so he will keep the Board posted.

DOE Quarterly Meeting

DOE briefed on Rocky Flats activities for the second quarter of 2010 (April – June). DOE has posted the full report on its website. Activities for the quarter included surface water monitoring, groundwater monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).

Surface Water Monitoring – George Squibb
There was some non-RFLMA work during the quarter. Many of these activities have only been taking place since spring, so they will know a great deal more in terms of results in coming quarters. Pond operations included terminal pond discharges of A-4 and B-5 in May, and transfers from A-3 to A-4 intermittently during the quarter. As of June 1, ponds A-3, A-4, B-5, and C-2 and the Landfill Pond were holding approximately 19.8% of capacity.

There was 6.65 inches of total precipitation during the quarter, which as 120% of the average. Flow rates ranged from a low of 11% at SW027 to 116-183% at GS01, GS03, GS10 and SW093. SW027 is the South Interceptor Ditch. Previous, higher flows in this drainage originated in the 400 area. Performance Monitoring during the second quarter showed surface water quality results below standards at both the Original and Present Landfills. George showed a map of the monitoring locations. Next, he ran through a number of slides showing Point of Compliance (POC) monitoring results at the five locations. All were well below standards. He pointed out the timeframes on the graphs showing when the ponds were discharged, and results were still well below the standards. He explained that results showing a big drop in uranium was correlated with some water from Broomfield coming through site. David Allen noted this water

came from Coal Creek. He also asked about a tiny jump in plutonium and americium results at GS01. George said some of that could be analytical error because the results were within the error bar for the testing, and some could be related to extra runoff events. The change was from 2% of the standard to 6% of the standard. David Allen also asked about GS08 and an increase in uranium, in a different timeframe than the increases at GS01. George explained that was from a batch sample, and was based on only two releases in the last year (12-month rolling average). David Allen commented that he was realizing that this system of plotting can show a 'false' stability. George said one can also look at the 30-day rolling average and additional analyses in the annual report. He added that, depending on the scenario, the 12-month rolling average can be more sensitive than the 30-day. David Allen asked about the previous discharge at Pond C-2, and said he was looking at little blip at GS31.

Point of Evaluation (POE) monitoring during the second quarter showed water quality data at POE SW027 (through April 26) indicated the standard for Pu-239,-240 (0.15 pCi/L) would be exceeded when complete data are available through April 30. A formal notification and proposed actions were included in a Contact Record and a subsequent Status Report. Water quality at all other POEs was below applicable standards during the quarter.

George next spoke about non-RFLMA enhanced sampling. The site is looking to better understand fate and transport, specifically between POE's. They are looking for any increases or decreases in concentration as water moves downstream. They saw higher concentrations of uranium at SPOUT (at the SPPTS), and then noticed an increase at Pond A-1. David Abelson asked if they knew whether the uranium was natural or anthropogenic. George said they had done one round of LANL sampling to look at this, and are talking about how to use more analyses in looking at these locations as water moves through drainage. David Allen asked if the sampling at Pond A-3 was flow-through. George said it was, and that there was a storage component factoring in which he said we should not see as they move forward with continuous flow-paced sampling. They are also looking at 'synoptic storm event sampling', which is designed to evaluate the spatial variation of water quality during storm events – and is specifically targeted at the previously-breached dams A-1, A-2, B-1, B-2 and B-3. They currently see no change in plutonium or americium, which George said was a good thing. Shelley Stanley asked why different storm events were listed in the report for various sampling locations. George said it was based on how the samplers were triggered and samples were grabbed.

He said that the LANL sampling was designed to evaluate the spatial variation of uranium isotopic signatures – anthropogenic (site-related) vs. naturally occurring. The latest samples were collected in March, with an additional round of samples coming soon. The only area showing more anthropogenic uranium was the Solar Ponds. This shows that the treatment system is collecting more anthropogenic uranium, which is what it was designed to do. David Allen pointed to a graph showing results at SW027, and noted that it shows how quickly things can change at a sampling location and highlights the importance of monitoring to catch these events

Water Quality Control Commission Rulemaking – Rick DiSalvo
As previously discussed, the triennial review of site-wide basic standards for surface water took place in June. It resulted in no change to the uranium standard. Shirley Garcia asked about a WQCC request that Rocky Flats conduct a study and consider an ambient standard. Scott Surovchak said this is part of what George is working on regarding uranium and nitrates. Although it will take a while to complete, they are starting to get good data. This also feeds into the EA work regarding dam breaching. George noted that the mechanisms associated with migration of plutonium and americium are very well understood. However, uranium was not seen in the samples prior to closure because it was so diluted, which is why they are doing more studies now.

Groundwater Monitoring – John Boylan
During the quarter, the site performed both RFLMA and non-RFLMA monitoring. Solar Ponds Plume Treatment System (SPPTS) activities included:

- Temporarily increased overall system flow to manage spring moisture (which led to decrease in overall treatment effectiveness)
- Continued to collect samples at least weekly
    - Locations support evaluation of Phase II, III, and entire system
    - Most analyzed by ESL; not validated
    - Splits collected periodically for contract lab analysis
- Optimization of Phases II, III
    - Phase II unable to remove significant uranium under increased flow rates
    - Adjusted Cell A dosing (carbon, phosphorus), flow rates, and recirculation
    - Cell B performance improved with warming temps (very low flows)
- Attempted to improve flow conditions in original cells
    - Biocide application (diluted bleach) did not improve flows

These changes increased overall flow rates through the system. Flows decreased in the third quarter, but water built up in the collection trench. The effects of higher flows are consistent with previous flow increases with reduced treatment. Higher flow rate means shorter residence time in the treatment media. Flow rates decreased when water levels in trench reached desired depth.

At the Phase II SPPTS cell, uranium removal essentially ceased in July under higher-flow setting. The media was replaced in August and treatment effectiveness was restored. Lab studies were not fully confirmed by the full-scale application. Studies showed removing uranium before nitrate would be successful and long-lasting. However, they found uranium treatment may be most effective and efficient (i.e., media will last longer) after nitrate is removed. They are continuing to evaluate this system.

The Phase III pilot studies were completed. Cell A (inert media, carbon dosing) was selected for Phase IV alternative development. They are recommending that the original structure be converted to a small building that will house the nitrate treatment cells. This is more active than was desired, but affords the best treatment and easiest access to components for maintenance. It

requires upgrading the carbon storage tank to permit direct fill via tanker truck and also allows change if needed to allow uranium treatment after nitrate treatment.

Ongoing activities include designing Phase IV (full-scale nitrate treatment), operating Phase III to support nitrate treatment, and continuing to evaluate Phase II performance.

At the Mound System Plume Treatment System (MSPTS), activities include designing an effluent polishing component. This will be installed as part of the previously planned media replacement activity, with construction in early CY2011. Shirley Garcia asked which VOC's were being seen at the Mound treatment system. Scott Surovchak said that they are seeing daughter products, and breakdown of constituents.

Site Operations -- Jeremiah McLaughlin
Monthly inspections at the Original Landfill (OLF) were completed on April 29, May 27, and June 30. At the OLF, several seeps are being monitored. Seep 1 was dry throughout the second quarter. The Seep 2 and 3 areas were saturated and showed some surface expression but no surface flow. The Seep 4 and 5 areas were saturated and showed surface expression, but drained via Berm 3 as designed.

The Seep 6 area had three new locations that showed surface expression and supported wetland vegetation. Seep 7 flowed 2-5 gallons per minute (gpm) in the second quarter. Water from Seep 7 flowed down the Berm 7 channel and the top of the buttress. Seep 8 flowed at approximately 5 gpm throughout the quarter. Samples were taken in two places at Seep 7 in April and were analyzed for VOCs, SVOCs, metals, and uranium. Only a few analytes were detected above the detection limits. All detected analytes were well below RFLMA surface water standards. Shirley Garcia asked which analytes were detected at Seep 7. Jeremiah listed several, and noted that the full results could be found in Appendix B of the Quarterly Report.

Also at the OLF, settlement monuments were surveyed in June and data were within the expected range per the Original Landfill Monitoring and Maintenance Plan, which is between 1.34 and 2.86 feet depending on the location. Inclinometers were measured in May and June. Inclinometers 2, 3, and 4 were also measured in April after high precipitation and noted deflection in March. There was very little deflection on the April 19 measurement. All inclinometers were measured May 5 due to snow on the OLF surface at the end of April. Inclinometer 2 showed approximately 3 inches of movement on the May 5 measurement. Inclinometer 3 showed little movement during this period. Inclinometer 4 could not be measured below 13-feet. Previous measurements were to a 29-foot depth. This indicated that the tube has broken at 13 feet. They were able to measure approximately 1 inch of movement after May 5.

Inclinometers 5, 6, and 7 measured approximately 0.25 to 0.5 inch of deflection, and Inclinometer 1 showed little deflection. Per the M&M Plan, a qualified geotechnical engineer was consulted. This was consistent with the findings of the 2008 geotechnical investigation. An organic layer near the bedrock surface is a weak zone, especially if it becomes lubricated by subsurface moisture. Seeps 4 and 7 also showed significant moisture and had surface expressions during this period

David Allen asked when the inclinometers were installed and if there was reason to be concerned that one was already lost. Jeremiah said they were installed about two years ago and that losing one was really not unexpected. The path forward is to continue to monitor. Rick DiSalvo said that the results are confirming previous observations, and are providing additional data. They will read the inclinometers for as long as they last, but there is no recommendation to install additional ones.

Jeremiah also reported on the status of OLF Slumps. A significant crack in Berm 1 was noted on April 26 following a precipitation event of approximately 3 inches. The crack was 100 feet long, 6 to 8 inches deep, had 2 to 4 inches of vertical displacement, and followed the same contour as previously reported cracks in the area. It appears consistent with the observed inclinometer deflection. Per the M&M Plan, the crack was filled and compacted with Rocky Flats Alluvium to the extent possible on the same day. Larger-scale repairs were completed with heavy equipment on June 7.

A slump at the end of Berm 7 was observed on March 30 and inspected in April. A design drawing outlining proposed modifications to Berm 7 was submitted to CDPHE and verbally approved in May. The design included removing soil mass that extended into the East Perimeter Channel, backfilling area with soil and rock, and re-contouring the area to match the surrounding grade. Repairs were completed on June 3.

At the Present Landfill (PLF), the quarterly inspection was completed on May 27. No areas of concern were observed. No vegetation inspection was completed because the cover was meeting vegetation success criteria.

Rick DiSalvo completed the presentation with a review of the OLF Soil Sampling project. This project is a preliminary evaluation of residual contamination levels in relation to CDPHE's August 2008 policy, End of Post-Closure Care. Pre-closure residual soil contamination data are between 15 and 19 years old. This study will provide data for comparison to risk-based levels, but does not necessarily mean that post-closure controls for the OLF would end. Some M&M requirements possibly may be reduced. The area also remains subject to land-use restrictions under the Environmental Covenant. Rick said they will provide more detail in the 3rd quarter presentation. He said the area where they are seeing most movement is a historical slide area and was primarily a fill area when the landfill was constructed.

CDPHE approved the OLF SAP on June 9, 2010. The goal is to drill twelve 25-foot boreholes, below 2-foot cover soil and sample at 5-foot core intervals. There are six OLF IM/IRA targeted locations (three from the surface soil data set, and 3 from subsurface soil data set), as well as six additional locations to provide subsurface data from the east and west side. They will analyze for VOCs, SVOCs, pesticides and PCBs, metals, and plutonium, americium, and uranium. Sampling took place June 29 to July 8. 228 samples were collected, and data evaluation and summary reporting will be completed in the third and fourth quarters. They are seeing nothing unexpected, with much lower levels of naturally-degrading materials, and no VOC's to speak of. Levels are decreasing, and are well below risk-based levels. Rick noted that the primary contaminants of concern at the OLF are related to cars, tar and roads. Uranium and depleted

uranium hotspots on the surface were removed during remediation, and none have been seen in the landfill.

Approve Fiscal Year 2011 Work Plan

David Abelson opened discussion of the 2011 work plan by noting that the Board reviewed a draft at the September meeting and no changes were offered. Marc Williams moved to approve the 2011 Stewardship Council Work Plan. The motion was seconded by Roman Kohler. Prior to voting, the Board began a discussion. David Allen commented that Bill Fisher had brought up the issue of outreach at the last meeting. He handed out a May 2010 memo from DOE General Counsel to DOE-LM's David Geiser. He then said he would almost recommend having the Board's attorney go through the work plan to make sure there is nothing in it that would put the organization in jeopardy. He said he was particularly referring to the section about developing and circulating information.

David Abelson said it would have been helpful with regard to planning for this discussion if he had been given a heads-up about this concern before meeting. He said that as the aforementioned DOE memo clearly provides, the Stewardship Council is not a FACA group and is no way even coming close to FACA issues. DOE does not ask for a collective opinion of this group, which comes together to discuss and debate issues. David noted that the Board has issued only two recommendations since 2007. Further, he said he has had multiple discussions with Barb Vander Wall about this FACA issue. David Abelson said this group is supposed to have dialogue and disseminate information.

David Allen said he does not want the organization to be jeopardized, and wants to make sure the work plan is consistent with the Stewardship Council's enacting legislation. David Abelson pointed out that the first three bullets in the work plan were taken directly from the legislation. He said that with rare exception, this Board serves as the only public outreach for DOE, in its role as LSO. He added that nothing has come from any agency that says that the Board is moving beyond its scope, and that DOE just gave the organization a grant extension. He said if there was something we were coming up against, staff would be flagging it as their job to monitor this.

Lori Cox asked David Allen to point to something specific in the work plan that causes him concern. David brought up Item 5 in section regarding 'DOE Management Responsibilities' which calls for the Stewardship Council to provide information about Rocky Flats long-term stewardship to the community. Jeannette responded to David by noting that he had been on the Board for quite a while and had witnessed how this group offers balance and has standards in addressing scientific issues. She said that the Board has always discussed ways of doing public outreach and has deferred to the Rocky Flats Cold War Museum to do much of the public education. She added that most of the content of the work plan is unchanged from year to year and that she was surprised that this was being brought up now. Barb Vander Wall referred to the letter from General Counsel and cautioned the group not to take items flagged in the memo out of context. David Allen said he was not implying that this is a FACA group, and was just bringing these issues forward as a concern. Bill Fisher said that it was important to discuss these issues. He added that, in reviewing the work plan and the Board's enacting legislation, he

believed that the Board's outreach is exactly what it is supposed to be. Joe Cirelli said that did not hear David Allen challenge what the Board is doing, only that a legal review of the language in the work plan would be beneficial. He added that he was satisfied that staff has reviewed it appropriately. Lisa Morzel said she also did not see these remarks as an attack on what the group is doing. She stated that it was imperative that the public sees the Stewardship Council as an independent group, which warrants some vigilance about sticking to the mission of the group, and she was glad this issue was raised. She said it was too bad members of the public or press do not regularly attend these meetings.

Sue Vaughan noted that when she uses the talking points that were developed by this group, she always prefaces her talk by stating that they came from the Stewardship Council. Scott Surovchak stated that Barb was right about that memo. He said it was primarily a conversation between attorneys. Several factors led up to the creation of the memo. It was principally designed to be an informational memo to newer people within the administration and bring them up to speed on the role of the Stewardship Council, because their initial take was completely inconsistent with how this group really functions. David Abelson added that, in response to discussions about how this Board disseminates information, staff will be attaching public statements to minutes and setting up a new area on the website for posting this type of content. He went on to point out that the language for Item 5 in the work plan that David Allen referred to earlier came directly out of the LSO Organization Plan that DOE approved. That Organization Plan, David noted, was included in the Board packet for this meeting. He reiterated that DOE is not treating this Board as a FACA group, and is not asking for consensus advice from a collective body. However, this does not mean that this group cannot provide comments. Chair Lori Cox referred back to the motion and second that were on the table. The motion passed 11-0.

Fiscal Year 2011 Budget Hearings

The Board reviewed the draft budget at the September meeting and no changes were offered. Prior to finalizing the budget, the Board must hold budget hearings and allow time for public comment. Chair Lori Cox officially opening the budget hearing. There were no comments from the audience or the Board. Lori then closed the budget hearing.

Bill Fisher moved to approve the Fiscal Year 2011 budget. The motion was seconded by Lisa Morzel. The motion passed 11-0.

Update on Changes to RFLMA Points of Compliance and Dam Breach EA

Broomfield, Westminster and Northglenn have been meeting with DOE and CDPHE to try to resolve the impasse on DOE's proposals to move the existing surface water and groundwater points of compliance stationed along Indiana Street to the eastern edge of the COU, and to manage ponds A-4, B-5 and C-2 in a flow-through configuration and later breach them.

David Allen updated the group on these issues. He said that since the last meeting, there had been a couple of meetings with DOE, on both management and staff levels. These meetings included a fairly thorough walk-through of difference between 12-month and 30-day rolling averages. Public comments were due on October 19, and those submitted by Broomfield,

Westminster, Northglenn and the Woman Creek Reservoir Authority were included in the Board's packet. He said that the path forward is up in air. DOE has requested a technical group be formed to discuss the adapted management plan. He added that Broomfield is still working to prepare a model for a working group as discussed previously. The EA and RFLMA are just some of the issues this group can address. There are additional issues related to groundwater treatment, landfills and other systems. Shelley Stanley said Northglenn had nothing different to report, and that they are looking forward to participating in the technical working group.

David Abelson asked whether Northglenn and Broomfield were on same page with the development of this technical working group. He said it was his understanding that the letter from DOE requesting a working group was specific to issues related to the EA. Scott Surovchak noted that the first meeting of DOE's technical discussion was going to be in late November. The meeting would be a public working group and would not be limited to downstream, communities. Lori Cox said she was concerned about moving forward with DOE's suggestion. She said Martha Rudolph CDPHE executive director) had committed two or three months earlier to put a group together. Lori noted this new plan should be fine as long as CDPHE and DOE are working together on composition, goals, and scope for the group. Carl Spreng said that he was fairly certain that Martha Rudolph's intent was to move things forward and that she would be happy to consolidate meetings. Lori asked if there was to be an actual structure proposed by Martha. Carl said that the primary intent was to identify issues and move forward, and that he thought they could meet these objectives without requiring separate 'Martha Rudolph' meetings. He will confirm this with her and report back to the Stewardship Council.

Briefing on History of Rocky Flats Stewardship Council

David Abelson noted that the request for a report on the history of the Stewardship Council was made by Shari Paiz, and since she was not in attendance and the meeting was running long, asked if the Board would like to move forward with this agenda item. Lori Cox asked for a sense of the Board, and the item was tabled for a future meeting.

Public comment

There was none.

Updates/Big Picture Review

Next Meeting: February 7, 2011 (remainder of 2011 schedule to be determined at February 7th meeting)

February 7, 2011

Potential Business Items

- Elect 2011 Officers
- Adopt resolution regarding 2011 meeting dates

Potential Briefing Items

- Host LM quarterly public meeting
- Approve Washington, D.C. talking points
- Continue discussing water issues (focus on changes to RFLMA)
- Continue discussing interpretive signs for Rocky Flats

April 4, 2011 (?)

Potential Briefing Items

- Initial discussion with DOE about Stewardship Council's role as LSO
- Update on Original Landfill
- Continue discussing water issues (focus on dam breach EA)

David Abelson said that he would like to see the Board start a discussion in April regarding the Stewardship Council's role as LSO and the Triennial Review. He also noted that he started including a list of 'Issues to Watch' on the big picture schedule. Barb Vander Wall announced that the paperwork for re-appointment of members will be sent to each local government, and will be distributed to various contacts within each entity. David Allen requested that the election of Board officers be scheduled at the beginning of the February meeting, as last year there was an issue with maintaining a quorum.

EXECUTIVE SESSION

At 11:54 a.m. Joe Cirelli made a motion to move into Executive Session for the purpose of discussing personnel issues, and to receive legal advice on such issues, as authorized under Sections 24-6-402(4)(b) and (f), C.R.S. Maria VanderKolk seconded the motion. The motion passed 11-0.

The Board reconvened from Executive Session at 12:10 a.m. and affirmed that no actions had been taken during Executive Session.

The meeting was adjourned at 12:11 p.m.

Respectfully submitted by Erin Rogers.

Rocky Flats Stewardship Council
Check Detail
October 20, 2010 through January 17, 2011

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Check		**10/28/2010**		**CASH-Wells Fargo-Operating**		**-3.50**
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Check		**11/29/2010**		**CASH-Wells Fargo-Operating**		**-3.50**
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Check		**12/27/2010**		**CASH-Wells Fargo-Operating**		**-3.50**
				Admin Services-Misc Services	-3.50	3.50
TOTAL					-3.50	3.50
Check	**1456**	**11/7/2010**	**Qwest**	**CASH-Wells Fargo-Operating**		**-26.48**
				Telecommunications	-26.48	26.48
TOTAL					-26.48	26.48
Bill Pm...	**1457**	**11/7/2010**	**Crescent Strategies, LLC**	**CASH-Wells Fargo-Operating**		**-7,596.15**
Bill	10/31...	10/31/2010		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-130.40	130.40
				TRAVEL-Local	-45.50	45.50
				Postage	-215.99	215.99
				Printing	-354.26	354.26
TOTAL					-7,596.15	7,596.15
Bill Pm...	**1458**	**11/7/2010**	**Jennifer A. Bohn**	**CASH-Wells Fargo-Operating**		**-306.00**
Bill	10-94	10/31/2010		Accounting Fees	-306.00	306.00
TOTAL					-306.00	306.00
Bill Pm...	**1459**	**11/7/2010**	**Seter & Vander Wall, P.C.**	**CASH-Wells Fargo-Operating**		**-98.70**
Bill	59361	10/31/2010		Attorney Fees	-98.70	98.70
TOTAL					-98.70	98.70
Bill Pm...	**1460**	**11/7/2010**	**Blue Sky Bistro**	**CASH-Wells Fargo-Operating**		**-195.85**
Bill	380	10/1/2010		Misc Expense-Local Government	-195.85	195.85
TOTAL					-195.85	195.85
Bill Pm...	**1461**	**12/10/2010**	**Blue Sky Bistro**	**CASH-Wells Fargo-Operating**		**-195.85**
Bill	428	11/8/2010		Misc Expense-Local Government	-195.85	195.85
TOTAL					-195.85	195.85
Bill Pm...	**1462**	**12/10/2010**	**Crescent Strategies, LLC**	**CASH-Wells Fargo-Operating**		**-7,492.34**
Bill	11/30...	11/30/2010		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-126.90	126.90
				TRAVEL-Local	-499.45	499.45
				Postage	-15.99	15.99
TOTAL					-7,492.34	7,492.34

Rocky Flats Stewardship Council
Check Detail
October 20, 2010 through January 17, 2011

Type	Num	Date	Name	Account	Paid Amount	Original Amount
Bill Pm...	**1463**	**12/10/2010**	**Jennifer A. Bohn**	**CASH-Wells Fargo-Operating**		**-187.00**
Bill	10-103	11/30/2010		Accounting Fees	-187.00	187.00
TOTAL					-187.00	187.00
Bill Pm...	**1464**	**12/10/2010**	**Seter & Vander Wall, P.C.**	**CASH-Wells Fargo-Operating**		**-2,244.00**
Bill	49615	11/30/2010		Attorney Fees	-2,244.00	2,244.00
TOTAL					-2,244.00	2,244.00
Check	**1465**	**12/10/2010**	**Qwest**	**CASH-Wells Fargo-Operating**		**-28.43**
				Telecommunications	-28.43	28.43
TOTAL					-28.43	28.43
Check	**1466**	**12/10/2010**	**Energy Communities All...**	**CASH-Wells Fargo-Operating**		**-500.00**
				Subscriptions/Memberships	-500.00	500.00
TOTAL					-500.00	500.00
Bill Pm...	**1467**	**1/9/2011**	**Crescent Strategies, LLC**	**CASH-Wells Fargo-Operating**		**-7,271.13**
Bill	12/31...	12/31/2010		Personnel - Contract	-6,850.00	6,850.00
				Telecommunications	-122.40	122.40
				TRAVEL-Local	-89.50	89.50
				Postage	-15.99	15.99
				Meeting Expense	-19.30	19.30
				Website	-173.94	173.94
TOTAL					-7,271.13	7,271.13
Bill Pm...	**1468**	**1/9/2011**	**Jennifer A. Bohn**	**CASH-Wells Fargo-Operating**		**-365.50**
Bill	10-110	12/31/2010		Accounting Fees	-365.50	365.50
TOTAL					-365.50	365.50
Bill Pm...	**1469**	**1/9/2011**	**Seter & Vander Wall, P.C.**	**CASH-Wells Fargo-Operating**		**-919.24**
Bill	59817	12/31/2010		Attorney Fees	-919.24	919.24
TOTAL					-919.24	919.24
Bill Pm...	**1470**	**1/9/2011**	**The Rogers Group, LLC**	**CASH-Wells Fargo-Operating**		**-550.00**
Bill	12/13...	11/7/2010		Personnel - Contract	-550.00	550.00
TOTAL					-550.00	550.00
Check	**1471**	**1/9/2011**	**Qwest**	**CASH-Wells Fargo-Operating**		**-26.97**
				Telecommunications	-26.97	26.97
TOTAL					-26.97	26.97

RESOLUTION
OF THE
BOARD OF DIRECTORS
OF
ROCKY FLATS STEWARDSHIP COUNCIL

regarding

2011 MEETING SCHEDULE AND NOTICE PROVISIONS

WHEREAS, pursuant to an Intergovernmental Agreement dated as of February 13, 2006, and as amended thereafter, (the "IGA"), the Rocky Flats Stewardship Council ("Stewardship Council") was established; 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 Board of Directors of the Stewardship Council has a duty to perform certain obligations in order to assure the efficient operation of the Stewardship Council; and

WHEREAS, on March 6, 2006, the Board of Directors of the Stewardship Council adopted Bylaws regarding the operations of the Stewardship Council, governing, *inter alia*, meeting and notice requirements; and

WHEREAS, § 24-6-402, C.R.S., of the Colorado Sunshine Law, specifies the duty of the Board of Directors at its first regular meeting of the calendar year to designate a public posting place within the boundaries of the Stewardship Council for notices of meetings, in addition to any other means of notice; and

WHEREAS, pursuant to its Bylaws and Colorado laws, the Stewardship Council desires to establish its regular meeting schedule and location, and to designate its public posting place(s) for 2011.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE ROCKY FLATS STEWARDSHIP COUNCIL THAT:

1. Meeting Schedule/Location. The Board of Directors determines to hold regular meetings the **first Monday of February, April, and June, and the second Monday of September and November at 8:30 AM** at the Rocky Mountain Metropolitan Airport Terminal Building, 11755 Airport Way, Broomfield, Colorado; and to hold special meetings as may be necessary, in accordance with the Bylaws of the Stewardship Council.

2. Regular Meeting Notice. The Board of Directors determines to annually post its regular meeting schedule at the Clerk and Recorder's office of the following counties: Jefferson, Boulder, Broomfield, Adams and Weld; and at the City or Town Clerk's Office of the following cities and/or towns: Arvada, Boulder, Broomfield, Westminster, Golden, Superior and Northglenn, for posting in a public place. In addition, the Board shall post its regular meeting schedule on the website established for the Stewardship Council. These notices shall remain posted throughout the year. At least seven (7) days advance notice of the regular meeting time, place and date shall be provided to the directors and

alternate directors, and to those members of the public who so request. The general nature of the business proposed to be transacted or the purpose of any meeting of the Board of Directors shall be specified in the notices of such meeting where possible.

3. Special Meeting Notice. In the event of a special meeting, a notice of such special meeting shall be posted at least seventy-two (72) hours in advance at the clerks' offices of the counties, cities and towns indicated above, for posting in a public place. At least seventy-two (72) hours advance notice of the special meeting time, place and date shall be provided to the directors and alternate directors, and to those members of the public who so request. The general nature of the business proposed to be transacted at or the purpose of any meeting of the Board of Directors shall be specified in the notices of such meeting where possible. The Board of Directors' ability to act on matters brought before it at a special meeting is restricted to those items specified in the notice.

4. Emergency Meeting Notice. Should the Board of Directors determine an emergency special meeting is necessary, a notice of such emergency meeting shall be posted at least twenty-four (24) hours in advance at the clerks' offices of the counties, cities and towns indicated above in accordance with the Colorado Open Meetings Act. The general nature of the business proposed to be transacted at, or the purpose of, any meeting of the Board of Directors shall be specified in the notices of such meeting where possible. The Board of Directors' ability to act on matters brought before it at a special meeting is restricted to those items specified in the notice.

5. Written Notice Requirements. Written notice of each meeting of the Board of Directors shall be given by telefax or electronic mail; provided, however, that in the instance of any Director who in writing requests that such notice not be given by telefax or electronic mail, the notice shall be by hand delivery to an address within the boundaries of the Parties designated in writing.

6. Additional Notification. The Stewardship Council shall maintain a list of persons who, within the previous two years, have requested notification of all meetings, or of meetings with discussions of certain specified policies, and shall provide reasonable advance notification of such meetings to the individuals.

APPROVED AND ADOPTED THIS _____ DAY OF _____, 2011.

(SEAL)

ROCKY FLATS STEWARDSHIP COUNCIL

By: _____
Chair

ATTEST:

By: _____

RFSCo/RESO
ST1026
0756.0008; .0007

DOE Quarterly Meeting

- Cover memo
- Quarterly report (minus appendices)

ROCKY FLATS STEWARDSHIP COUNCIL

P.O. Box 17670
Boulder, CO 80308-0670
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(303) 412-1200
(303) 600-7773 (f)

MEMORANDUM

TO: Stewardship Council Board
FROM: Rik Getty
SUBJECT: DOE Quarterly Briefing
DATE: January 26, 2011

We have scheduled one hour for DOE to present its quarterly briefing for the third quarter of 2010 (July - September). The report (minus the appendices) is attached. The full report can also be found at: http://www.lm.doe.gov/Rocky_Flats/Documents.aspx The appendices include more extensive information about the landfill inspections, results of special original landfill (OLF) soil sampling, and water quality results.

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, pond operations, security, general maintenance, etc.).

Highlights of the surveillance and maintenance activities are excerpted below.

Present Landfill (PLF) Inspection
The routine PLF inspection for the third quarter was performed on August 31, 2010. No significant problems were observed during these inspections. Copies of the landfill inspection forms are presented in Appendix A.

Original Landfill (OLF) Inspection
Routine OLF inspections during the third quarter were performed on July 19, August 31, and September 23. The landfill cover vegetation was evaluated on July 8. The completed inspection forms are presented in Appendix A. As discussed in the first quarter of CY 2010 report, 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 third quarter.

The repaired outfall of Berm 7 continued to look good throughout the third quarter. Water flowing from Seep 7 down the trough of Berm 7 and into the East Perimeter Channel ceased to reach the end of the berm early in the third quarter. The erosion controls placed over the project area are functioning as designed and vegetation has started to come back in the area. As with the Berm 1 area, the Berm 7 project location is monitored during routine and non-routine inspections for any changes in its condition.

Special OLF sampling

Contact Record 2010-01 documented consultation regarding performing targeted soil sampling at the OLF to evaluate residual contamination levels in relation to CDPHE's August 2008 Policy, *End of Post-Closure Care.* CDPHE's *End of Post-Closure Care* (2008) policy discusses criteria to be evaluated to determine when post-closure care of hazardous waste landfills is no longer necessary, based on a demonstration that the closed unit does not significantly threaten human health or the environment. The CDPHE criteria include whether a closed unit may meet "clean closure" standards, or whether a performance-based evaluation shows that the closed unit does not pose a threat for which post-closure care is needed. The "clean closure" standards are based on CDPHE-specified residential- and unrestricted-use soil-screening levels.

DOE believes that the OLF sampling effort can provide data to characterize a reduction in contaminant levels over time. The data can help establish a baseline for current conditions and make it easier to surmise when certain OLF post-closure maintenance requirements might be ended. Under the CDPHE policy, ending post-closure care would not necessarily mean that post-closure controls for the OLF would end. However, certain monitoring and maintenance requirements may be reduced, given that the Rocky Flats Site will remain subject to land use restrictions under an existing Environmental Covenant.

Twelve locations were selected for sampling and the project was completed on July 8. A map of the OLF Sampling and Analysis Plan selected sampling locations is included in Appendix B. A total of 228 samples were collected and analyzed (depending on the amount of recovery) for the following analytes:

- Volatile organic compounds (VOCs)
- Semivolatile organic compounds
- Pesticides and polychlorinated biphenyls
- Metals and radiochemical analytes

Laboratory analysis was completed in the third quarter report. The sample data are included in Appendix B. A report of the evaluation of the results will be presented in the annual report for CY 2010.

Groundwater Treatment Systems

Mound Site Plume Treatment System (MSPTS)

Routine maintenance included raking the media each week, checking and flushing filters, and inspecting influent and effluent flow conditions. The parallel upflow configuration established in June 2010 was maintained. Refer to Section 3.1.10.1 for information on water quality sampling. Planning for replacing the treatment media at the MSPTS was underway and possible effluent polishing approaches were under consideration as the quarter ended.

East Trenches Plume Treatment System (ETPTS)

Routine maintenance activities included checking influent and effluent flow conditions and water levels in the cells. Refer to Section 3.1.10.2 for information on water quality sampling.

Solar Ponds Plume Treatment System (SPPTS)

Routine maintenance activities included weekly inspections of the solar/battery systems that power the pumps, the operation of the pumps, and influent and effluent flow conditions. The Phase II and III upgrades that were completed in the second quarter of CY 2009 continued to be a focal point for optimization efforts. In particular, the treatment media in the Phase II cell was replaced in August 2010 to improve uranium removal. The new media, comprised of zero-valent iron (ZVI) mixed with quartzite gravel, performed well through the balance of the quarter.

Erosion Control and Re-vegetation

Maintenance of the site erosion control features required continued effort throughout the third 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. Several areas were interseeded with additional native species to increase vegetation cover.

Water Monitoring Highlights

Pre-discharge samples are collected prior to discharge at terminal Ponds A-4, B-5, and C-2 on North Walnut Creek, South Walnut Creek, and Woman Creek, respectively. Pre-discharge samples were collected at Pond C-2 during the third quarter. Data indicated that release of the retained water would result in acceptable water quality at the downstream POCs. About 7 million gallons were discharged from C-2 in late July and early August.

During the third quarter, the water monitoring network successfully met the targeted monitoring objectives. The RFLMA network consisted of 11 automated gaging stations, 10 surface water grab-sampling locations, 8 treatment system locations, 99 wells, and 8 precipitation gages. During the quarter, 16 flow-paced composite samples, 9 surface water grab samples, 25 treatment system samples, and 10 groundwater samples were collected (in accordance with RFLMA protocols) and submitted for analysis. An additional 5 flow-paced composites were in progress during the quarter and were not complete by the end of the quarter. All water-quality data at the RFLMA POCs remained well below the applicable standards.

Elevated levels of plutonium-239,240 slightly above the surface water standard were measured at POE SW027 (upstream of Pond C-2 in Woman Creek drainage) during the second quarter. These data are presented and discussed further in Section 3.1.3.2. All other analyte concentrations at SW027 remained below reporting levels as of the end of the third quarter.

All POE analyte concentrations at GS10 (South Walnut Creek drainage) and SW093 (North Walnut Creek drainage) remained below reporting levels as of the end of the third quarter. Erosion and runoff controls, as well as extensive revegetation efforts, have been effective in measurably reducing both sediment transport and constituent concentrations. As of the end of

the quarter, these monitoring locations continued to show plutonium-239, plutonium-240, and americium-241 activities well below the RFLMA standards. With the removal of impervious areas (resulting in decreased runoff), the stabilization of soils within the drainages, and the progression of revegetation, water quality is expected to continue to be meet applicable standards.

Please contact me if you have any questions.

LMS/RFS/S07307

Rocky Flats Site Quarterly Report of Site Surveillance and Maintenance Activities Third Quarter Calendar Year 2010

January 2011

U.S. DEPARTMENT OF ENERGY | Legacy Management

Contents

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Abbreviations

AOC	area of concern
CAD/ROD	Corrective Action Decision/Record of Decision
CDPHE	Colorado Department of Public Health and Environment
CY	calendar year
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ETPTS	East Trenches Plume Treatment System
FC	Functional Channel
gpm	gallon per minute
GWIS	Groundwater Intercept System
LM	Office of Legacy Management
µg/L	microgram 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
PMJM	Preble's meadow jumping mouse
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*
SID	South Interceptor Ditch
Site	Rocky Flats Site
SPPTS	Solar Ponds Plume Treatment System
TSS	total suspended solids
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
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* (DOE 2006) issued on September 29, 2006, for the Rocky Flats Site (the Site). 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 Corrective Action Decision/Record of Decision (CAD/ROD) as described in the *Rocky Flats Legacy Management Agreement* (RFLMA) (DOE 2007a). Attachment 2 of the RFLMA defines the Central Operable Unit 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 Site Operations Guide* (RFSOG) (DOE 2009a) 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 third quarter of calendar year (CY) 2010 (July 1 through September 30). This report describes the following:

- 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 per the requirements in RFLMA Attachment 2, Table 3. The exit strategy for vegetation monitoring as outlined in Table 3 states that when the PLF M&M Plan grassland success criteria have been met, vegetation monitoring is no longer required. Based on the vegetation monitoring conducted in 2009 and reported in the 2009 Annual Report (DOE 2010a), these criteria have been met. Therefore, the specific PLF vegetation monitoring as outlined in the RFLMA will no longer be conducted, but rather the PLF vegetation will now be monitored as part of the ongoing general Site vegetation monitoring.

2.1.1.1 Inspection Results

The routine PLF inspection for the third quarter of CY 2010 was performed on August 31, 2010. No significant problems were observed during these inspections. Copies of the landfill inspection forms are presented in Appendix A.

2.1.1.2 Settlement Monuments

The annual settlement monument surveys were performed in December 2009. The next round of surveys will be completed in December 2010. 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 2009c) 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 5-year review of the Site (DOE 2007b).

2.1.2.1 Inspection Results

Routine OLF inspections during the third quarter of CY 2010 were performed on July 19, August 31, and September 23, 2010. The landfill cover vegetation was evaluated on July 8, 2010. The completed inspection forms are presented in Appendix A.

2.1.2.2 Settlement Monuments

The OLF settlement monuments were surveyed on September 23, 2010. Survey data indicate that settling at each monument does not exceed the limits published in the OLF M&M Plan (DOE 2009c). 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 (Figure 1).

Movement of the inclinometers has been monitored approximately monthly since installation. Inclinometers deflect based on 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 2009c).

Inclinometer measurements were taken on July 28, August 30, and September 30, 2010. Measurements at inclinometers 5, 6, and 7 were not taken on August 30 but were taken on September 9, 2010. The measurements taken on September 30 were not able to be plotted, and the problem was traced to inadvertently reversing the orientation of the monitoring probe within the inclinometer tubes while taking the field readings.

The inclinometer readings showed little deflection. The largest deflection noted was for inclinometer 4. This inclinometer, which could not be measured below 13 feet in depth after May 2010 (as discussed in the quarterly report for the second quarter of CY 2010 [DOE 2010c]), showed approximately 0.1 inch of deflection.

In accordance with the OLF M&M Plan, a qualified geotechnical engineer has been consulted. The deflection noticed in this quarter, which had high precipitation, appears consistent with the findings of the geotechnical investigation that an organic layer lies near the bedrock surface and is a weak zone for the overlying soil, especially if it becomes lubricated by subsurface moisture. Seeps 4 and 7 also showed significant moisture and had surface expressions during this period. As described in Contact Record 2008-07, in 2008, the West Perimeter Channel was regraded, and a channel drain was added to improve the stability of the western side of the OLF cover.

Further geotechnical evaluation of whether the seeps are contributing to significant instability is planned, and results will be provided in subsequent quarterly reports.

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 third quarter. The following discussion of the results of the inclinometer monitoring contains additional information regarding slope stability monitoring.

Berm 1

No new cracking was observed in the Berm 1 area during the third quarter of CY 2010. The decrease of movement in the area can most likely be attributed to the reduced seep activity on the landfill cover during the late summer months. Staff continued to perform routine and nonroutine inspections of the Berm 1 area to monitor this location for any changes.

Berm 7

The repaired outfall of Berm 7 continued to look good throughout the third quarter of CY 2010. Water flowing from Seep 7 down the trough of Berm 7 and into the East Perimeter Channel ceased to reach the end of the berm early in the third quarter. The erosion controls placed over the project area are functioning as designed and vegetation has started to come back in the area. As with the Berm 1 area, the Berm 7 project location is monitored during routine and nonroutine inspections for any changes in its condition.

As noted in the Stormwater Management Structure portion of the March 2010 OLF Inspection Report, which is included in Appendix A of the quarterly report for the first quarter of CY 2010 (DOE 2010b), Berm 7 was observed to be saturated at the base with some evidence of flow through the berm. Several very heavy precipitation events occurred in March and April 2010, which contributed to seep expressions on the OLF face in historical seep locations (see Section 2.1.2.5). A major contribution of the water being conveyed in the Berm 7 channel was from the expression of Seep 7, north and south of the eastern end of Berm 3.

Because this condition persisted in April 2010, a qualified geotechnical engineer was consulted to assist with further evaluation of the impacts of the saturated conditions on stability of the berm. Conditions of Seep 7 are noted in monthly inspection reports after May 2010 as becoming progressively smaller, and no visible runoff from Seep 7 to the Berm 7 channel was noted in August 2010.

The conclusion of the geotechnical engineer's evaluation, which was completed in October 2010, is that Berm 7 will perform adequately during a design storm event. The evaluation plan and geotechnical engineer's report will be included in the annual report for CY 2010.

Figure 1. Original Landfill Observed Surface Cracking Location and Inclinometer Locations

2.1.2.5 Seeps

Seeps at the OLF were evaluated during the monthly inspections as well as during unscheduled visits. Cover seeps on the OLF have dried up significantly since the last inspection report. Wetland vegetation is still thriving in most seep areas; however, there is much less surface expression associated with the seeps. Individual seep flows are outlined below.

Seep 1 was dry throughout the third quarter of CY 2010. The Seep 2 and 3 areas were saturated throughout the quarter and supported significant wetland vegetation. Seep 4 was saturated and showed surface expression throughout the third quarter. The Seep 4 area continued to support the thriving wetland vegetation that exists in this area throughout most of the year. The Seep 5 and 6 areas were dry on the surface for most of the third quarter; however, the wetland vegetation that exists in these areas continued to be successful. The Seep 7 area dried up significantly during the summer months and ceased to have any surface flow. The area was saturated only temporarily after precipitation events. Approximately one-half of the wetland vegetation in the Seep 7 area died toward the end of the quarter. Seep 8 continued to flow at a rate of 2 to 5 gallons per minute (gpm) throughout the third quarter of CY 2010. This location continues to see flow throughout most of the year as this is the designed drain outfall for the buttress.

2.1.2.6 OLF Soil Sampling Project

The OLF soil sampling project was discussed in the quarterly report for the second quarter of CY 2010 (DOE 2010c). Twelve locations were selected for sampling and the project was completed on July 8, 2010.

A map of the OLF Sampling and Analysis Plan (DOE 2010d) selected sampling locations is included in Appendix B.

A total of 228 samples were collected and analyzed (depending on the amount of recovery) for the following analytes:

- Volatile organic compounds (VOCs)
- Semivolatile organic compounds
- Pesticides and polychlorinated biphenyls
- Metals and radiochemical analytes

Laboratory analysis was completed in the third quarter of CY 2010. The sample data are included in Appendix B.

A report of the evaluation of the results will be presented in the annual report for CY 2010.

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 drain pipe 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 (GWIS) and flow from the PLF seep.

2.2.1 Mound Site Plume Treatment System

Routine maintenance activities continued at the MSPTS through the third quarter of CY 2010. These activities included raking the media each week, checking and flushing filters, and inspecting influent and effluent flow conditions. The parallel upflow configuration established in June 2010 was maintained. Refer to Section 3.1.10.1 for information on water quality sampling.

Planning for replacing the treatment media at the MSPTS was underway and possible effluent polishing approaches were under consideration as the quarter ended.

2.2.2 East Trenches Plume Treatment System

Routine maintenance activities continued at the ETPTS through the third quarter of CY 2010. These activities included checking influent and effluent flow conditions and water levels in the cells. Refer to Section 3.1.10.2 for information on water quality sampling.

2.2.3 Solar Ponds Plume Treatment System

Routine maintenance activities continued at the SPPTS through the third quarter of CY 2010. 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.

The Phase II and III upgrades that were completed in the second quarter of CY 2009 continued to be a focal point for optimization efforts. In particular, the treatment media in the Phase II cell was replaced in August 2010 to improve uranium removal. The new media, comprised of zero-valent iron (ZVI) mixed with a quartzite gravel, performed well through the balance of the quarter.

Operation of Phase III Cell A, which is filled with inert media and dosed with a liquid carbon source, was revised slightly. Through the second quarter of CY 2010, influent to the cell was separately dosed with the selected carbon source and a liquid phosphorus source. Having determined an appropriate ratio, beginning on July 1 a custom blend of the liquid carbon with added phosphorus was used. In addition, the dose rate was reduced in mid-September.

An auxiliary distribution gallery was installed in late July in the original Cell 1 (which is filled mainly with sawdust and is designed to treat nitrate) to improve flow through the Cell 1 media. Although flow through the media did improve, the gallery became clogged very quickly. Attempts to eliminate the clogging were successful, but only for a short time as the gallery quickly became clogged again. Clogging appeared to be due to a combination of biological fouling and mineralogical precipitates. Consistent with this observation, a sample of precipitates that was collected from the bottom of Phase III Cell A and analyzed appeared to be

predominantly biological detritus, possibly including carbonates of calcium (calcite) and iron (siderite) with some phosphates (possibly vivianite).

Section 3.1.10.3 summarizes the non-RFLMA sampling conducted at the SPPTS in the third quarter of CY 2010.

2.2.4 PLF Treatment System

Routine maintenance activities continued at the PLFTS through the third quarter of CY 2010. These activities generally consisted of inspecting the system for any issues or potential problems.

2.3 Erosion Control and Revegetation

Maintenance of the site erosion control features required continued effort throughout the third quarter of CY 2010, 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 third quarter of CY 2010. 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 quarterly report presents data collected during the third quarter of CY 2010. This section includes:

- A discussion of analytical results for the point-of-compliance (POC), point-of-evaluation (POE), PLF, and OLF monitoring objectives
- A summary of Area of Concern (AOC) well, Boundary well, Evaluation well, and Sentinel well monitoring; treatment system monitoring; and Resource Conservation and Recovery Act (RCRA) groundwater monitoring and Surface Water Support monitoring at the Site.

Monitoring locations, sampling criteria, and evaluation protocols for all water monitoring objectives in the following sections are detailed in RFLMA Attachment 2 and the RFSOG. Appendix C provides analytical water quality data for the third quarter of CY 2010. More detailed interpretation and discussion will be provided in the annual report for CY 2010.

3.1.1 Water Monitoring Highlights

During the third quarter of CY 2010, the water monitoring network successfully met the targeted monitoring objectives as required by the RFLMA and in conformance with RFSOG implementation guidance. The RFLMA network consisted of 11 automated gaging stations, 10 surface water grab-sampling locations, 8 treatment system locations, 99 wells, and 8 precipitation gages. During the quarter, 16 flow-paced composite samples, 9 surface water grab

samples, 25 treatment system samples, and 10 groundwater samples were collected (in accordance with RFLMA protocols) and submitted for analysis.[1] An additional 5 flow-paced composites were in progress during the quarter and were not complete by the end of the quarter.

All water-quality data at the RFLMA POCs remained well below the applicable standards through the third quarter of CY 2010.

Elevated levels of plutonium-239,240 were measured at POE SW027 during the second quarter. These data are presented and discussed further in Section 3.1.3.2. All other analyte concentrations at SW027 remained below reporting levels as of the end of the third quarter of CY 2010.

All POE analyte concentrations at GS10 and SW093 remained below reporting levels as of the end of the third quarter of CY 2010. Erosion and runoff controls, as well as extensive revegetation efforts, have been effective in measurably reducing both sediment transport and constituent concentrations. As of the end of the third quarter of CY 2010, these monitoring locations continued to show plutonium-239, plutonium-240, and americium-241 activities well below the RFLMA standards. With the removal of impervious areas (resulting in decreased runoff), the stabilization of soils within the drainages, and the progression of revegetation, water quality is expected to continue to be acceptable.

Groundwater monitoring results will be evaluated as part of the annual report for CY 2010.

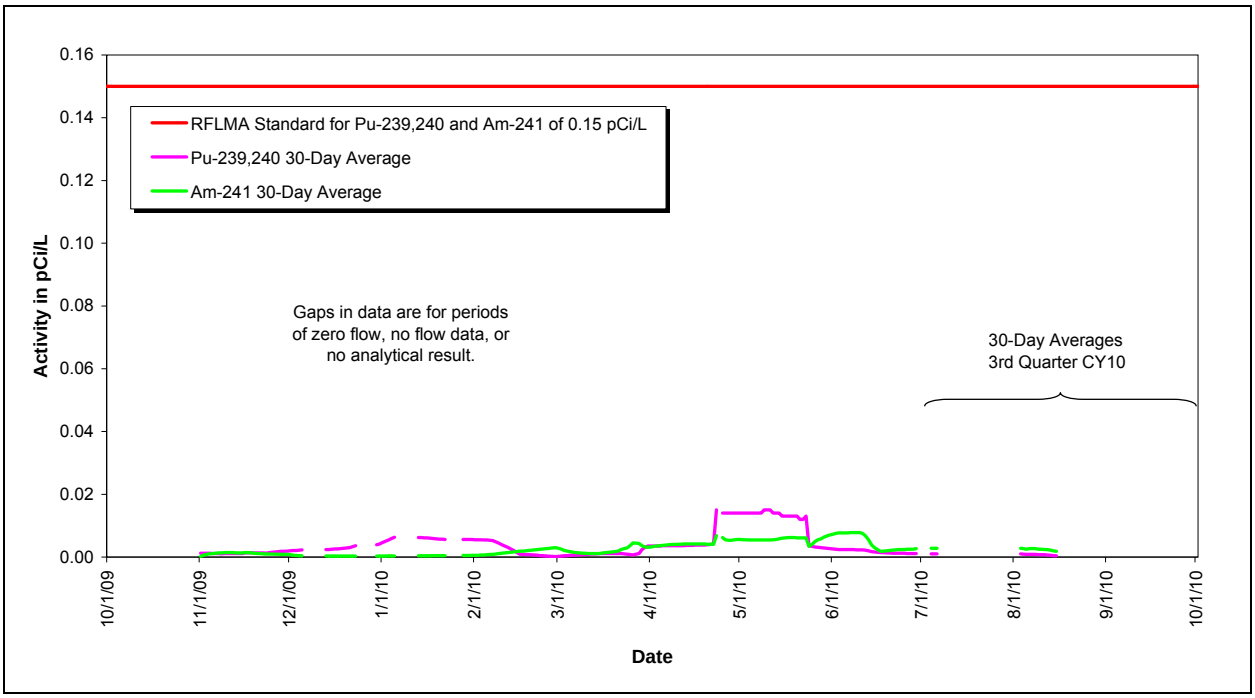
[1] Composite samples consist of multiple aliquots ("grabs") of identical volume. Each grab is delivered by the automatic sampler to the composite container at each predetermined flow volume or time interval. During the third quarter of CY 2010, the 16 flow-paced composites comprised 785 individual grabs.

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.

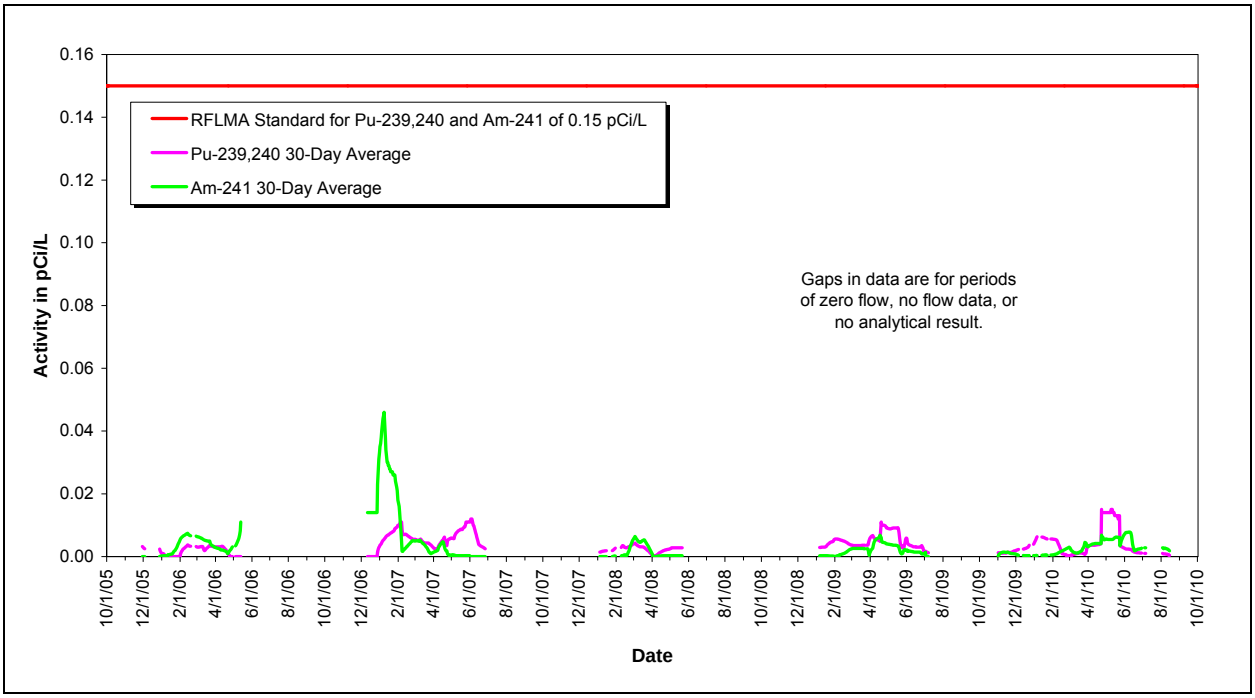
3.1.2.1 Monitoring Location GS01

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. Figure 3 and Figure 5 show sampling data from 2005 through third quarter CY 2010.



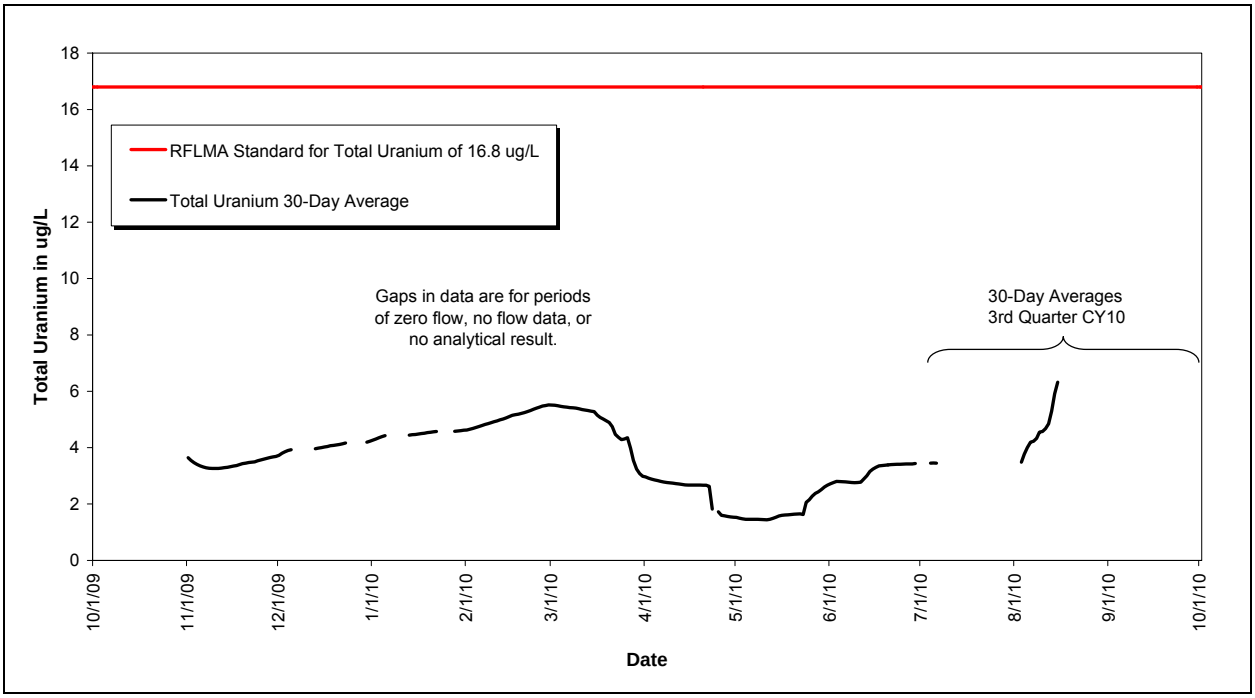
pCi/L = picocuries per liter; the composite sample started on 8/17/10 is still in progress

Figure 2. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS01: Calendar Year Ending Third Quarter CY 2010



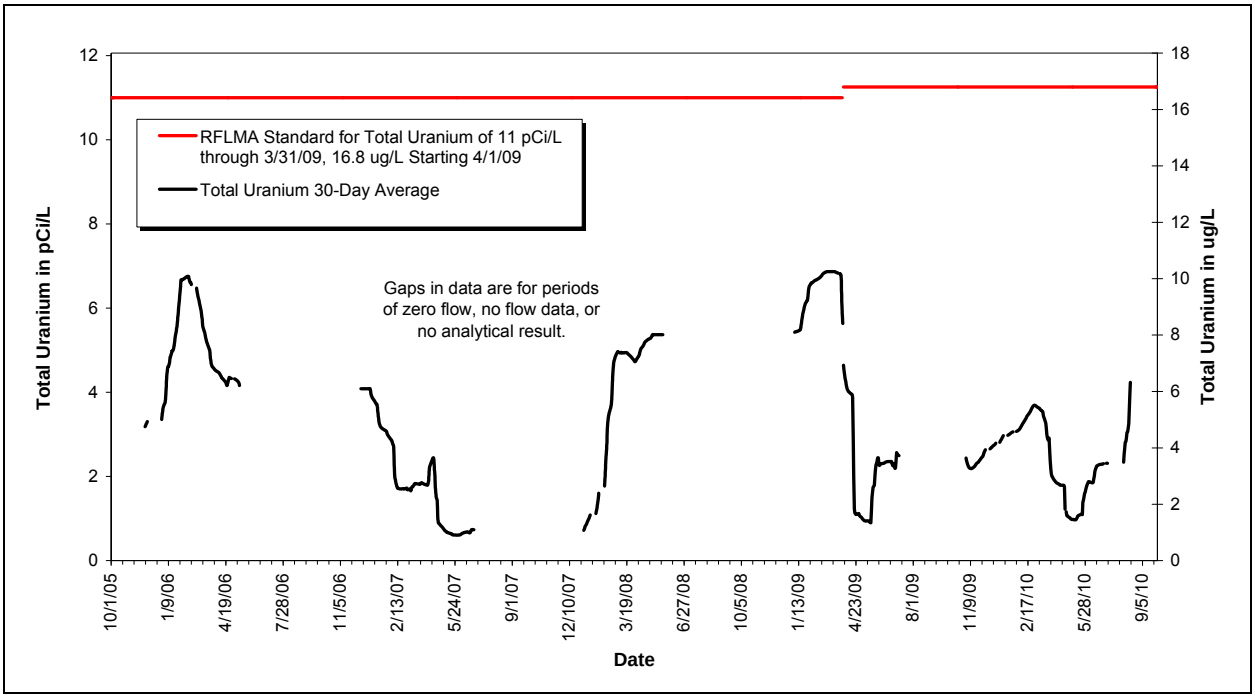
pCi/L = picocuries per liter; the composite sample started on 8/17/10 is still in progress

Figure 3. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS01: Post-Closure Period Ending Third Quarter CY 2010



µg/L = micrograms per liter; the composite sample started on 8/17/10 is still in progress

Figure 4. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS01: Calendar Year Ending Third Quarter CY 2010

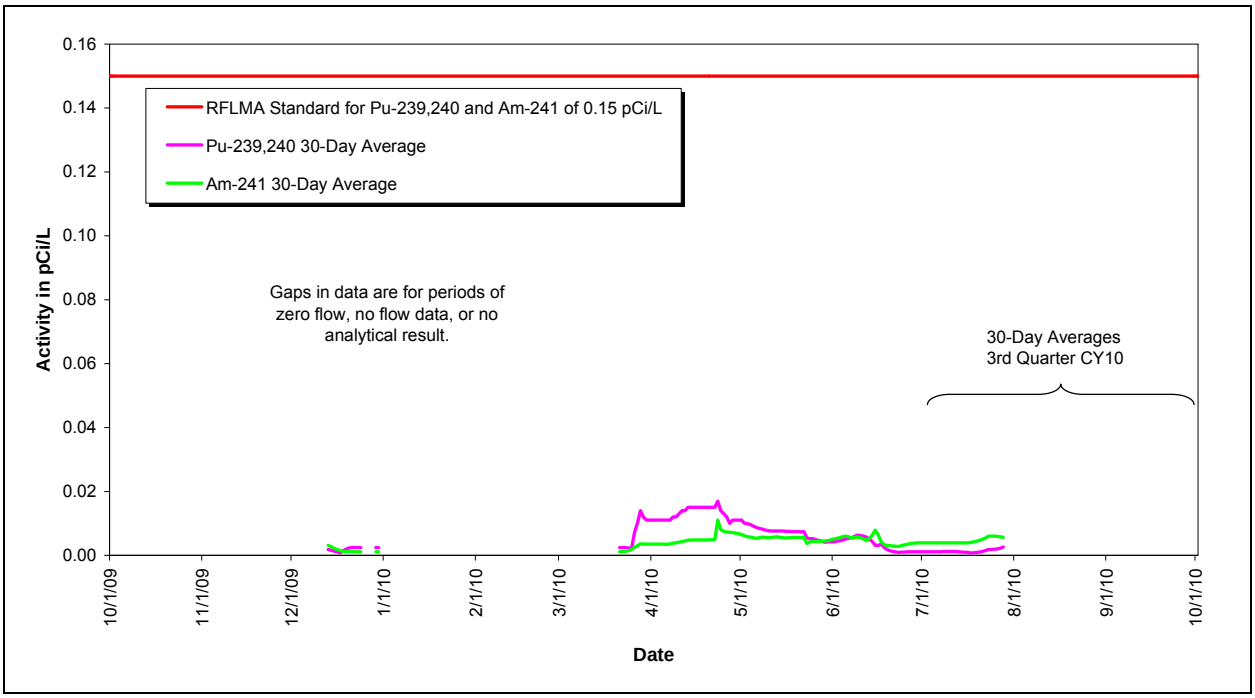


pCi/L = picocuries per liter; µg/L = micrograms per liter; the composite sample started on 8/17/10 is still in progress

Figure 5. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS01: Post-Closure Period Ending Third Quarter CY 2010

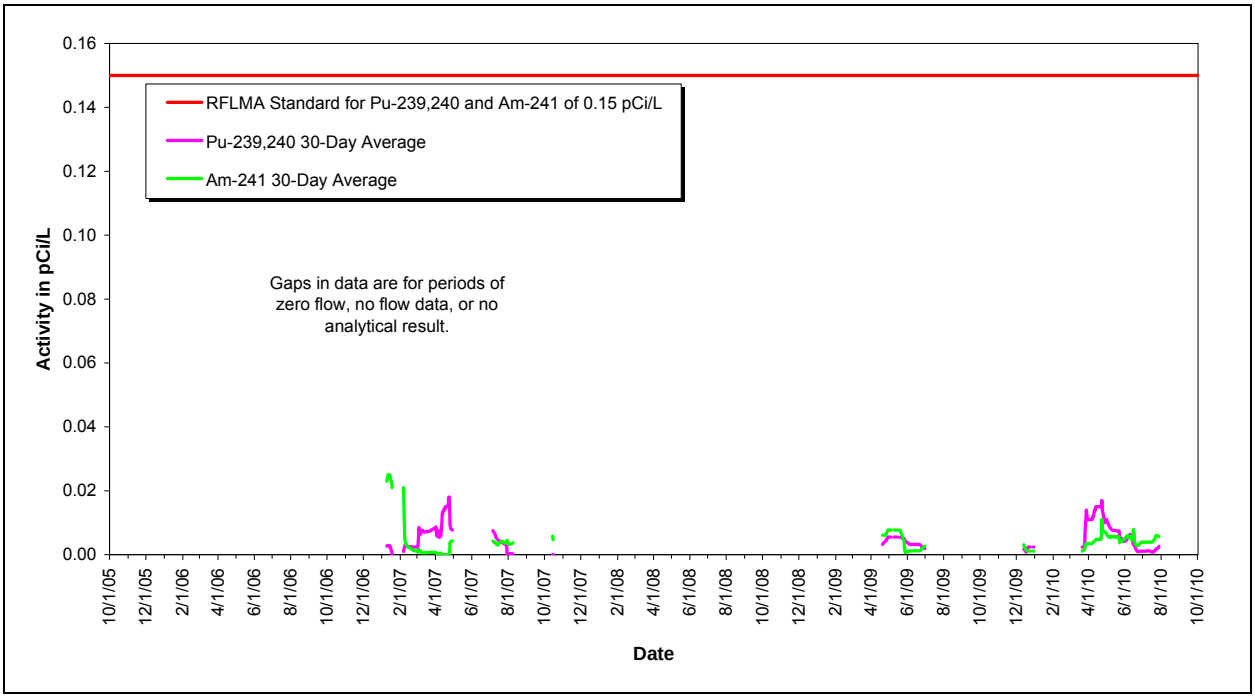
3.1.2.2 Monitoring Location GS03

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. Figure 7, Figure 9, and Figure 11 show sampling data from 2005 through third quarter CY 2010.



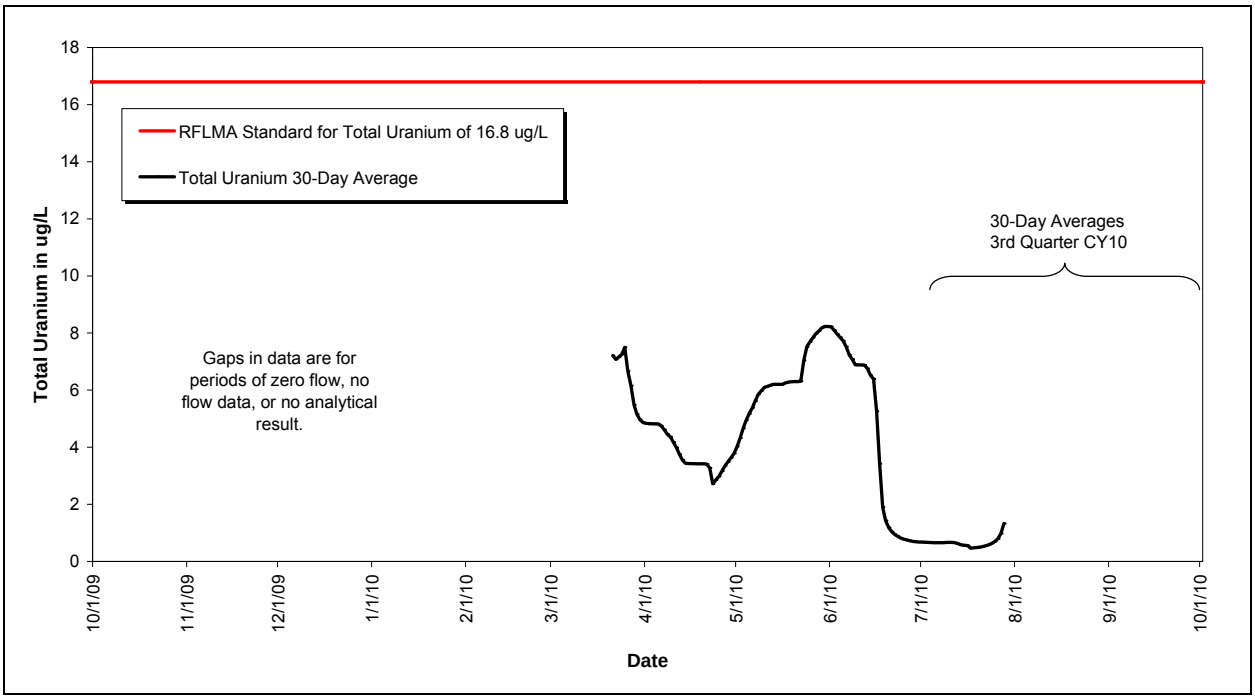
pCi/L = picocuries per liter; the composite sample started on 7/29/10 is still in progress

Figure 6. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS03: Calendar Year Ending Third Quarter CY 2010



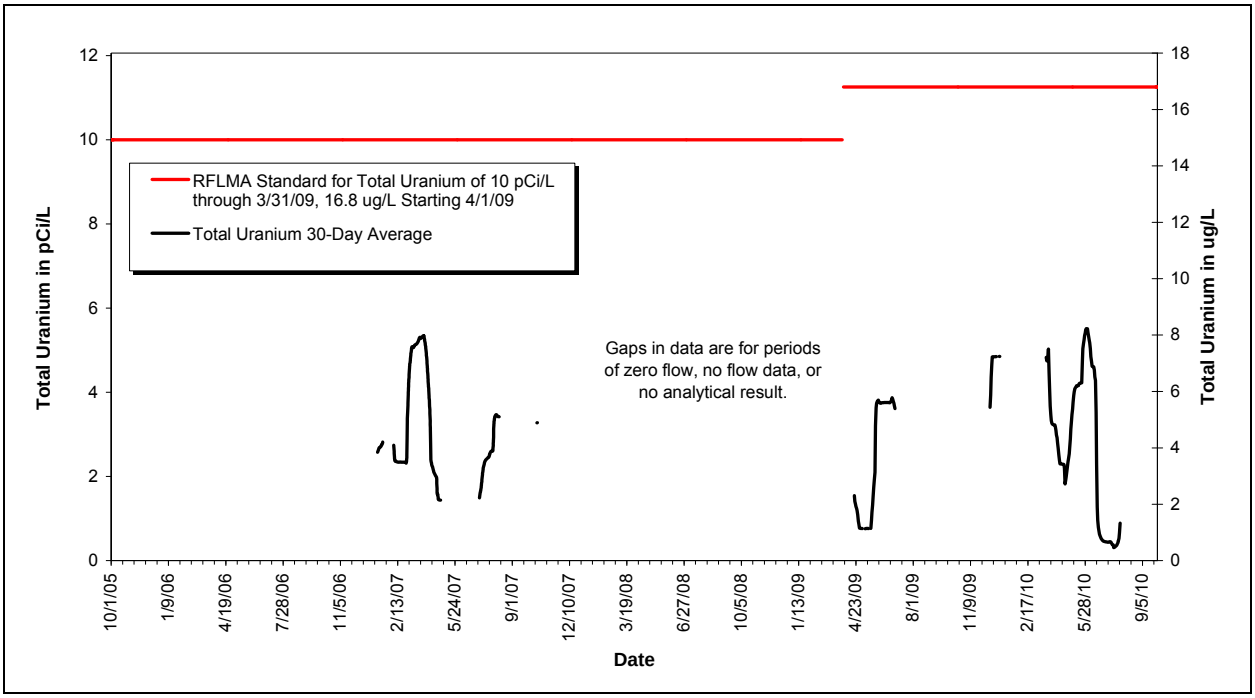
pCi/L = picocuries per liter; the composite sample started on 7/29/10 is still in progress

Figure 7. Volume-Weighted 30-Day Average Plutonium and Americium Activities at GS03: Post-Closure Period Ending Third Quarter CY 2010



µg/L = micrograms per liter; the composite sample started on 7/29/10 is still in progress

Figure 8. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS03: Calendar Year Ending Third Quarter CY 2010



µg/L = micrograms per liter; pCi/L = picocuries per liter; the composite sample started on 7/29/10 is still in progress

Figure 9. Volume-Weighted 30-Day Average Total Uranium Concentrations at GS03: Post-Closure Period Ending Third Quarter CY 2010

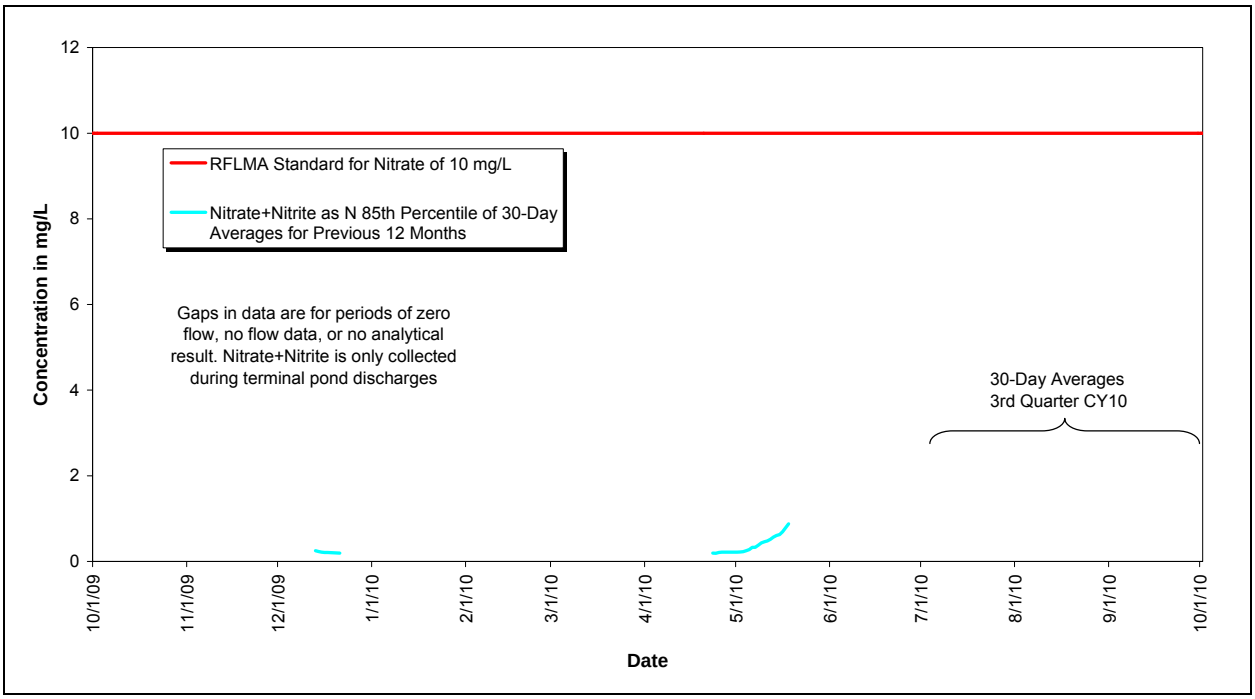


Figure 10. Volume-Weighted 85th Percentile of 30-Day Average Nitrate+Nitrite Concentrations at GS03: Calendar Year Ending Third Quarter CY 2010

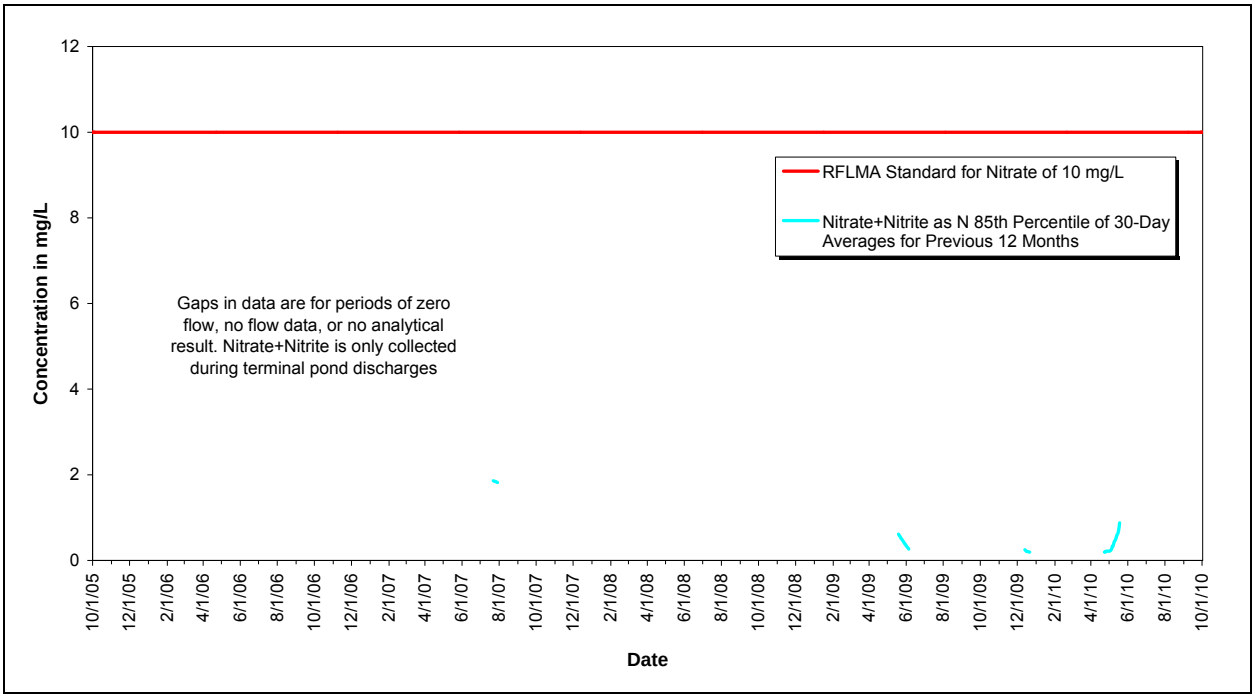
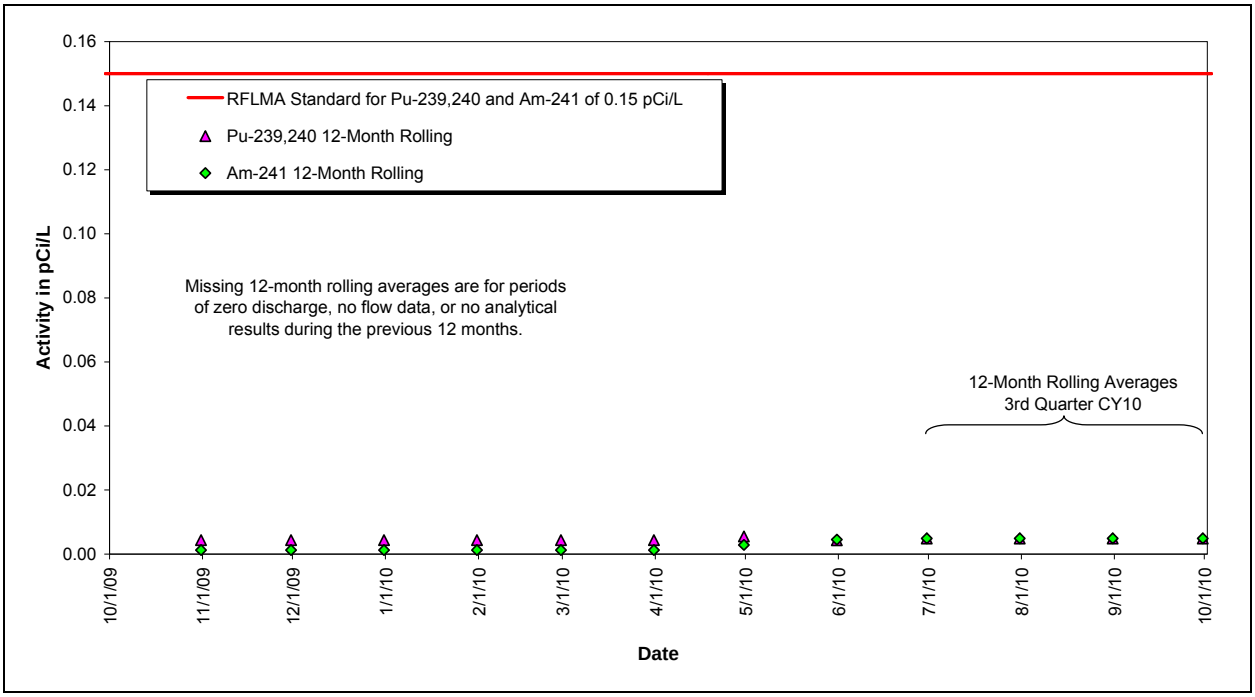


Figure 11. Volume-Weighted 85th Percentile of 30-Day Average Nitrate+Nitrite Concentrations at GS03: Post-Closure Period Ending Third Quarter CY 2010

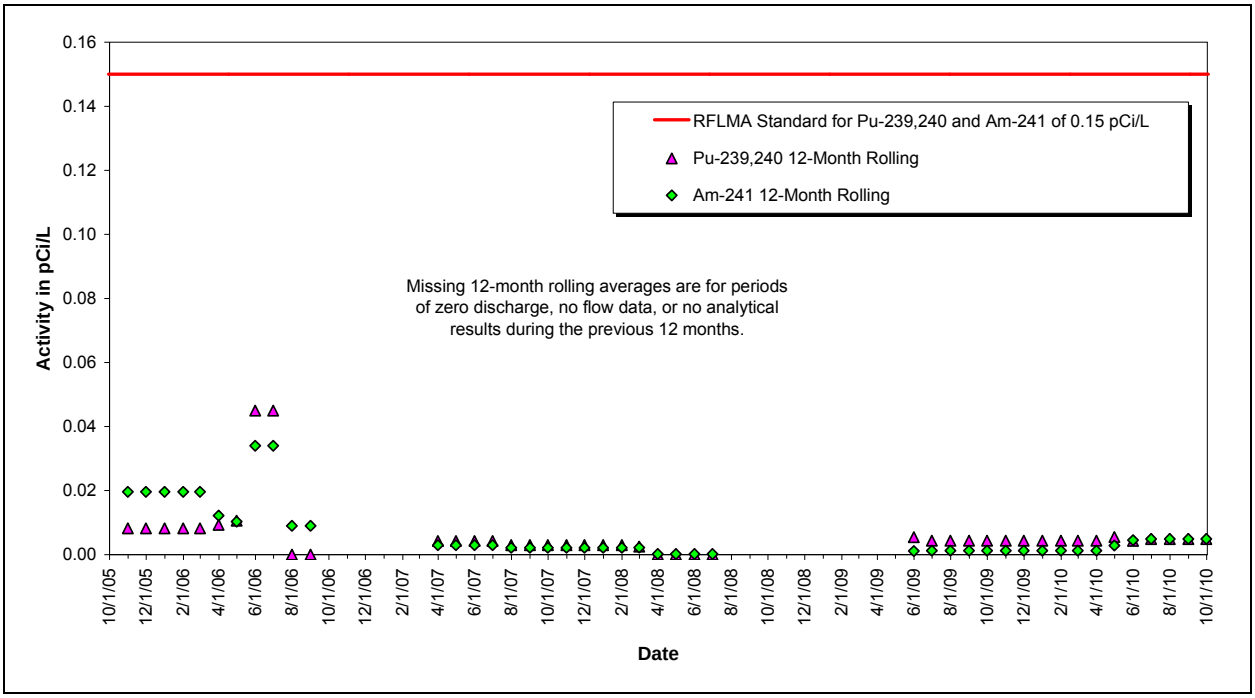
3.1.2.3 Monitoring Location GS08

Monitoring location GS08 is on South Walnut Creek at the outlet of Pond B-5. Figure 12, Figure 14, and Figure 16 show no occurrences of reportable 12-month rolling averages for the quarter. Figure 13, Figure 15, and Figure 17 show sampling data from 2005 through third quarter CY 2010.



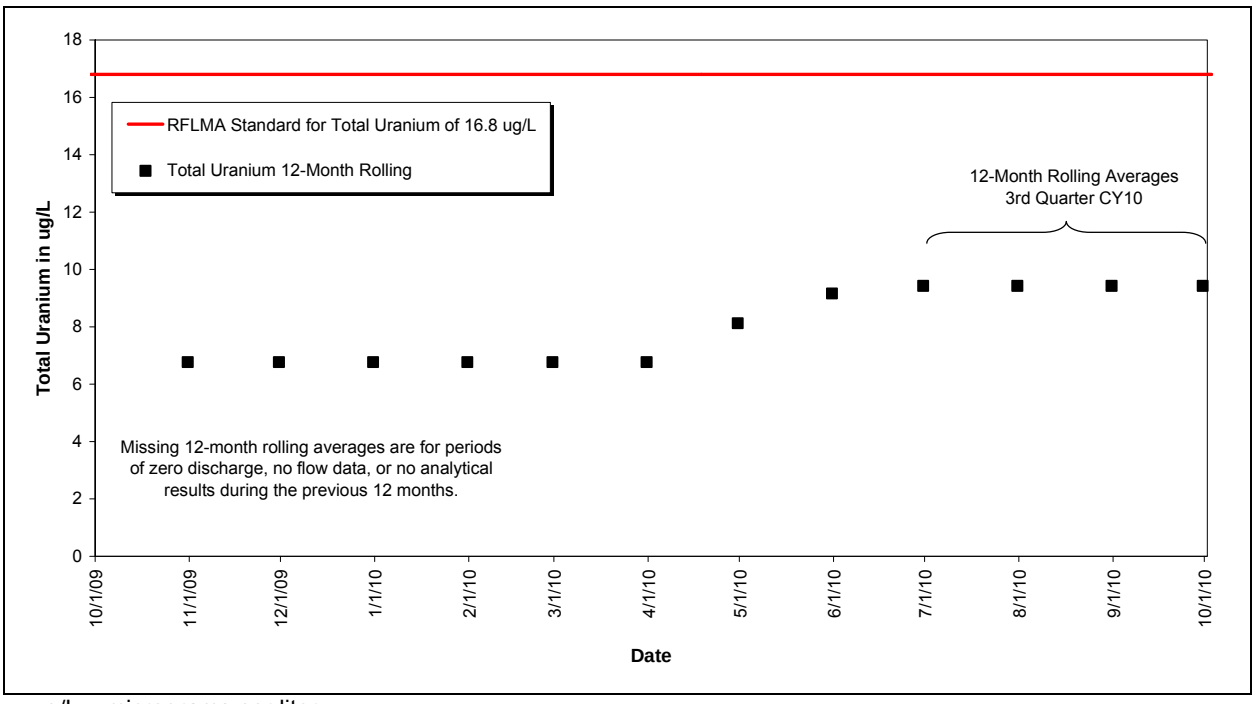
pCi/L = picocuries per liter

Figure 12. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS08: Calendar Year Ending Third Quarter CY 2010



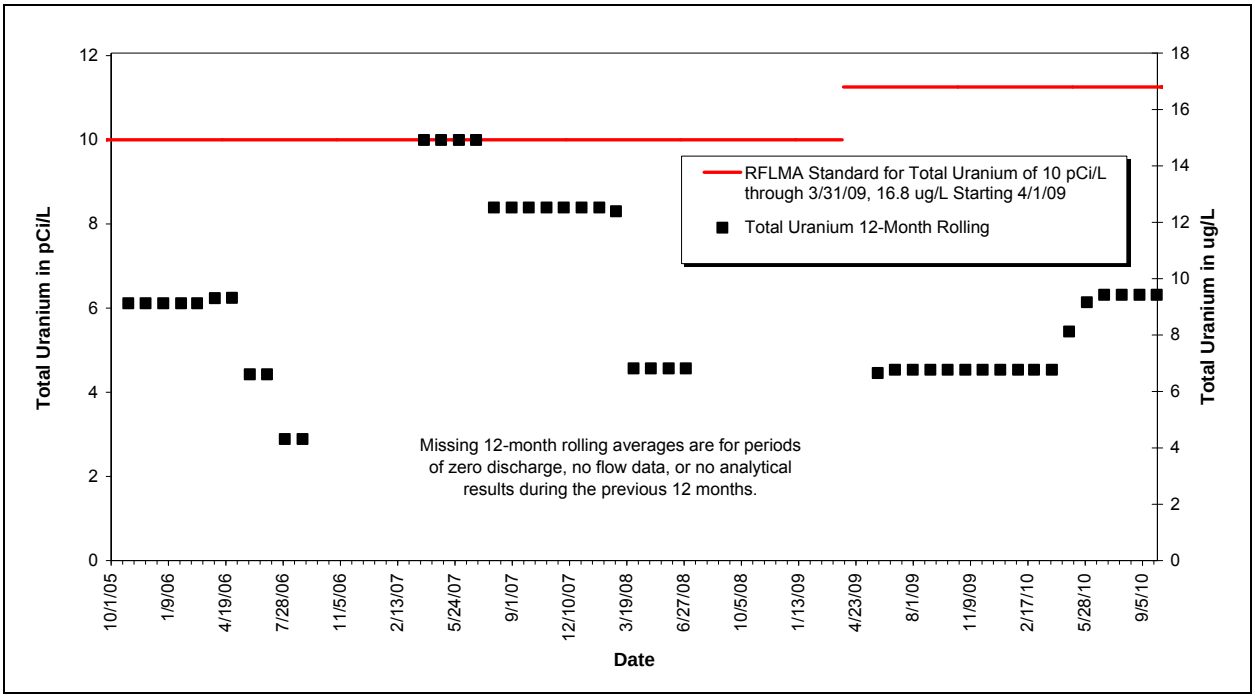
pCi/L = picocuries per liter

Figure 13. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS08: Post-Closure Period Ending Third Quarter CY 2010



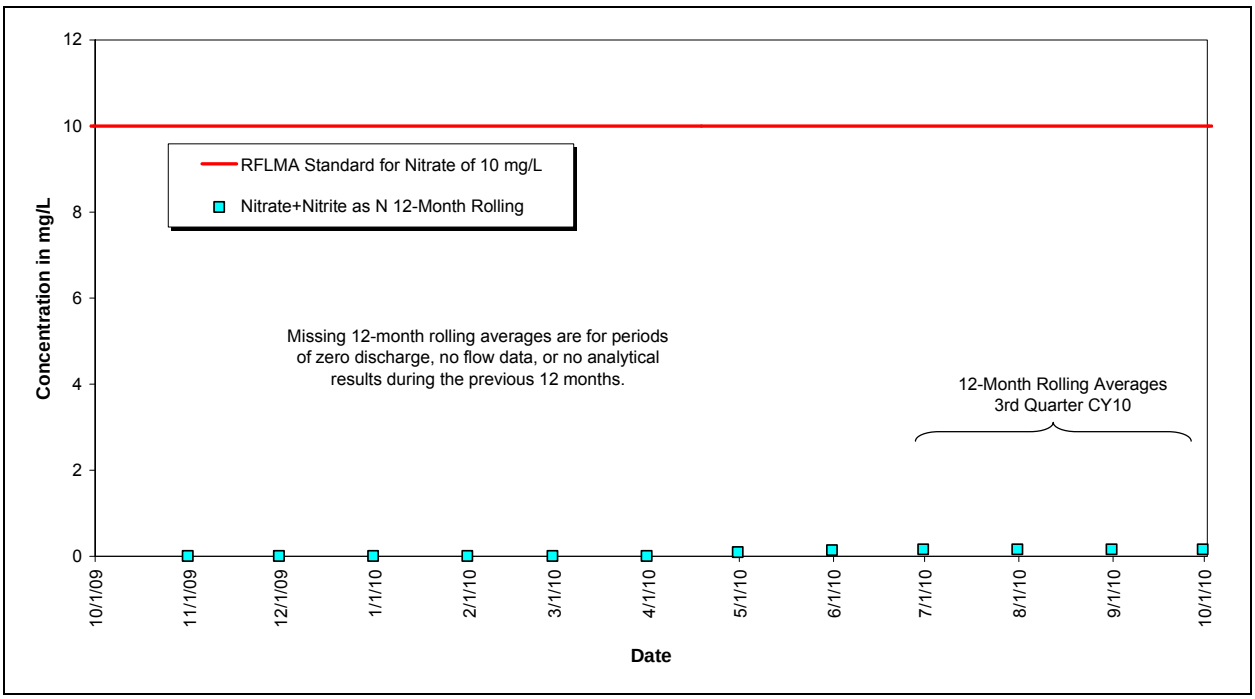
µg/L = micrograms per liter

Figure 14. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS08: Calendar Year Ending Third Quarter CY 2010



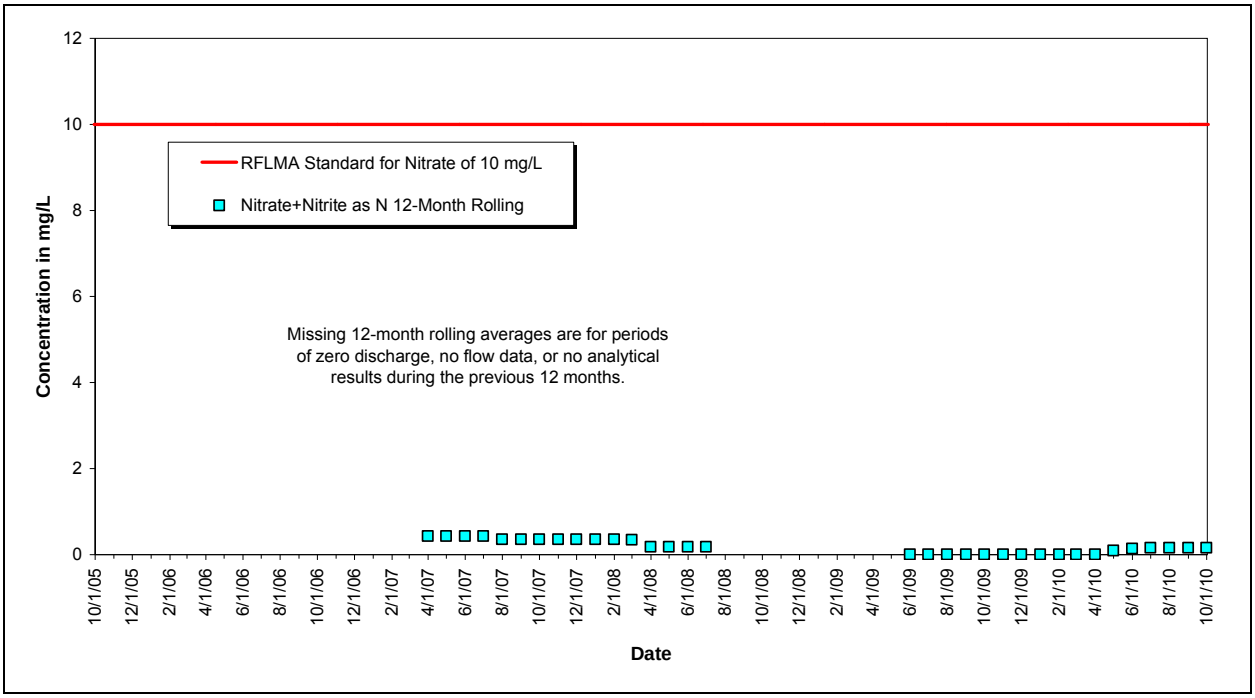
µg/L = micrograms per liter; pCi/L = picocuries per liter

Figure 15. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS08: Post-Closure Period Ending Third Quarter CY 2010



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

Figure 16. Volume-Weighted 12-Month Rolling Average Nitrate + Nitrite as Nitrogen Concentrations at GS08: Calendar Year Ending Third Quarter CY 2010

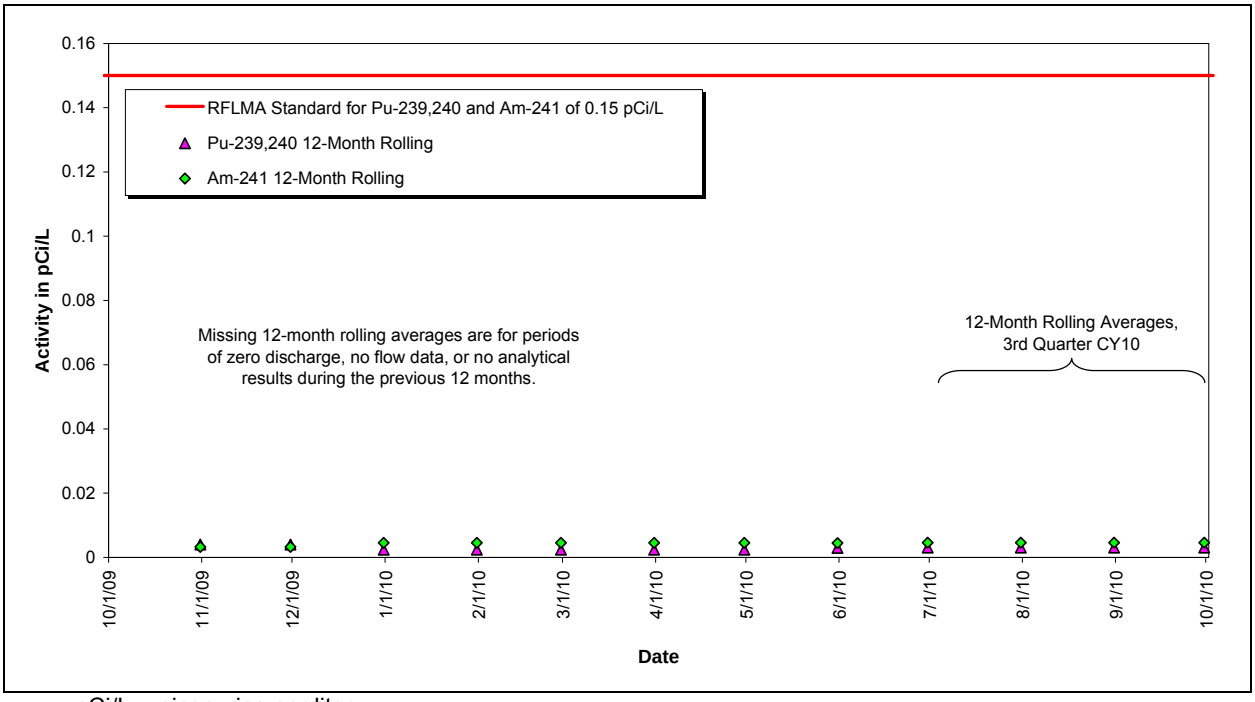


Note: Nitrate + nitrite as nitrogen 12-month averages are conservatively compared to the nitrate standard only.
mg/L = milligrams per liter

Figure 17. Volume-Weighted 12-Month Rolling Average Nitrate + Nitrite as Nitrogen Concentrations at GS08: Post-Closure Period Ending Third Quarter CY 2010

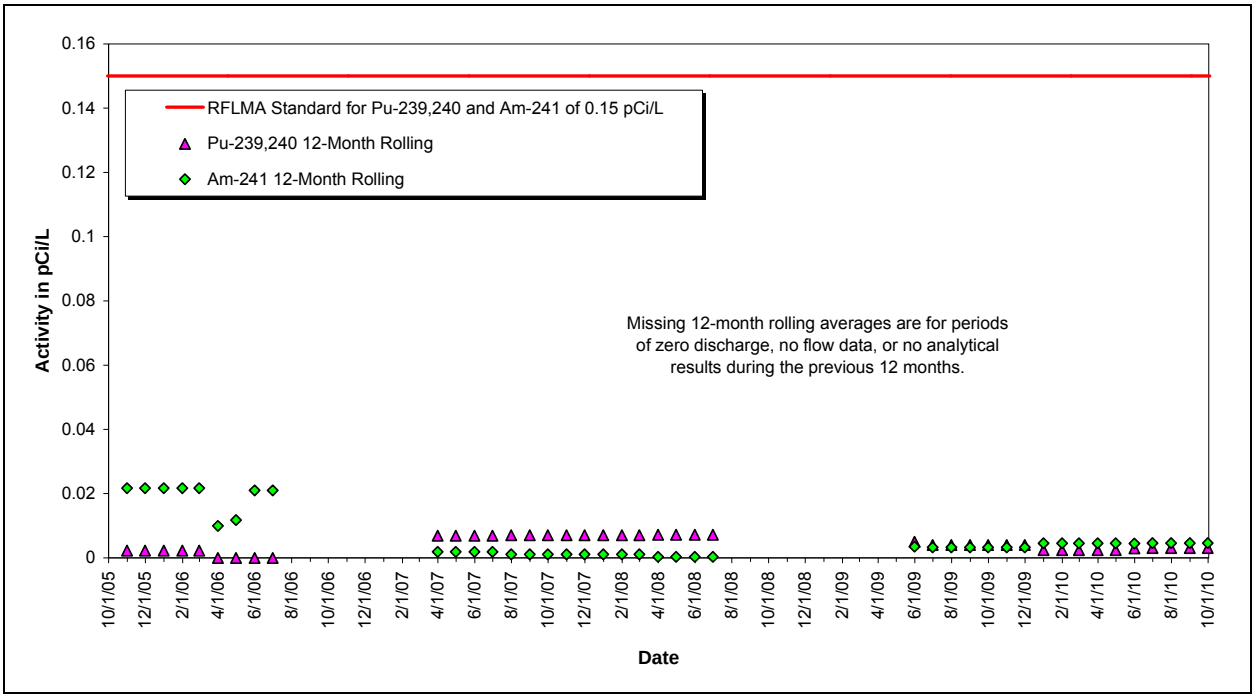
3.1.2.4 Monitoring Location GS11

Monitoring location GS11 is on North Walnut Creek at the outlet of Pond A-4. Figure 18, Figure 20, and Figure 22 show no occurrences of reportable 12-month rolling averages for the quarter. Figure 19, Figure 21, and Figure 23 show sampling data from 2005 through third quarter CY 2010.



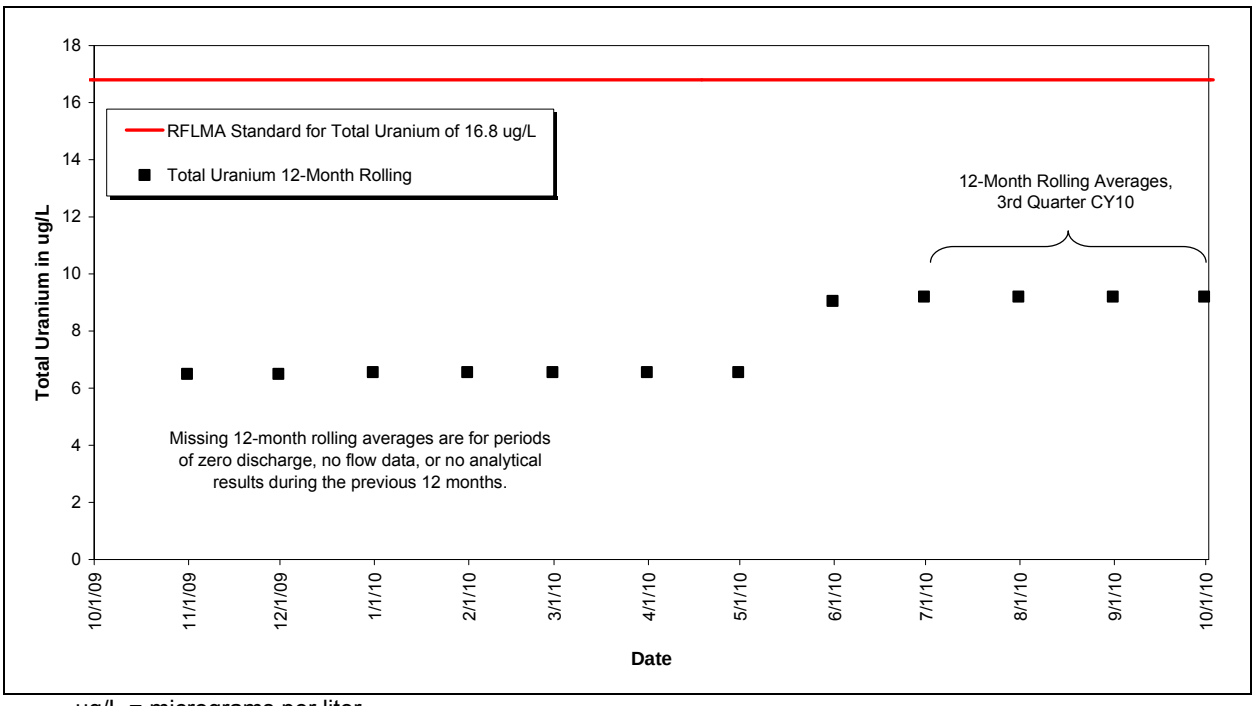
pCi/L = picocuries per liter

Figure 18. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS11: Calendar Year Ending Third Quarter CY 2010



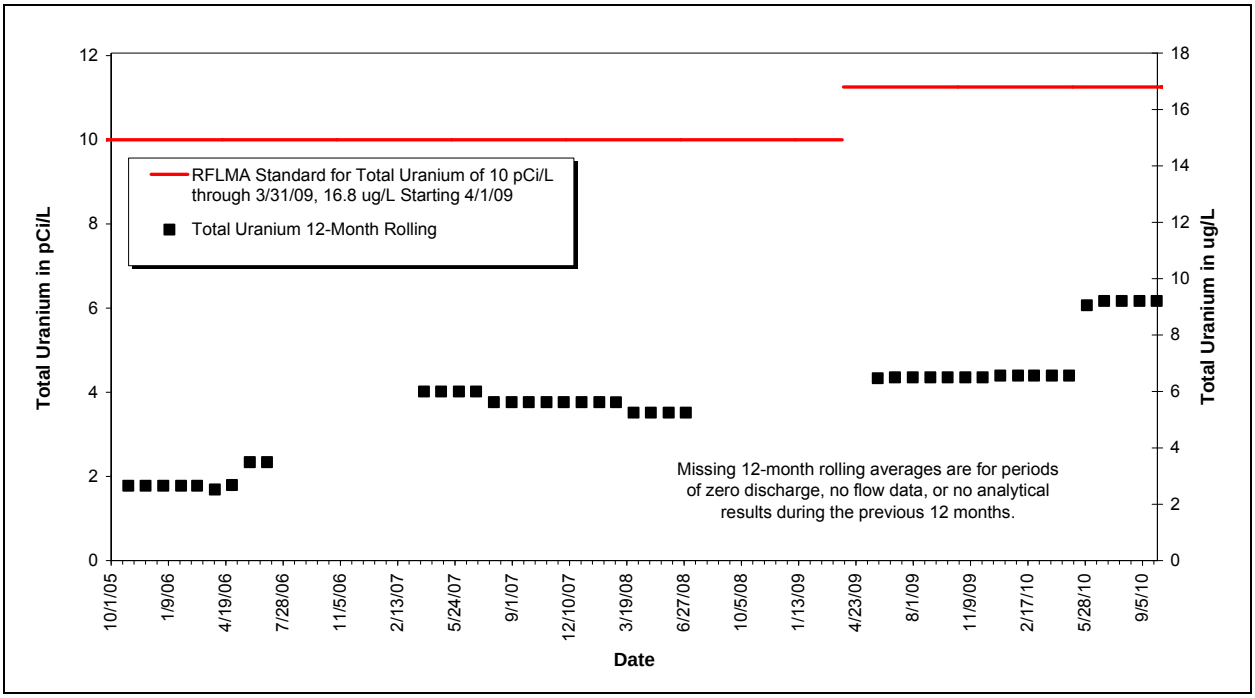
pCi/L = picocuries per liter

Figure 19. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS11: Post-Closure Period Ending Third Quarter CY 2010



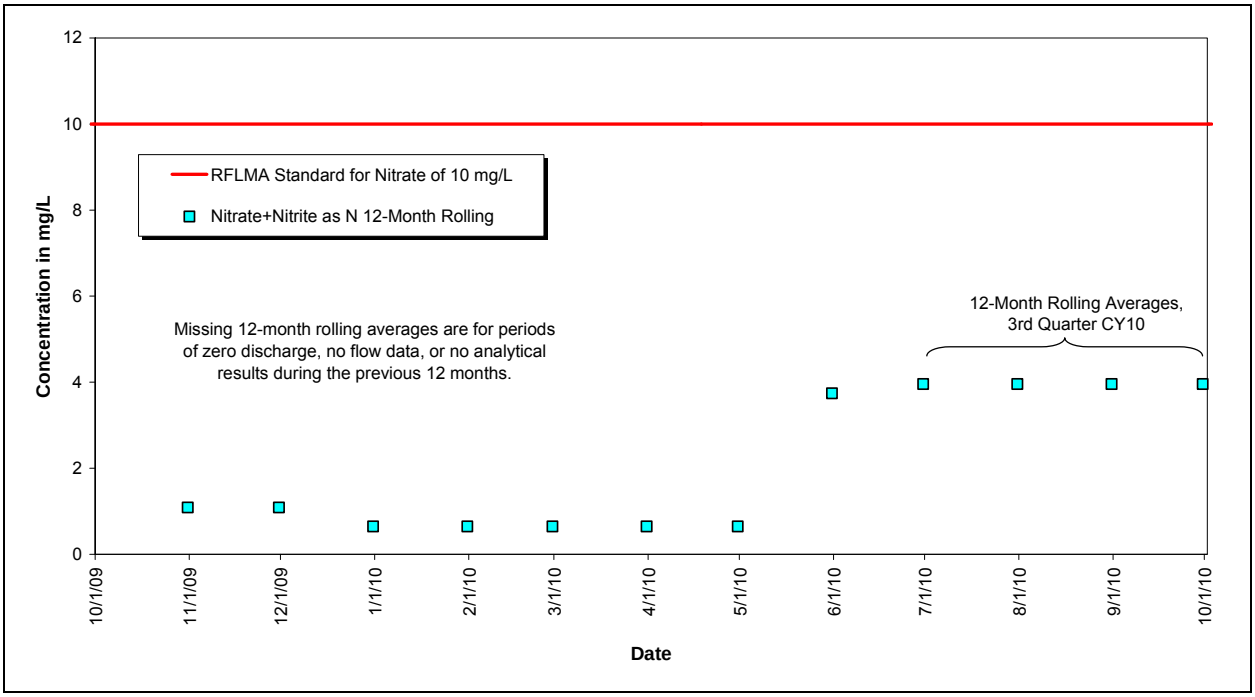
µg/L = micrograms per liter

Figure 20. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS11: Calendar Year Ending Third Quarter CY 2010



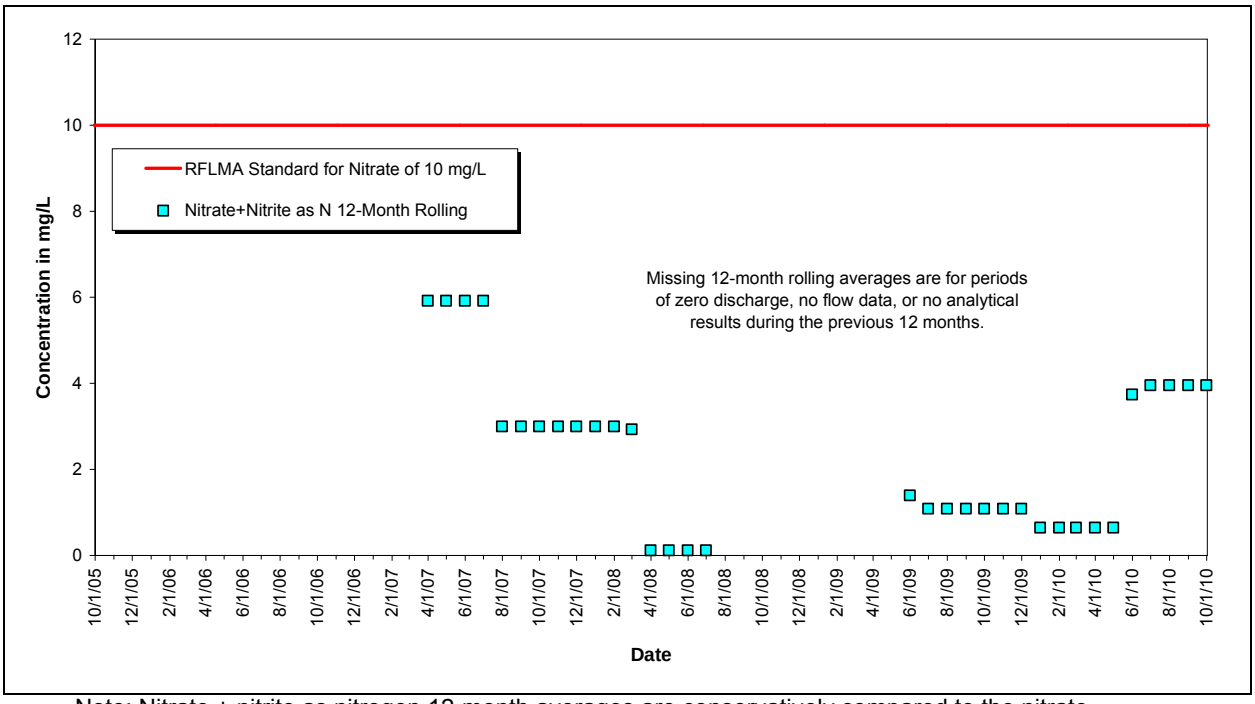
µg/L = micrograms per liter; pCi/L = picocuries per liter

Figure 21. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS11: Post-Closure Period Ending Third Quarter CY 2010



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

Figure 22. Volume-Weighted 12-Month Rolling Average Nitrate + Nitrite as Nitrogen Concentrations at GS11: Calendar Year Ending Third Quarter CY 2010

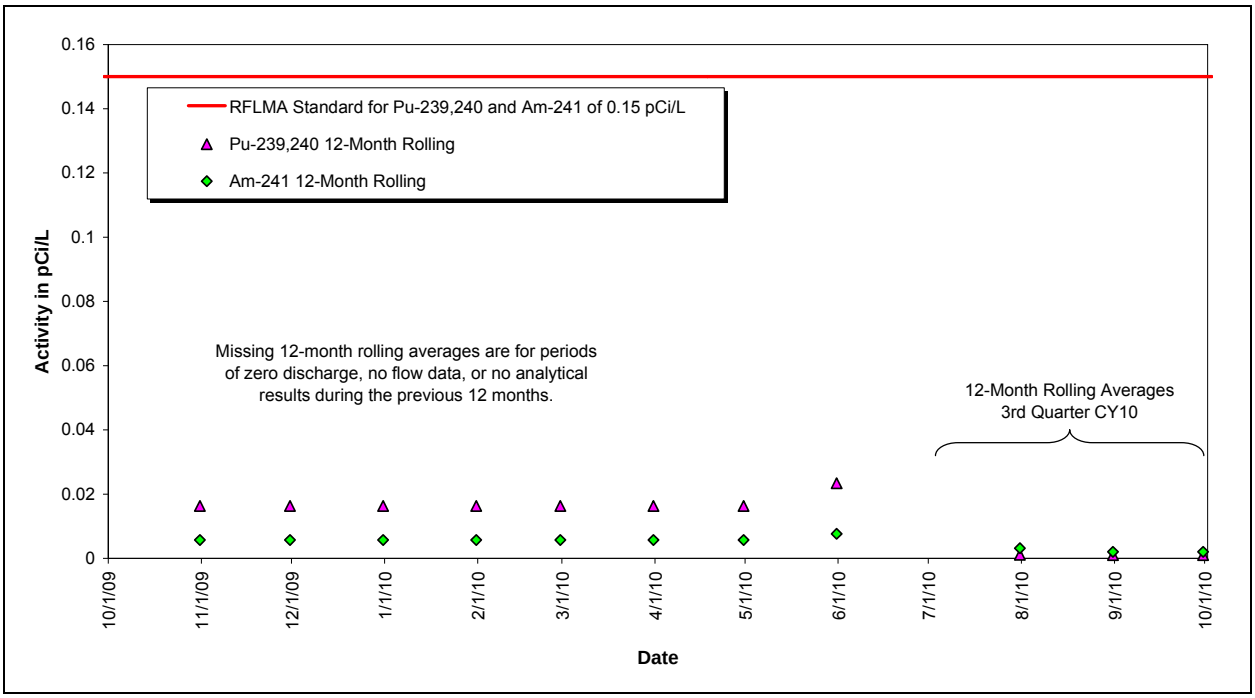


Note: Nitrate + nitrite as nitrogen 12-month averages are conservatively compared to the nitrate standard only.
mg/L = milligrams per liter

Figure 23. Volume-Weighted 12-Month Rolling Average Nitrate + Nitrite as Nitrogen Concentrations at GS11: Post-Closure Period Ending Third Quarter CY 2010

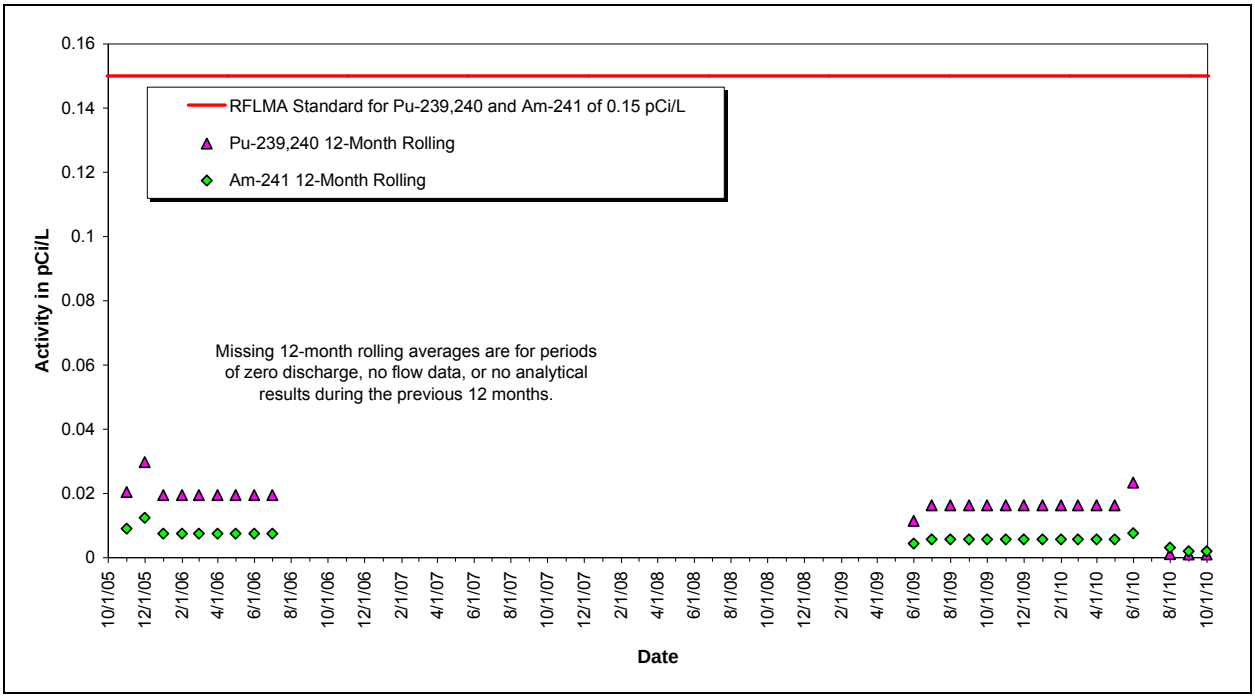
3.1.2.5 Monitoring Location GS31

Monitoring location GS31 is on Woman Creek at the outlet of Pond C-2. Figure 24 and Figure 26 show no occurrences of reportable 12-month rolling averages for the quarter. Figure 25 and Figure 27 show sampling data from 2005 through third quarter CY 2010.



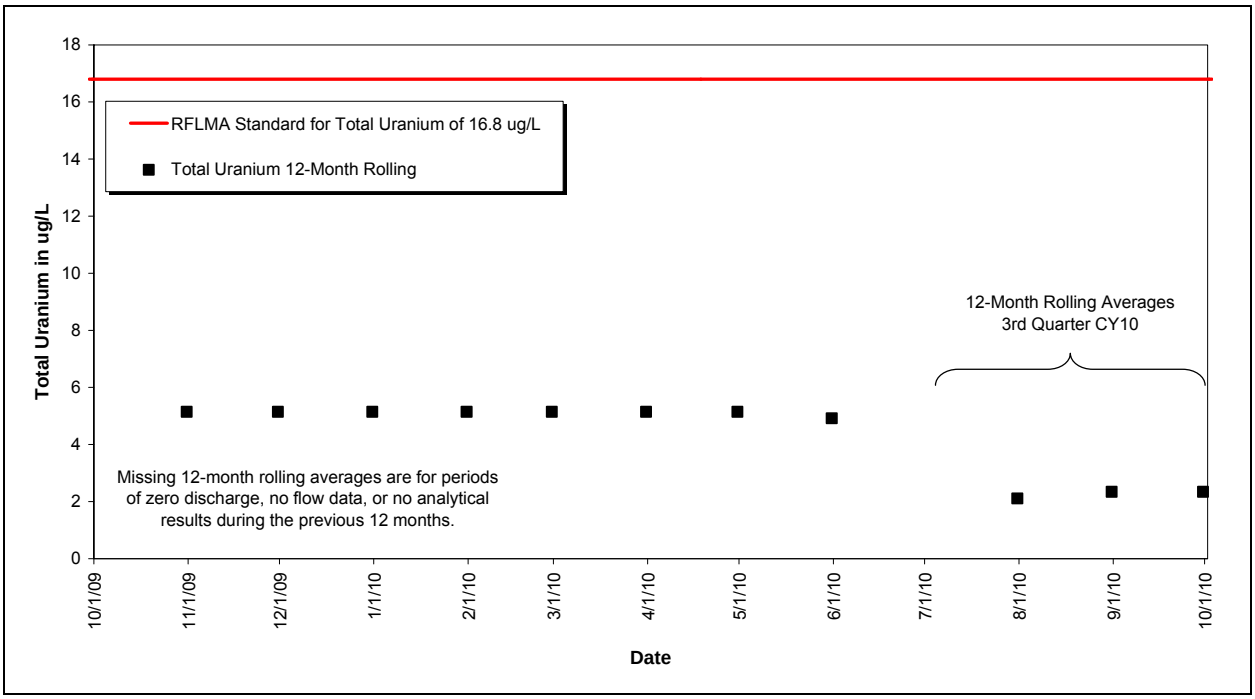
pCi/L = picocuries per liter

Figure 24. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS31: Calendar Year Ending Third Quarter CY 2010



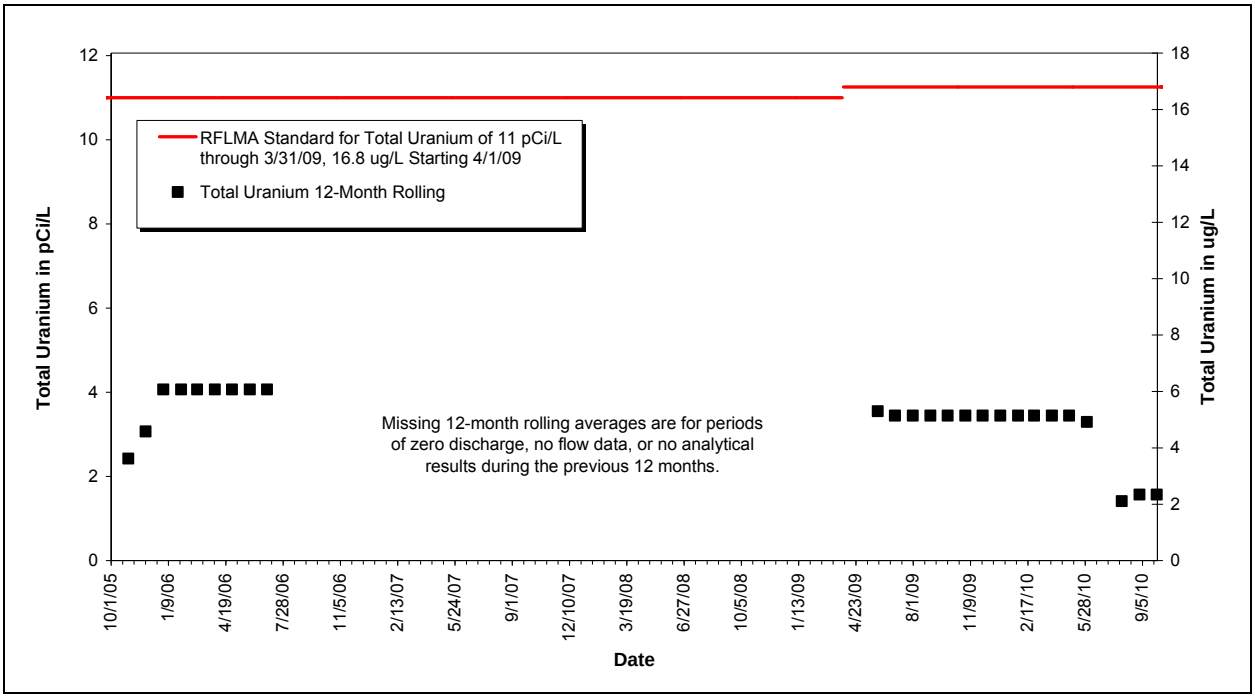
pCi/L = picocuries per liter

Figure 25. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS31: Post-Closure Period Ending Third Quarter CY 2010



µg/L = micrograms per liter

Figure 26. Volume-Weighted 12-Month Rolling Average Total Uranium Activities at GS31: Calendar Year Ending Third Quarter CY 2010



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

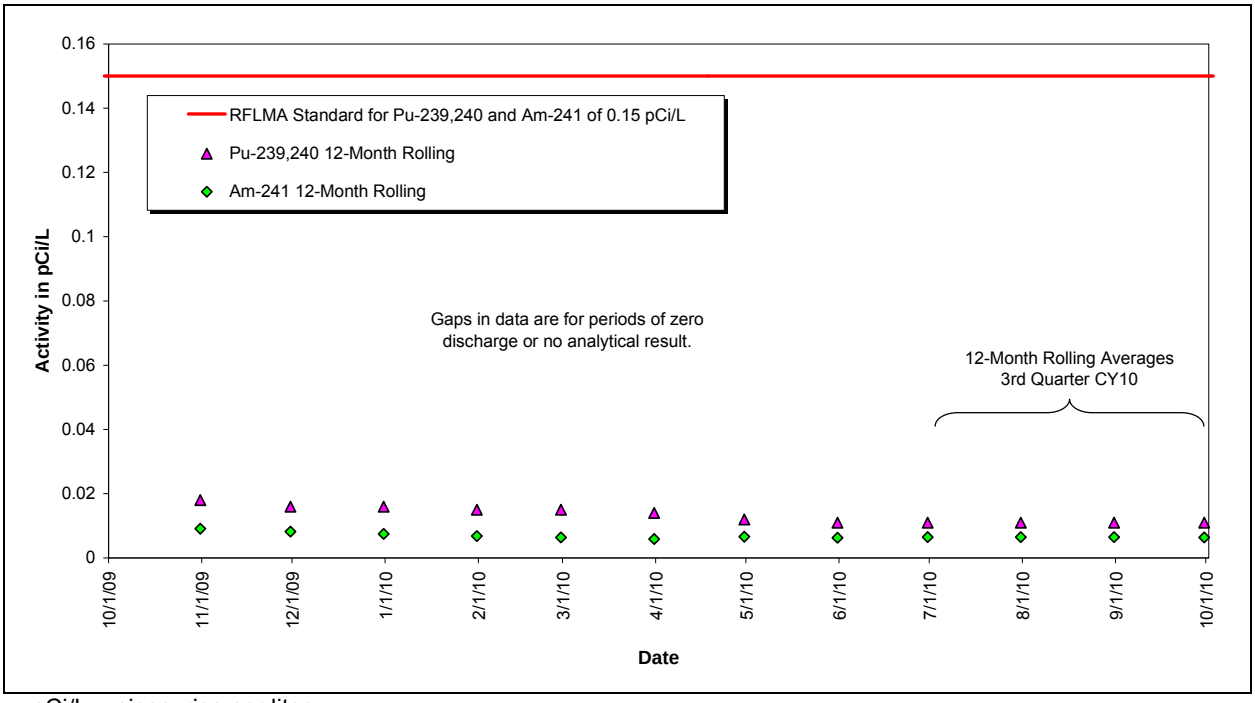
Figure 27. Volume-Weighted 12-Month Rolling Average Total Uranium Activities at GS31: Post-Closure Period Ending Third Quarter CY 2010

3.1.3 POE Monitoring

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

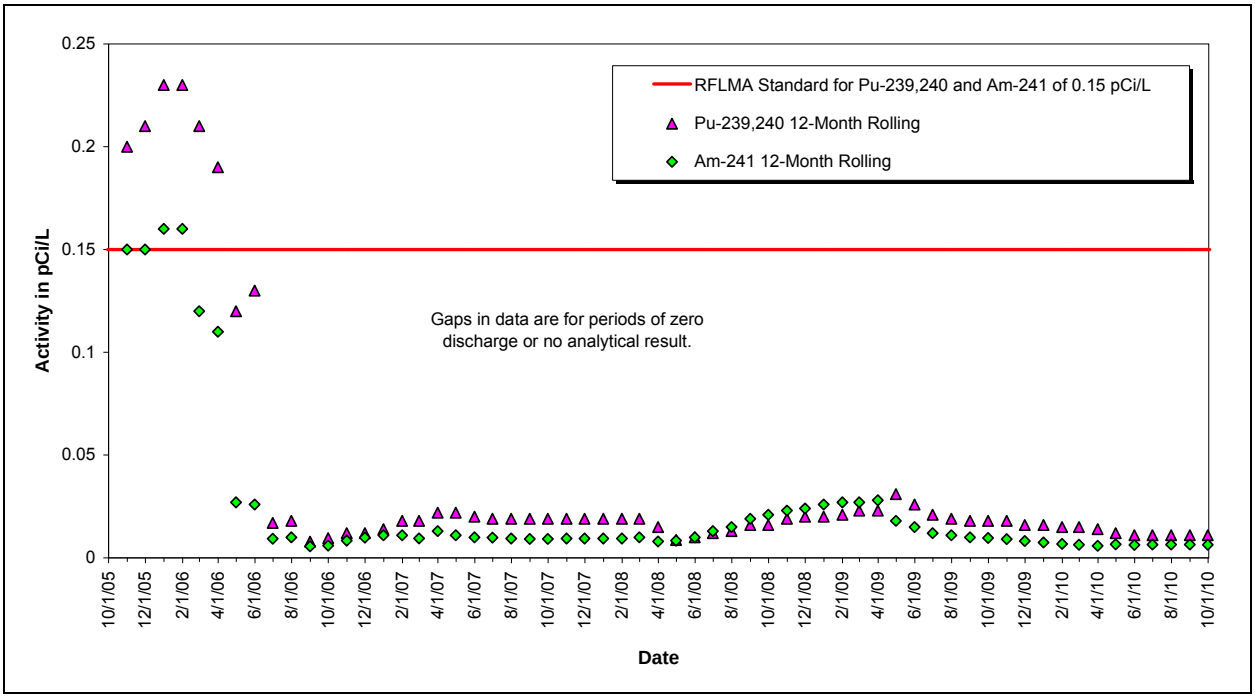
3.1.3.1 Monitoring Location GS10

Monitoring location GS10 is on South Walnut Creek just upstream of the B-Series ponds. Figure 28 and Figure 30 show no reportable plutonium, americium, or total uranium values during the quarter. Figure 29 and Figure 31 show sampling data from 2005 through third quarter CY 2010. In addition, none of the 85th-percentile 30-day average metals concentrations were reportable for the quarter.



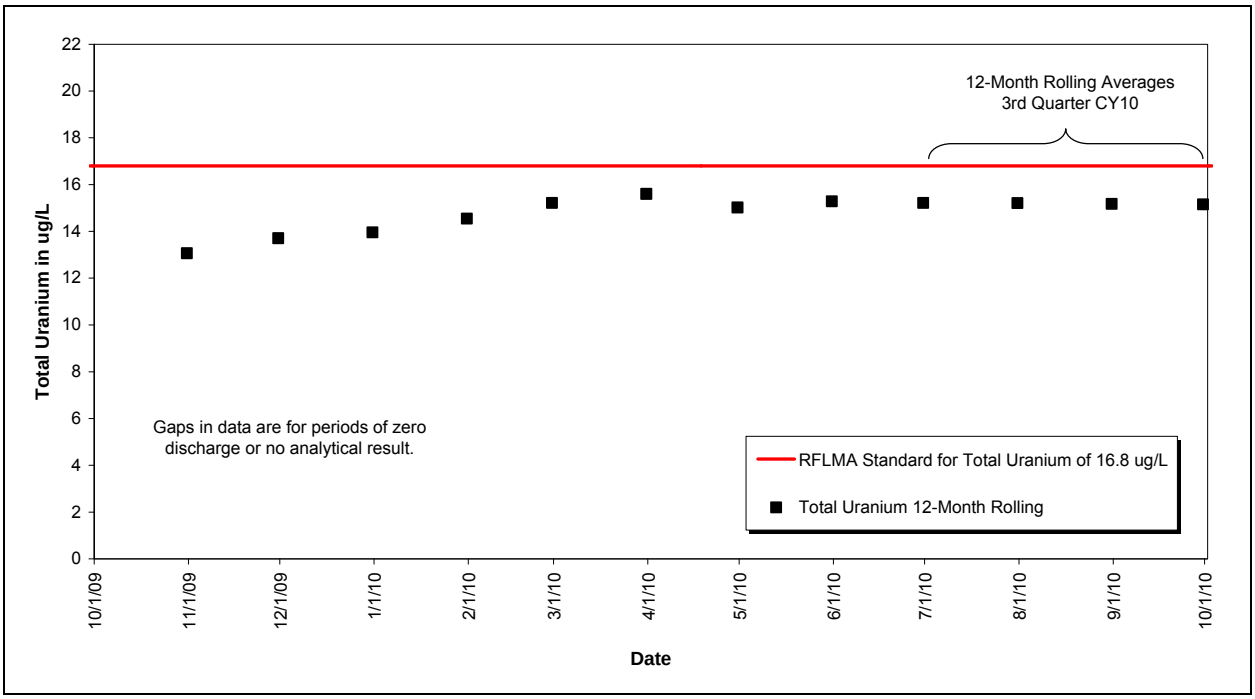
pCi/L = picocuries per liter

Figure 28. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS10: Calendar Year Ending Third Quarter CY 2010



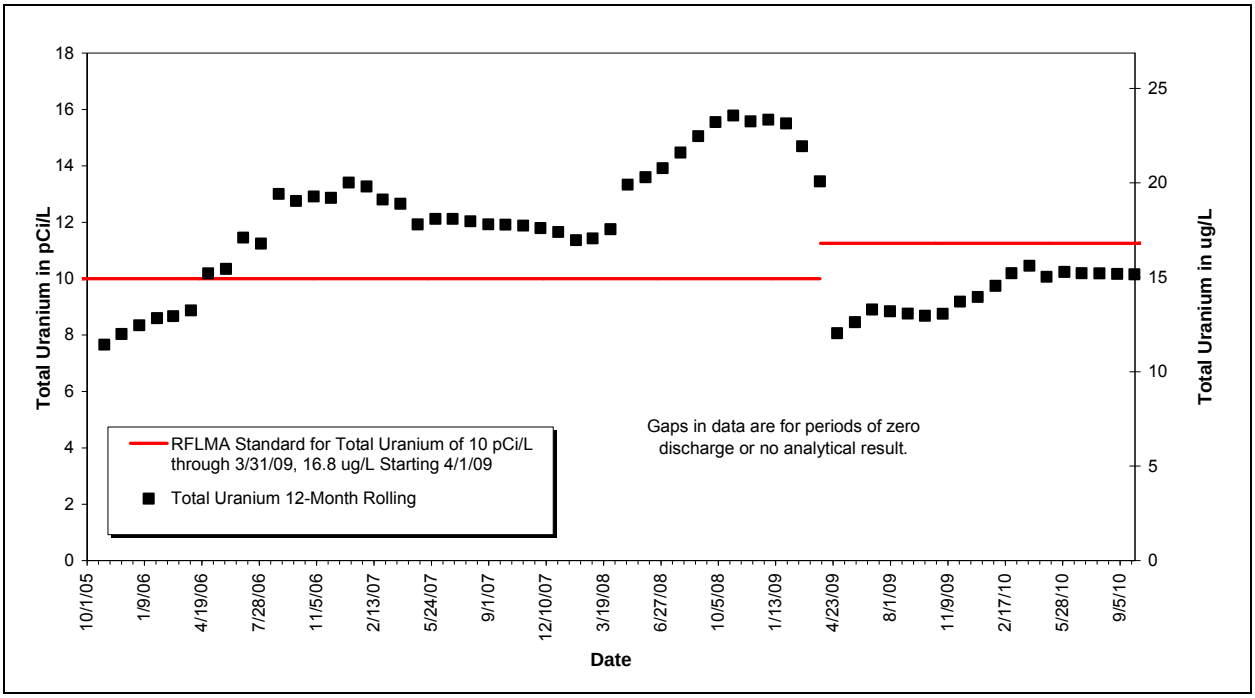
pCi/L = picocuries per liter

Figure 29. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at GS10: Post-Closure Period Ending Third Quarter CY 2010



µg/L = micrograms per liter

Figure 30. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS10: Calendar Year Ending Third Quarter CY 2010



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

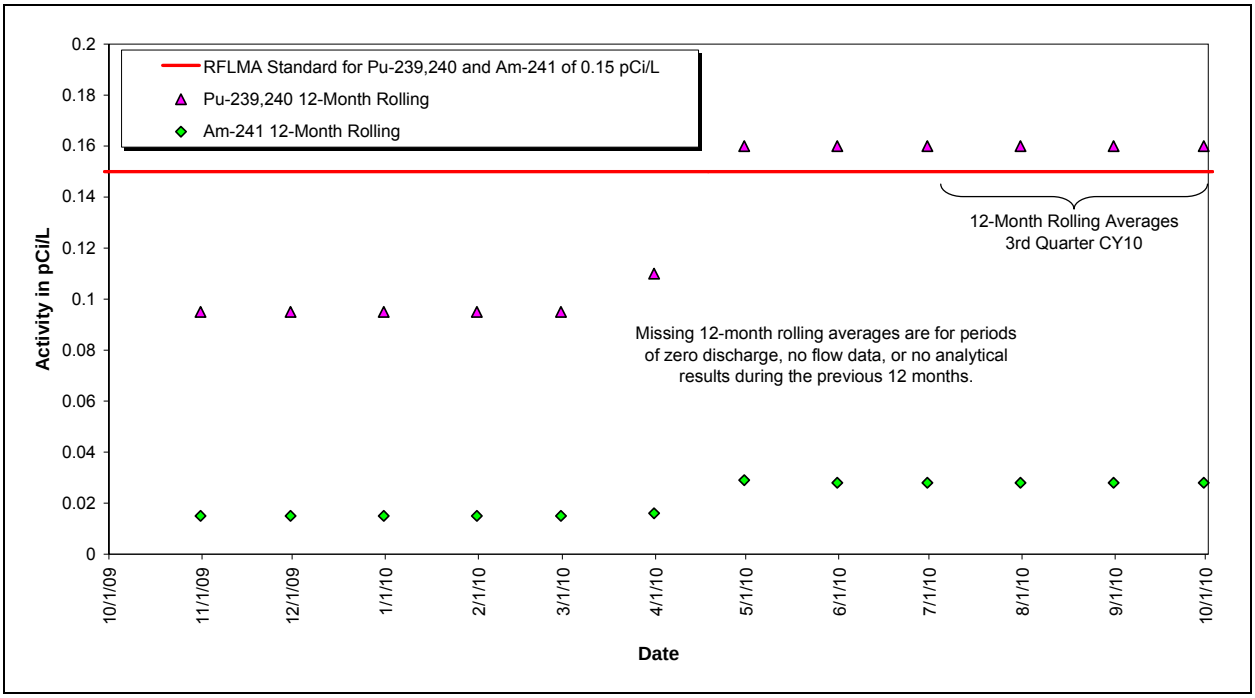
Figure 31. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at GS10: Post-Closure Period Ending Third Quarter CY 2010

3.1.3.2 Monitoring Location SW027

Monitoring location SW027 is at the end of the South Interceptor Ditch (SID) at the inlet to Pond C-2. Figure 32 and Figure 34 show the 12-month rolling averages for plutonium, americium, and total uranium during the quarter. Figure 33 and Figure 35 show sampling data from 2005 through third quarter CY 2010.

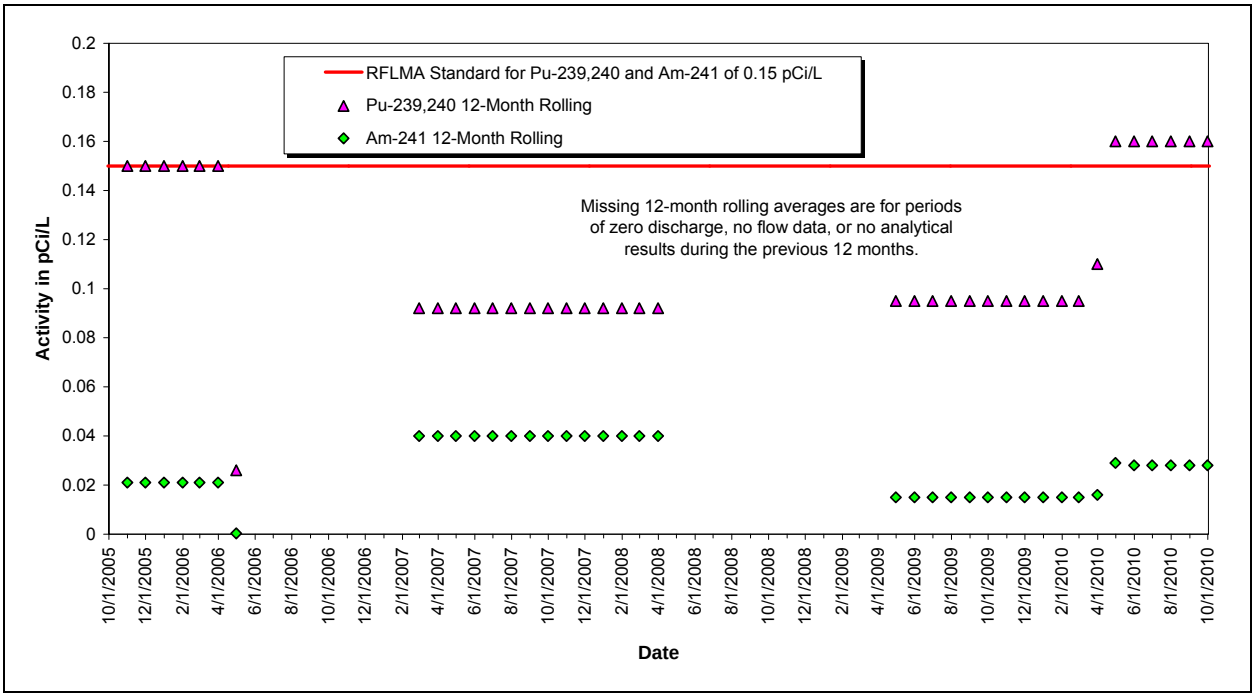
The most recent continuous flow-paced composite sample collected at SW027 was started on April 27, 2010. On October 4, 2010, that composite sample did not yet include a quantity of water sufficient for a complete analysis for all routine analytes. The SID flows intermittently when there is enough runoff, which was the case during March and April 2010; however, the SID has been dry since June 18, 2010. Since it was not known when additional sample volume would have been collected at SW027 to complete the flow-paced composite sample started on April 27, the decision was made to collect the sample from the field and analyze for an abbreviated analyte suite. The April 27 composite sample was collected on October 4 and submitted to the lab for plutonium, americium, uranium, chromium, and beryllium analysis; there was not sufficient volume to analyze for cadmium or silver. These latest results are included in the plots below.

Figure 32 shows that the 12-month rolling average for plutonium exceeds the RFLMA standard of 0.15 picocurie per liter. The composite sampling results for plutonium at SW027 collected during CY 2010 are given in Table 1. All other analytes were not reportable during the quarter.



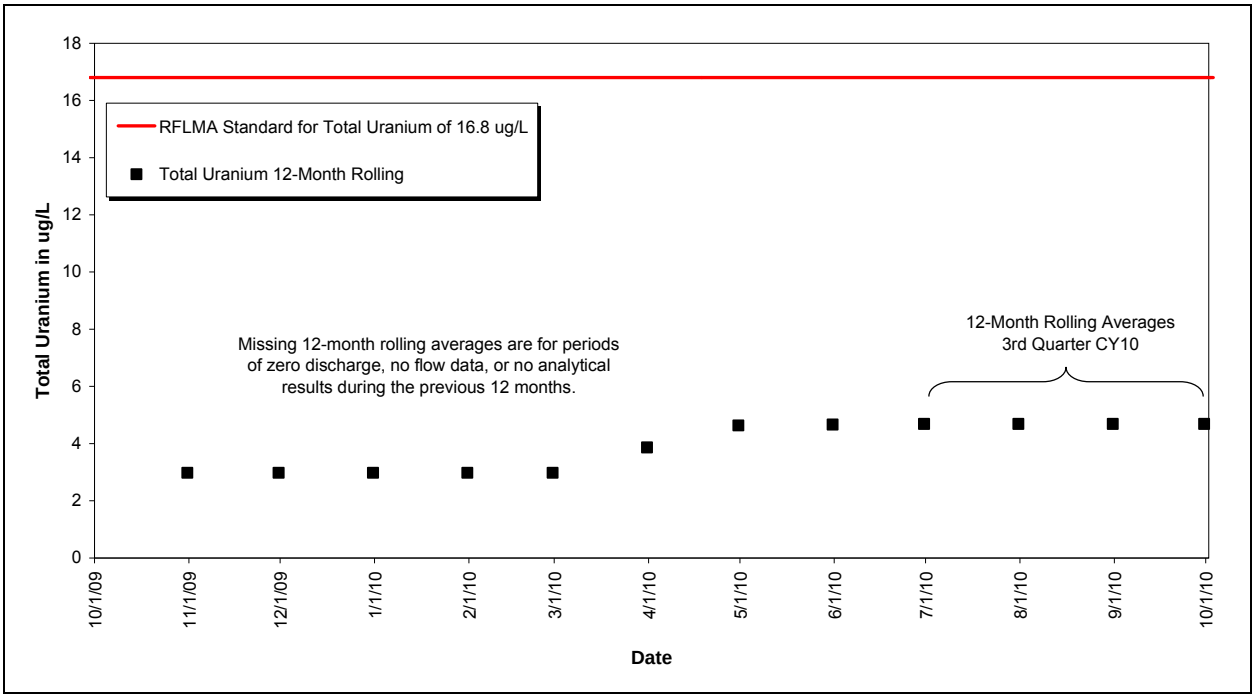
pCi/L = picocuries per liter

Figure 32. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at SW027: Calendar Year Ending Third Quarter CY 2010



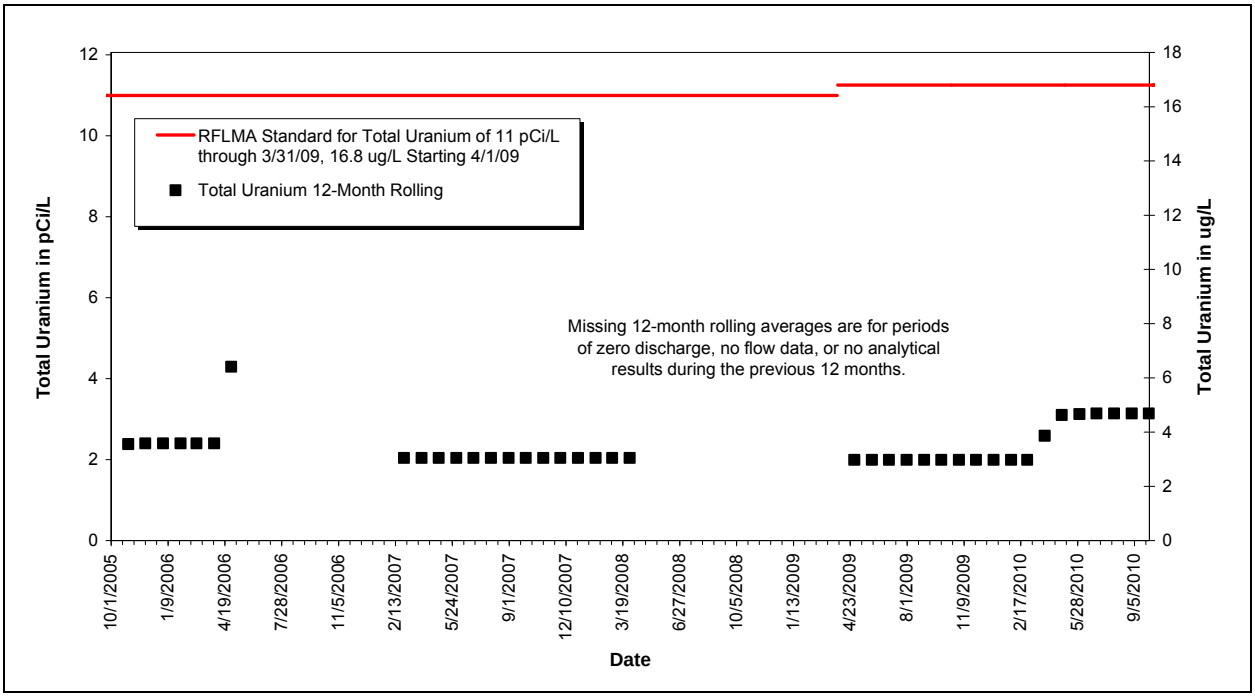
pCi/L = picocuries per liter

Figure 33. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at SW027: Post-Closure Period Ending Third Quarter CY 2010



µg/L = micrograms per liter

Figure 34. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at SW027: Calendar Year Ending Third Quarter CY 2010



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

Figure 35. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at SW027: Post-Closure Period Ending Third Quarter CY 2010

Table 1. CY 2010 Composite Sampling Results for Plutonium for SW027

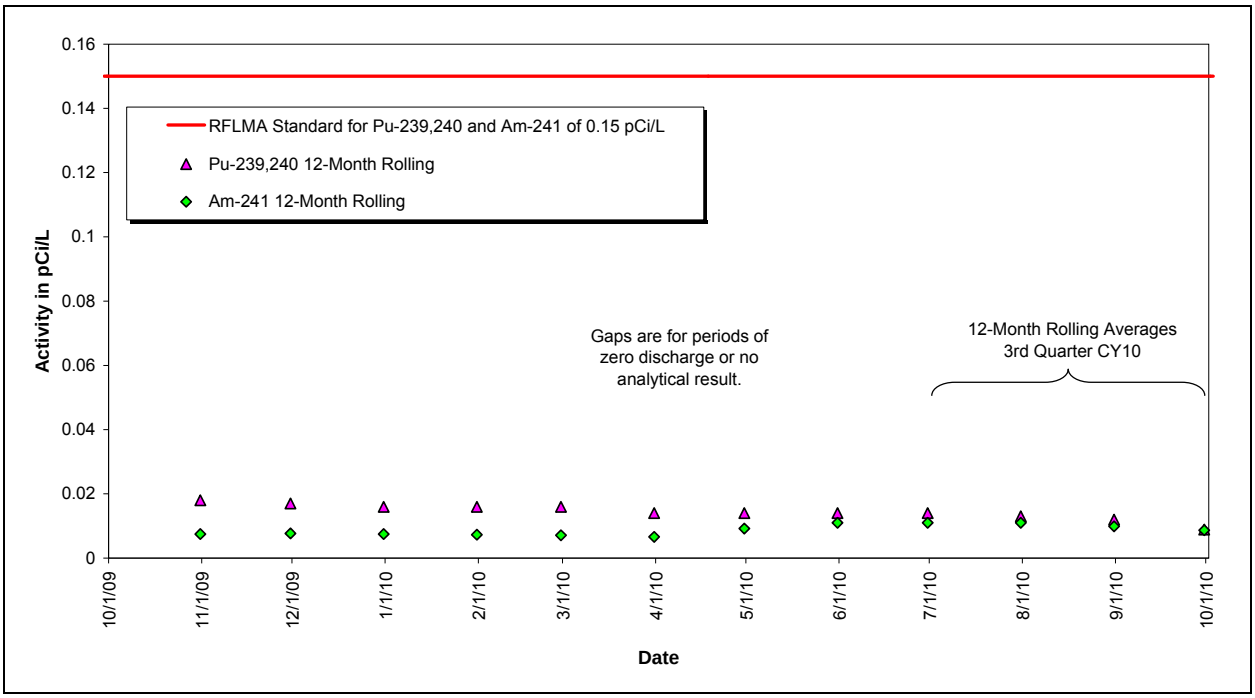
Date—Time Start	Date—Time End	Plutonium Result (µg/L)
1/13/10—11:11	3/29/10—11:55	0.122
3/29/10—11:55	4/23/10—11:11	0.300
4/23/10—11:11	4/23/10—19:12	0.294
4/23/10—19:12	4/27/10—12:07	0.029
4/27/10—12:07	10/4/10—12:39	0.040

While the 12-month rolling average values could not be formally calculated until complete analytical results were available for the April 27, 2010, sample, DOE initiated preemptive consultation with CDPHE on June 2, 2010. RFLMA Contact Record 2010-06, "Monitoring Results at Surface Water Point of Evaluation (POE) SW027," provides a discussion of the monitoring results and recaps the outcome of the RFLMA Parties' consultation regarding steps to be taken to evaluate the SW027 drainage area. Contact Record 2010-06 is available on the Rocky Flats website, http://www.lm.doe.gov/Rocky_Flats/ContactRecords.aspx.

Subsequent to Contact Record 2010-06, the *Report of Steps Taken Regarding Monitoring Results at Surface Water Point of Evaluation (POE) SW027* was completed on August 31, 2010. This report provides data evaluation and an update on the steps taken in accordance with Contact Record 2010-06. Recommendations beyond the actions already taken and discussed in the Contact Record are also provided. This report is available on the Rocky Flats website, http://www.lm.doe.gov/Rocky_Flats/ContactRecords.aspx.

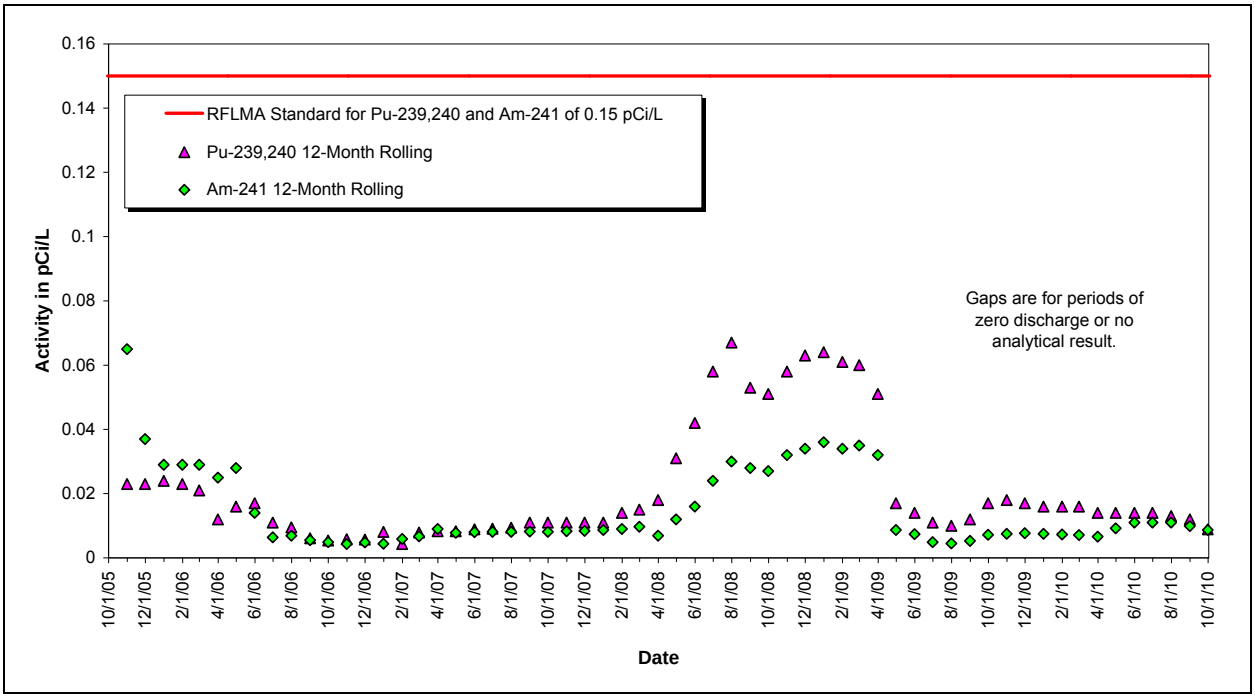
3.1.3.3 Monitoring Location SW093

Monitoring location SW093 is on North Walnut Creek 1,300 feet upstream of the A-Series ponds. Figure 36 and Figure 38 show no reportable plutonium, americium, or total uranium values during the quarter. Figure 37 and Figure 39 show sampling data from 2005 through third quarter CY 2010. None of the 85th-percentile 30-day average metals concentrations were reportable for the quarter.



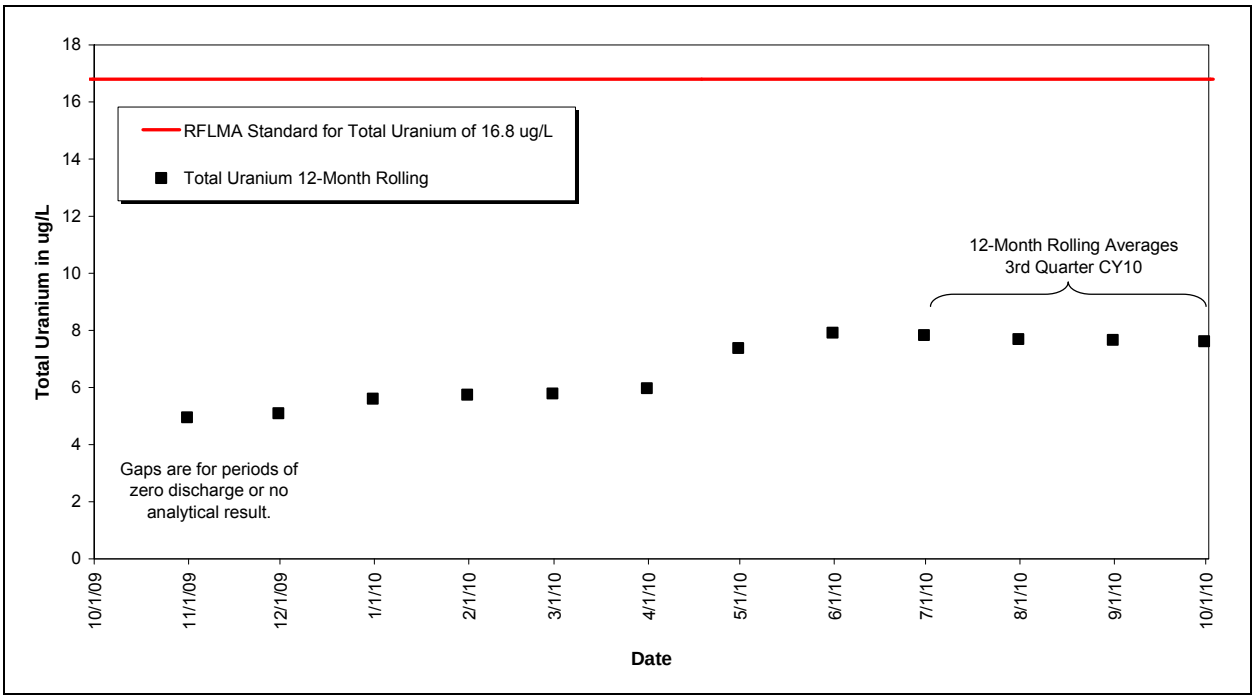
pCi/L = picocuries per liter

Figure 36. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at SW093: Calendar Year Ending Third Quarter CY 2010



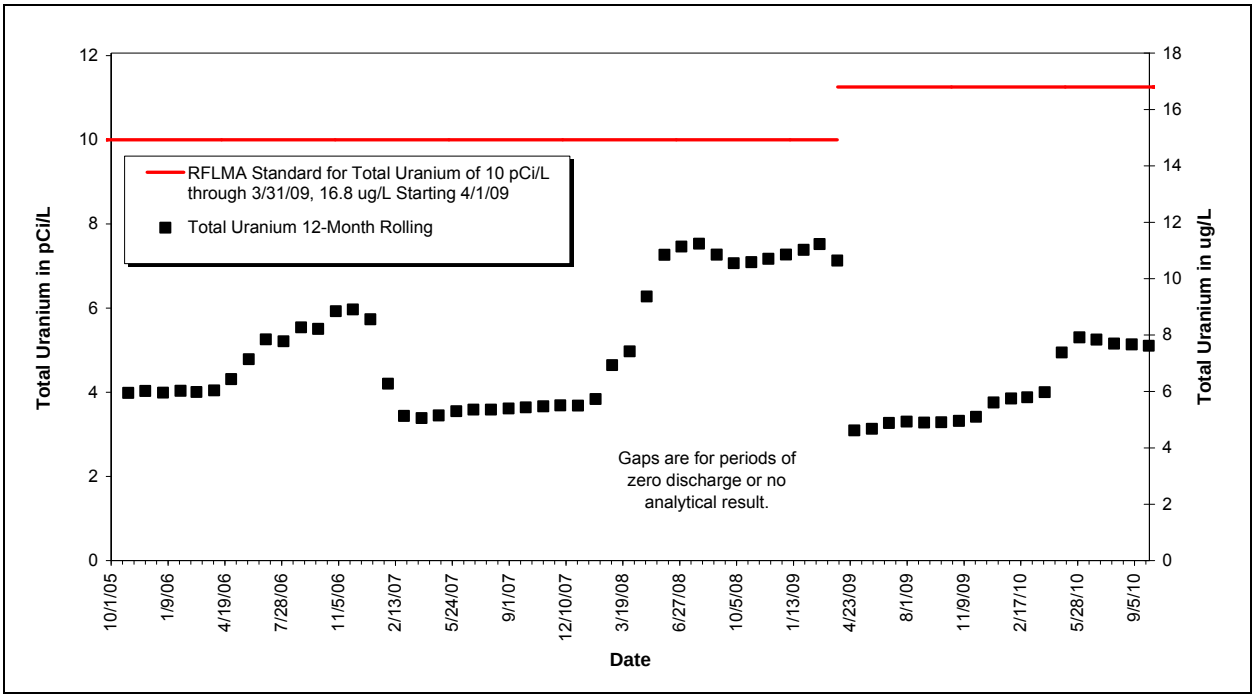
pCi/L = picocuries per liter

Figure 37. Volume-Weighted 12-Month Rolling Average Plutonium and Americium Activities at SW093: Post-Closure Period Ending Third Quarter CY 2010



µg/L = micrograms per liter

Figure 38. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at SW093: Calendar Year Ending Third Quarter CY 2010



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

Figure 39. Volume-Weighted 12-Month Rolling Average Total Uranium Concentrations at SW093: Post-Closure Period Ending Third Quarter CY 2010

3.1.4 AOC Wells and Surface Water Location SW018

Neither the AOC wells nor SW018 were scheduled for RFLMA monitoring in the third quarter of CY 2010.

3.1.5 Boundary Wells

Boundary wells were not scheduled for RFLMA monitoring in the third quarter of CY 2010.

3.1.6 Sentinel Wells

None of the Sentinel wells were scheduled for RFLMA monitoring in the third quarter of CY 2010.

3.1.7 Evaluation Wells

None of the Evaluation wells were scheduled for RFLMA monitoring in the third quarter of CY 2010.

3.1.8 PLF Monitoring

All RCRA groundwater monitoring wells at the PLF were sampled during the third quarter of CY 2010. Analytical results (Appendix C) were generally consistent with past samples and will

be discussed and statistically evaluated as part of the annual report for CY 2010. Section 3.1.10.4 discusses surface water monitoring at the PLF.

3.1.9 OLF Monitoring

All RCRA groundwater monitoring wells at the OLF were sampled during the third quarter of CY 2010. Analytical results (Appendix C) were generally consistent with past samples and will be discussed and statistically evaluated as part of the annual report for CY 2010.

During the third quarter of CY 2010, when routine surface water sampling was performed in Woman Creek downstream of the OLF (GS59), all available analytical results were less than the applicable surface water standards. Only VOC and mercury results from the routine quarterly grab sample were available for this report. The continuous flow-paced composite (providing analysis for metals and uranium) started on July 1, 2010, and is still in progress, so no results are available for this report. (GS59 was dry from July 28 through October 13, 2010.)

3.1.10 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 drain pipe into one or more treatment cells, where it is treated and then discharged to surface water. The PLFTS treats water from the northern and southern components of the GWIS and flow from the PLF seep.

3.1.10.1 Mound Site Plume Treatment System

MSPTS monitoring locations were not scheduled for RFLMA sampling in the third quarter of CY 2010. However, monthly samples were collected at several monitoring locations throughout the quarter as a continuation of the evaluation begun in June 2010 following the receipt of results from the second quarter CY 2010 sampling event. (Refer to the second quarter report [DOE 2010c] and to Contact Record 2010-07 for additional background and discussion.) These sampling locations included the MSPTS system influent, effluent, and surface water performance locations (all of which are RFLMA locations), as well as two locations within Functional Channel (FC)-4 downgradient and generally north-northeast of the MSPTS discharge gallery (both of which are non-RFLMA locations). The two locations in FC-4 were dry in August and September, and one was again flowing in October. The results for sampling events through August are summarized in Contact Record 2010-07, and this evaluation will be discussed at greater length as part of the annual report for CY 2010.

Treatment effectiveness of the MSPTS is challenged by the high concentrations of daughter products in system influent, especially under higher-flow conditions such as those during and following the spring of 2010. Data from the MSPTS surface water performance location, GS10, reflect infrequent detections of VOCs. Under conditions such as those experienced this spring, when the ZVI media was clogged and flow rates were high (equivalent to a low residence time for water passing through the media), concentrations of VOCs in water from GS10 can exceed the applicable surface water standard. This was documented in the evaluation samples collected in June, wherein trichloroethene concentrations exceeded the standard (reported at 2.8 micrograms per liter [µg/L], compared to the RFLMA standard is 2.5 µg/L) and vinyl chloride was estimated at a concentration exceeding the RFLMA level (estimated concentration

of 0.69 µg/L, compared to the RFLMA practical quantitation level of 0.2 µg/L). The higher flows observed in June decreased, and samples collected from GS10 through the third quarter of CY 2010 did not exceed applicable RFLMA standards.

Evaluation of potential effluent polishing approaches to address VOCs is underway, and the media is scheduled for replacement in early 2011.

3.1.10.2 East Trenches Plume Treatment System

ETPTS monitoring locations were not scheduled for RFLMA sampling in the third quarter of CY 2010. However, monthly samples were collected at several locations throughout the quarter as a continuation of the evaluation begun in June 2010 following the receipt of results from the second quarter CY 2010 sampling event. (Refer to the second quarter CY 2010 report [DOE 2010c] and to Contact Record 2010-07 for additional background and discussion.) These sampling locations included the ETPTS system influent, effluent, and surface water performance locations (all of which are RFLMA locations), as well as two locations downgradient and generally north of the ETPTS discharge gallery between the discharge gallery and former Pond B-4 (both of which are non-RFLMA locations). The results for sampling events through August are summarized in Contact Record 2010-07, and this evaluation will be discussed at greater length as part of the annual report for CY 2010. In short, treatment effectiveness of the ETPTS has not changed dramatically since its installation in 1999, although periods of higher flow can reduce effectiveness (especially when the media is clogged, which does not apply at this time). Data from the ETPTS surface water performance location, POM2, do not suggest the treatment system is adversely impacting water quality.

3.1.10.3 Solar Ponds Plume Treatment System

SPPTS monitoring locations were not scheduled for RFLMA sampling in the third quarter of CY 2010. However, non-RFLMA samples were collected on multiple occasions at several monitoring locations to support continuing evaluation and optimization of the Phase II and Phase III upgrades, as summarized in Section 2.2.3. Most of these screening/optimization samples were analyzed by the in-house Environmental Sciences Laboratory in Grand Junction, Colorado, rather than by an EPA-certified contract laboratory, and cannot be validated. Several samples were also submitted to contract labs for confirmatory purposes.

The reduced effectiveness of the ZVI-based media in the Phase II cell led to replacement of the media in August, as noted in Section 2.2.3. As reported in results of samples of the effluent from this cell, by July the cell was removing essentially no uranium. As soon as the media was replaced and the cell was placed back online, uranium treatment effectiveness resumed. Even so, because the exact cause or causes for the reduced treatment effectiveness was not certain, considerations of alternative approaches to addressing uranium contamination were underway (for example, by revising the flow configuration so uranium treatment occurred following nitrate treatment, even though in a laboratory setting the opposite had been demonstrated to be effective).

Development was underway on the design for Phase IV (full-scale nitrate treatment based on concepts tested under Phase III). This effort is continuing and will be discussed at greater length in the annual report for CY 2010.

3.1.10.4 PLF Treatment System

During collection of the July 15, 2010, sample at the system influent (monitoring location PLFSEEPINF), the flow rate was 1.17 gpm. As of September 30, 2010, the Landfill Pond outlet remained in an open configuration.

During the third quarter of CY 2010, routine sampling of the treated effluent exiting the system (monitoring location PLFSYSEFF) showed that no analyte concentrations were greater than the applicable surface water standards.

3.1.11 Pre-Discharge Monitoring

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

Pre-discharge samples were collected at Pond C-2 during the third quarter of CY 2010. Data indicated that release of the retained water would result in acceptable water quality at the downstream POCs.

3.1.12 Non-RFLMA 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 select constituents at the Site. Data in this section are not limited to the current quarter but include all available data.

3.1.12.1 Grab Sampling for Uranium and Nitrate+Nitrite in North and South Walnut Creeks

This monitoring objective is primarily intended to evaluate spatial variability of nitrate+nitrite and uranium at select locations along North and South Walnut Creeks (Figure 40). Samples are currently collected as grabs on a biweekly frequency. Sampling for this monitoring objective began on January 27, 2010. Summary statistics for the sampling to date are given in Table 2.

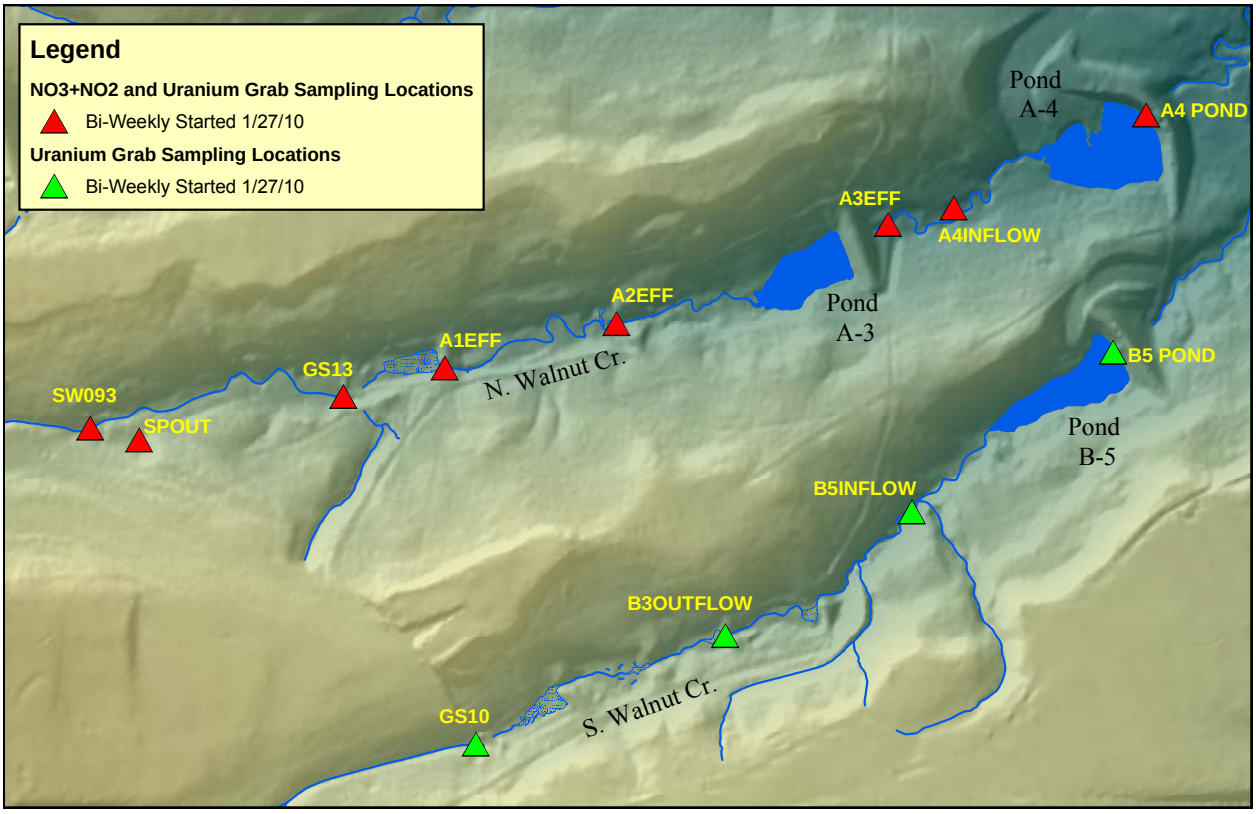


Figure 40. Grab-Sampling Locations in North and South Walnut Creeks

Table 2. Summary Statistics for Nitrate+Nitrite and Uranium Grab Sampling

North Walnut Creek			NO3+NO2 as N (mg/L)		Uranium (ug/L)	
	Location Code	Location Description	Average	Sample Count	Average	Sample Count
Upstream	SW093	POE at downstream end of Functional Channel 3	10.1	20	9.7	21
⬇	SPOUT*	Effluent from SPPTS	79.4	22	27.7	22
⬇	GS13	SPPTS Performance Monitoring Loc; influent to Pond A-1	18.2	15	14.8	15
⬇	A1EFF	Effluent from Pond A-1	12.8	18	10.6	19
⬇	A2EFF	Effluent from Pond A-2	13.4	13	21.1	15
⬇	A3EFF	Effluent from Pond A-3	6.1	13	19.9	14
⬇	A4INFLOW^	Influent to Pond A-4	7.6	10	21.9	10
Downstream	A4 POND	Pond A-4 at center of dam face	1.57	22	10.3	22

South Walnut Creek			Uranium (ug/L)	
	Location Code	Location Description	Average	Sample Count
Upstream	GS10	POE at downstream end of Functional Channel 4	16.2	22
⬇	B3OUTFLOW	Effluent from Pond B-3	17.2	19
⬇	B5INFLOW	Influent to Pond B-5	13.4	19
Downstream	B5 POND	Pond B-5 at center of dam face	9.9	22

Notes: *SPOUT (SPPTS effluent) is not located in North Walnut Creek but is tributary to North Walnut between monitoring locations SW093 and GS13.
^A4INFLOW sampling was terminated on June 30, 2010, since data indicate that this monitoring location is essentially redundant with A3EFF.
Sample counts vary because some locations are periodically dry.
Summary includes all data available as of December 13, 2010; some recent results are not validated (preliminary and subject to revision).

3.1.12.2 Continuous Flow-Paced Composite Sampling for Uranium in North and South Walnut Creeks

This monitoring objective is primarily intended to evaluate long-term spatial variability of uranium at select locations along North and South Walnut Creeks (Figure 41). Samples are collected as continuous flow-paced composites during all flow conditions. Sampling for this monitoring objective began on March 10, 2010, in North Walnut Creek and on June 16, 2010, in South Walnut Creek. Summary statistics for the sampling to date are given in Table 3.

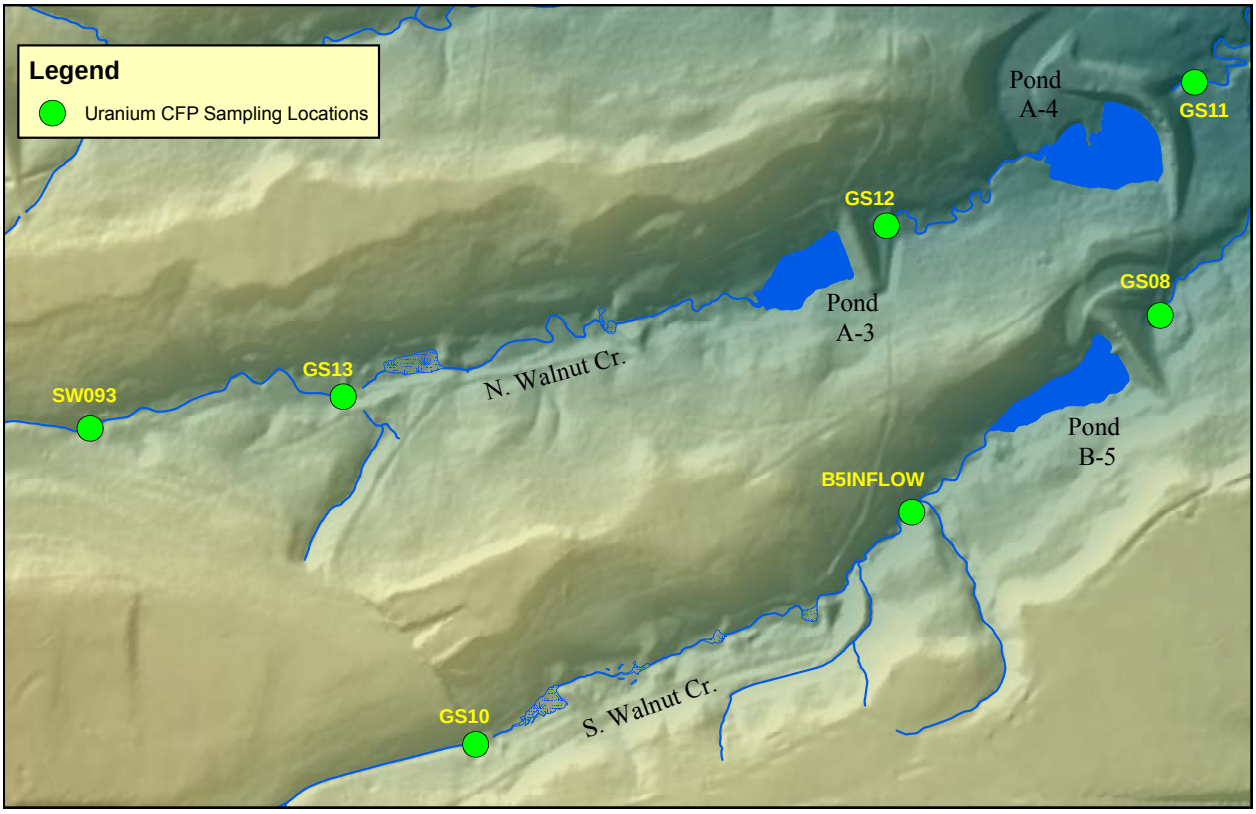


Figure 41. Continuous Flow-Paced Composite Sampling Locations in North and South Walnut Creeks

Table 3. Summary Statistics for Uranium Continuous Flow-Paced Composite Sampling

North Walnut Creek

			Uranium (ug/L)	
	Location Code	Location Description	Volume-Weighted Average	Sample Count
Upstream	SW093*	POE at downstream end of Functional Channel 3	7.1	13
⬇	GS13*	SPPTS Performance Monitoring Loc; influent to Pond A-1	8.4	13
⬇	GS12	Effluent from Pond A-3	11.5	15
Downstream	GS11*	Effluent from Pond A-4	9.8	9

Data start on 3/10/10

South Walnut Creek

			Uranium (ug/L)	
	Location Code	Location Description	Volume-Weighted Average	Sample Count
Upstream	GS10*	POE at downstream end of Functional Channel 4	11.5	2
⬇	B5INFLOW	Influent to Pond B-5	7.5	2
Downstream	GS08*	Effluent from Pond B-5	Insufficient Data	0

Data start on 6/16/10

Notes: *Data for SW093, GS13, GS11, GS10, and GS08 are acquired through the routine RFLMA-required monitoring at these locations.
Sample counts vary because composite sampling periods vary with water availability.
Summary includes all data available as of September 16, 2010; some recent results are not validated (preliminary and subject to revision).

3.1.12.3 Synoptic Storm-Event Sampling in North and South Walnut Creeks

This monitoring objective is primarily intended to evaluate spatial variability of plutonium, americium, uranium, and total suspended solids (TSS) at select locations along North and South

Walnut Creeks (Figure 42). This sampling is specifically targeted at previously breached Dams A-1, A-2, B-1, B-2, and B-3. Samples are collected as time-paced composites using automated samplers that trigger during the rising limb of a runoff hydrograph as the event moves down a drainage. This type of sampling is opportunistic; a group of samples is only analyzed when the runoff event results in a significant increase in flow rate, and samples are collected at each location on the same portion of the hydrograph (rising limb). As such, samples are periodically discarded when these criteria are not met. Sampling for this monitoring objective began in April 2010. Summary statistics for the sampling to date are given in Table 4.

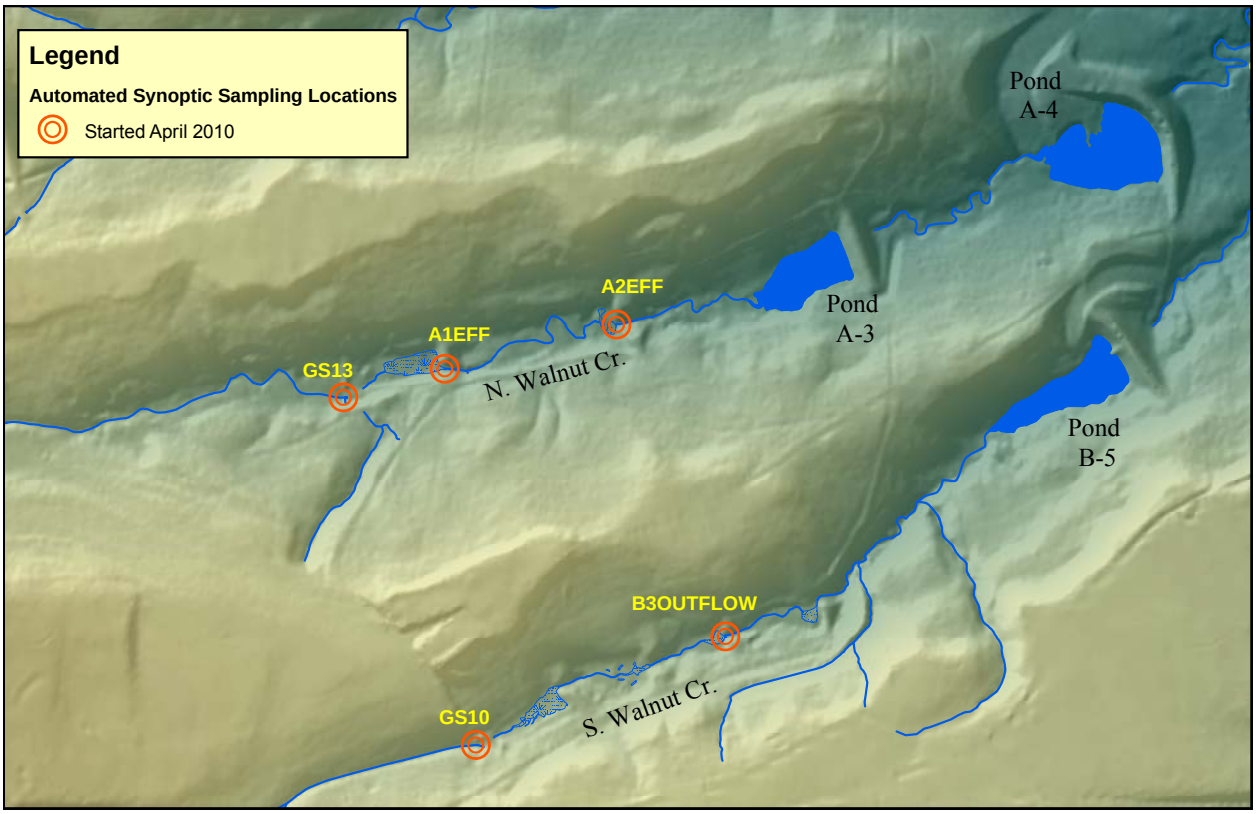


Figure 42. Synoptic Storm-Event Sampling Locations in North and South Walnut Creeks

Table 4. Summary of CY 2010 Synoptic Storm-Event Sampling

North Walnut Creek

April 22, 2010 Event	Location Code	Location Description	Pu-239,240 (pCi/L)	Am-241 (pCi/L)	Uranium (ug/L)	TSS (mg/L)
Upstream	GS13	Influent to Pond A-1	0.006 ± 0.007	0.01 ± 0.007	10.50	62.0
⬇	A1EFF	Effluent from Pond A-1 / Influent to Pond A-2	0.004 ± 0.006	0 ± 0.004	13.30	0.6
Downstream	A2EFF	Effluent from Pond A-2	0.007 ± 0.006	0 ± 0.012	14.10	0.6

July 4, 2010 Event	Location Code	Location Description	Pu-239,240 (pCi/L)	Am-241 (pCi/L)	Uranium (ug/L)	TSS (mg/L)
Upstream	GS13	Influent to Pond A-1	0.011 ± 0.01	0.006 ± 0.005	9.17	2.4
⬇	A1EFF	Effluent from Pond A-1 / Influent to Pond A-2	0.007 ± 0.008	0.003 ± 0.005	6.24	2.5
Downstream	A2EFF	Effluent from Pond A-2	0.004 ± 0.006	0.002 ± 0.003	8.62	7.2

South Walnut Creek

April 22, 2010 Event	Location Code	Location Description	Pu-239,240 (pCi/L)	Am-241 (pCi/L)	Uranium (ug/L)	TSS (mg/L)
Upstream	GS10	Influent to Pond B-1	0.015 ± 0.008	0.01 ± 0.006	17.30	33.0
Downstream	B3OUTFLOW	Effluent from Pond B-3	0 ± 0.005	0.01 ± 0.013	18.20	0.6

3.1.12.4 Pre-Abandonment Sampling of Off-Site Monitoring Wells

Four off-site wells were scheduled for abandonment (one at the Standley Lake dam, one at the Great Western Reservoir dam, and two immediately upstream of Great Western Reservoir) as the third quarter ended. During the quarter, the three wells associated with Great Western Reservoir were scheduled for sampling to collect splits of samples collected by representatives of the City of Broomfield. The requested analytes were VOCs and nitrate. One well provided insufficient water for sampling, and the other two were successfully sampled. Analytical results from the DOE splits are presented in Appendix C (wells 11894 and 49192) and include nondetects for VOCs and very low detections of nitrate.

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 third quarter of CY 2010.

5.0 Ecological Monitoring

During the third quarter of CY 2010, Preble's meadow jumping mouse (PMJM) mitigation monitoring and wetland monitoring was conducted. The PMJM monitoring data will be summarized and delivered to the U.S. Fish and Wildlife Service (USFWS) in the 2010 USFWS Biological Opinion Reports for the Rocky Flats Site. These reports are due to USFWS on December 1, 2010. The wetland monitoring data will be summarized and delivered to EPA in the *2010 Rocky Flats Site Annual Wetland Mitigation Monitoring Report* due on March 1, 2011. A brief summary of the information from both reports will be included in the annual report for CY 2010.

On September 21, 2010, EPA conducted vegetation monitoring as part of their own evaluation of revegetation success. Their monitoring report summary will be included as an appendix in the annual report for CY 2010.

6.0 References

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Washington, D.C. Talking Points

- Cover memo
- Draft talking points

Update to Dam Breach and RFLMA Points of Compliance

- Cover memo
- DOE description of Adaptive Management Plan (AMP) process
- DOE slides from initial AMP meeting
- DOE paper on AMP issues
- List of outstanding issues from Northglenn, Westminster, Broomfield, Jefferson County Health Department, and Woman Creek Reservoir Authority
- List of outstanding issues from LeRoy Moore

ROCKY FLATS STEWARDSHIP COUNCIL

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MEMORANDUM

TO: Board
FROM: David Abelson
SUBJECT: Washington, D.C. talking points
DATE: January 27, 2011

I have scheduled 15 minutes for the board to discuss and approve (as modified) the attached talking points for meetings with Congress and DOE. As has been the case in past years, throughout February and March, Stewardship Council members will meet with officials in Washington, D.C. To ensure our message as it relates to Rocky Flats reflects the Stewardship Council's positions and policies, it is helpful for the board to approve talking points.

Please let me know what questions and/or concerns you have, and any issues that you believe should be added or deleted. I have focused on broad-reaching issues, recognizing that as was the case last year, Stewardship Council members will supplement these messages when they meet with their representatives.

Also, regarding DOE's proposal to breach the terminal pond dams and move the existing points of compliance from Indiana Street to the eastern edge of DOE's jurisdictional boundary, the talking points are intentionally brief. I expect and trust the cities downstream of Rocky Flats will make this issue the central thrust of their Rocky Flats briefings. Additionally, the level of detail needed to discuss these issues in-depth cannot (and should not) be captured in talking points as they are too detailed and voluminous. Accordingly, the draft talking points are a guidepost, but are not offered as a complete or definitive statement of what any government or group might say. For these reasons, when discussing the dam breach and points of compliance, I recommend we ensure that the high level message is accurate and appropriate, and that we not delve into the details.

Action Item: Approve DC Talking Points

Rocky Flats Stewardship Council
Washington, D.C. – Talking Points

February 2011

Background – General:

1. The Rocky Flats Stewardship Council is starting its sixth year of operations. We formed to provide ongoing local government and community oversight of the post-closure management of Rocky Flats, the former nuclear weapons plant northwest of Denver.
2. The nearly $7 billion cleanup project was completed in October 2005 and represents an important legacy for our communities. Cleanup significantly reduced the many risks posed by the former weapons site, but ongoing management remains vital to ensuring long-term protection of human health and the environment. Those responsibilities lie with the Department of Energy (DOE).
3. We are the DOE-designated Local Stakeholder Organization (LSO) for Rocky Flats and thus provide public oversight and advise DOE on management issues.
4. The Board is comprised of elected officials from nine local governments, three community groups (including one representing former workers) and one individual.
5. We meet 5-6 times per year. All meetings are open to the public.

Water Management:

1. DOE is proposing significant changes to water management at Rocky Flats – breaching three terminal ponds and moving important water monitoring stations.
2. Local governments and citizens are strongly opposed to these changes, but we are working with DOE to try to resolve our differences.
3. What is missing is that these decisions are linked but DOE is handling them as separate matters.
4. We also need more time – and given that DOE will not breach the dams until 2018-2020, there is no need to finalize the decision documents at this time.
5. The Rocky Flats cleanup was successful in part because we took the time for DOE, the regulators, local governments and citizens to proactively resolve tough issues. That's what we again need from DOE.

Congressional support:

6. **We need our delegation to weigh in with DOE and the EPA to slow down this process and allow more time to discuss DOE's proposal with the goal of resolving our differences.**

Funding for DOE:

1. In large measure the cleanup remedies are performing as designed.
2. With anticipated cuts to discretionary funding, we need to make sure that DOE's Office of Legacy Management has the funds necessary to meet their obligations.
3. Funding for Office of Legacy Management was
    a. fiscal year 2009: $185 million
    b. fiscal year 2010: $190 million

4. DOE has consistently asked for and Congress has consistently provided funding for Legacy Management.
5. That funding allows DOE to carry out its mission at Rocky Flats.

Congressional support:

6. **Funding for DOE's Office of Legacy Management remains necessary in order to for the agency to carry out its responsibilities. That requires making sure the Administration continues to ask for the necessary funds – and Congress providing sufficient funding.**

Workers:

1. The Stewardship Council remains concerned about implementation of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA), a federal compensation claims for former DOE workers.
2. The GAO study of the EEOICPA identified a number of problems to the program.
3. We continue to support coverage for all former workers who have become ill from workplace exposures.
4. Towards this end, in April 2009 we voiced our support for the "Charlie Wolf Nuclear Workers Compensation Act" (S. 757; HR 1828)

Congressional support:

5. **Congressional oversight of the program remains vital and we urge Congress to approve this important legislation.**

Rocky Flats National Wildlife Refuge:

1. In July 2007 DOE transferred to the USFWS approximately 4000 acres to create the Rocky Flats National Wildlife Refuge. However, USFWS has not requested and Congress has not provided any funding for this refuge.
2. For fiscal year 2010, Congress appropriated $503.3 million for the national wildlife refuge system, $20 million above the request and $40.4 million above 2009, to provide critically needed staff, implement climate change strategies, and improve conservation efforts.
3. It is not unusual for new refuges to not have an operating budget for first 3-5 years. Without a budget, however, the USFWS will not be able to implement most of the Rocky Flats Refuge Comprehensive Conservation Plan (CCP). Until such time that funds become available the Rocky Flats Refuge will remain in caretaker status.
4. In June 2010, the Stewardship Council wrote Secretary Salazar expressing our support for funding for the refuge.

Congressional support:

5. **DOI and Congress need to provide long-term, consistent funding for USFWS to implement the CCP to help ensure the site is an asset.**
6. **With Ken Salazar as Secretary, the Colorado delegation should begin discussing with DOI long-term stable funding for the Rocky Flats Refuge.**

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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 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: Update on Dam Breach EA/AMP and RFLMA Changes
DATE: January 26, 2011

We have scheduled 40 minutes for the downstream communities, DOE, CDPHE and EPA to update the board on the dam breach environmental assessment (EA)/Adaptive Management Plan (AMP). We will weave into the conversation DOE's proposal to move the Indiana Street water points of compliance to the eastern edge of the DOE lands.

As Stewardship Council staff has communicated to you, DOE has delayed issuing the dam breach EA as it works with local communities and others to resolve a number of outstanding issues. DOE has initiated an AMP planning process in an effort to address and resolve their concerns. (See attached documents for more information about that process, and for comments Broomfield et al, and LeRoy Moore issued as part of the process.)

The AMP, in short, is geared towards reassuring "an engaged public on how the Proposed Action would be monitored and eventually implemented. DOE intends that the AMP and the EA decision document will be finalized in April 2011." To date, DOE has hosted two well-attended meetings of the AMP working group. The group is in the process of compiling a list of outstanding issues associated with the EA's proposed action. DOE's intent is to hold discussions on these issues, attempt to reach consensus on as many as possible, and then commit to incorporating the proposals into the final EA. However, one potential difficulty raised by the downstream communities is the compressed remaining AMP timeline:

Current DOE AMP Timeline:

- December – Early March: AMP team will identify measurements, controls and actions
- Late January – Late March: AMP Team will draft the AMP
- Early March – Early April: DOE will incorporate AMP commitments into the EA
- Late April: DOE will finalize the AMP and issue the EA

As a result of schedule concerns raised by the communities, DOE has agreed to hold additional public meetings beyond those initially envisioned.

As outlined in the attached documents, issues to be addressed in the AMP meetings include:

1. Institutional Control (IC) prohibiting excavations below 3 feet in non-remedy areas
    a. Risk assessment of sub-surface soils in regard to the IC
    b. Environmental Covenant in regard to the IC
2. Monitoring points
3. Monitoring protocols
4. DOE's obligation/commitment under EA/AMP for water quality monitoring
5. Water lease with Broomfield
6. Standley Lake Protection Project operating agreement
7. Contingency plans
8. Explanation of the reason or basis for going forward with the proposed action
9. Present Landfill Pond dam breaching

While DOE has not yet made any final decisions, changes to the EA that are being discussed include, but are not limited to:

1. Delaying breach of the terminal ponds until 2018 -2020.
2. Continuing to monitor at Indiana Street (see below)
3. Providing additional monitoring data to stakeholders, and using that information to inform decision-making
4. Developing protocols DOE would implement to address water quality concerns.

Continuing to monitor at Indiana Street

Relocating the existing regulatory water monitoring points of compliance (POCs) from Indiana Street to immediately downstream of the three terminal ponds (A-4, B-5, and C-2) remains a contentious issue. DOE is proposing that it move the Indiana Street POCs but continue to sample at Indiana Street. Under the current regulatory structure, for regulatory POCs, CDPHE and EPA can bring enforcement actions and issues fines. These agencies must also approve changes to the monitoring program, including analytes that DOE analyzes, frequency of monitoring, etc.

Under the new Indiana Street sampling plan DOE is proposing as part of the AMP, sampling at Indian Street would not be regulatory monitoring points. Accordingly, should water quality at the Indiana Street sampling stations exceed current water quality standards, CDPHE and EPA could not bring an enforcement action and could not fine DOE. It is also unclear under what circumstances DOE could cease sampling, and the role of CDPHE and EPA in that decision.

IC prohibiting excavation below 3'

Another significant issue indentified by the downstream communities regards the proposed dam breaches and the prohibition of excavation deeper than three feet except for remedy-related purposes. This prohibition is an institutional control found in the CAD/ROD, RFLMA and the Environmental Covenant with the State of Colorado. The downstream communities believe the proposed dam breaches violate this prohibition since the dams are not considered part of the remedy, and excavations deeper than three feet will occur. The RFLMA parties – DOE, CDPHE, and EPA – do not agree with this position. At the most recent AMP meeting they stated that the prohibition against excavations greater than three feet was never intended to keep DOE from performing regulator-approved, non-remedy excavation work deeper than three

feet. Dan Miller of the Colorado AG Office is in the process of drafting clarifying language to be incorporated into the three documents. The new language will need to go through some type of public comment process before it can be finalized.

Please contact me if you have any questions.

Rocky Flats Surface Water Configuration Environmental Assessment
Adaptive Management Plan Purpose and Process

The U.S. Department of Energy is proposing to develop an Adaptive Management Plan that may be implemented to address community concerns that have been expressed concerning the draft *Rocky Flats Surface Water Configuration Environmental Assessment (EA).*

The draft EA concluded that no significant impacts to human health or the environment would result from implementing the proposed dam breach action, and none of the comments received during the public comment period provided a technical or scientific basis for reconsidering that conclusion.

However, based on public comments received and a number of public discussion forums, DOE is aware that some members of the public still have concerns about the proposed action. DOE is exploring the adaptive management process in order to mitigate these concerns.

Adaptive management is used to address unanticipated changes in environmental conditions or subsequent information that might affect the original environmental protections as analyzed in the EA that are of concern to the public. The NEPA adaptive management model requires ongoing environmental monitoring following implementation of any proposed action that includes mitigation under the EA. The planned mitigation measures for this EA are the long-term water quality monitoring and data evaluation discussed in the draft EA. In addition, NEPA requires that the action's implementation be adapted as appropriate based on the ongoing environmental monitoring data. Under this approach, actions are adjusted to foster desired outcomes and reduce undesired ones.

DOE has initiated a public process to develop an Adaptive Management Plan (AMP) in order to address public concerns and try to reassure an engaged public on how the Proposed Action would be monitored and eventually implemented. DOE intends that the AMP and the EA decision document will be finalized in the April 2011 timeframe.

DOE envisions a flexible process that integrates long-term monitoring and analysis with adjustments to management actions to address unforeseen changes in site conditions. For this project, the AMP does not represent a mitigation measure, nor does it change the findings of the EA. It does provide the framework to adjust elements of the Proposed Action over time based on ongoing monitoring results. This ability to adjust is intended to alleviate public concerns by allowing DOE to ensure that the conclusions reached in the EA remain consistent prior to breaching, which would occur between 2018 and 2020. Examples of elements that could be adjusted include adding water monitoring locations and modifying monitoring frequency, setting parameters for the decision to breach, and determining the specific time-frame for breaching the terminal dams.

Although DOE has not established formal guidance on implementing adaptive management, a number of other federal agencies have used adaptive management to address public concerns over proposed actions. The U.S. Department of the Interior (DOI) has developed a number of AMPs and DOE is using the DOI guidance as a tool to develop an AMP for the dam breach action. These guidelines help frame the overall questions that should be asked to determine if an AMP is appropriate and suggest steps to take to enhance the consensus-building process. The DOI guidelines provide direction on how to develop an AMP, but do not provide a step by step outline. Because the issues involved in each action are not always similar in nature, each individual AMP will be different.

DOE has responded to several local communities' requests for more public participation by hosting a number of public working group sessions to discuss the details of the Proposed Action and to help determine whether developing an AMP is a viable method of mitigating the public concerns. The first step in this process was to obtain public input into what should be included in an AMP. Future meetings will address the specific actions to be included in the proposed AMP and how it will be implemented until the final breaching decision is reached.

Organizational Meeting for Developing an Adaptive Management Plan (AMP) for Surface Water Configuration EA

Date and time to be determined

Rocky Flats Site Office

11025 Dover St.

Broomfield, CO 80021

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Adaptive Management Plan (AMP) for Surface Water Configuration EA

- The purpose of these meetings is to determine what additional mitigating actions should be in the AMP.
- The AMP only applies to actions as defined in the EA.
- The AMP does not change the findings of the EA.
- Development of the AMP requires collaboration to reach consensus.
- Commitment will be required from all parties to maintain flexibility and openness in discussions.

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DOE Responsibilities

- Protect water quality
- Monitor and report on conditions
- Respond to water quality impacts
- Improve site environmental attributes
- Maintain transparent decision-making process

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Mitigating Actions Currently in the EA

- RFLMA monitoring and reporting
- CERCLA 5-year review
- Operate in flow-through condition prior to construction
- Protect wildlife, birds, T&E species
- Erosion controls and revegetation
- Wetlands replacement and enhancement
- Actions during construction
  - Drain water levels down
  - Provide dust control
  - Follow nationwide permit for dredge and fill
  - Obtain stormwater discharge permit during construction

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Areas for Potential Additional AMP Mitigating Actions

- Non-RFLMA surface water monitoring
- Evaluating wetlands development
- Evaluating stream hydrology
- Evaluating habitat enhancement
- Data evaluation and reporting (Non-RFLMA)
- Implementation timeline

Note: All RFLMA monitoring and reporting continue.

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AMP Development Process

- AMP developed through public process
  - Rocky Flats Stewardship Council (RFSC) participation to support dissemination of information to the public
  - Structured process
  - Focus list of agreed topics in relation to the EA only
- Emphasis on transparency and cooperative engagement of stakeholders
- AMP should be finalized within 6 months
- The commitment to prepare the AMP would be included in the EA

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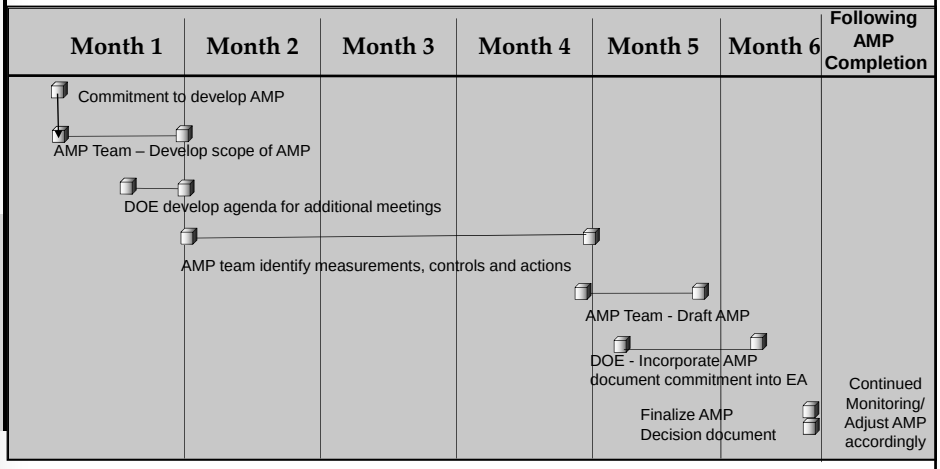
AMP Implementation Process

- AMP is dynamic - may be revised as more specific and detailed information becomes available or regulated activities change
  - RFSC facilitated discussions can include revisions to AMP
- Annual progress report on mitigation actions
  - Will include in RFLMA Annual Report
  - Meet with cities and RFSC technical staff as requested to discuss details

AMP Development Timeline



Draft

Outline for Rocky Flats Surface Water Configuration
Adaptive Management Plan

1.0 Introduction
- 1.1 Project Setting
- 1.2 Definition of Terms
- 1.3 Reasons for the AMP
- 1.4 Goals of initial AMP
- 1.5 Coordination with other RF programs (RFLMA)

2.0 Rocky Flats Dam description
- 2.1 Description of current management action – the decision to be made
- 2.2 Description of dam breach elements – flow through with final breach

3.0 Surface Water Configuration AMP Details
- 3.1 Establishment of AMP Structure – what is and is not included
- 3.2 Establishment of Management Objectives – goal of project
- 3.3 Monitoring program – timing and triggers for monitoring
- 3.4 Data Interpretation and modeling
- 3.5 Development of Management Action Plan
  - 3.5.1 Parameters of data evaluation
  - 3.5.2 Action Plan decision matrix
  - 3.5.3 Administrative Provisions for AMP modification
- 3.6 Dispute Resolution Procedure

4.0 Annual Operating Plan

5.0 Appendices

Issues to be addressed during the Rocky Flats Surface Water Configuration EA Adaptive Management Plan development process

In response to DOE's request at the Dec. 09, 2010 working group meeting, two stakeholders provided DOE with input on issues/topics that should be addressed during the Adaptive Management Plan development process. One additional topic was determined to be appropriate for inclusion in the AMP development process. Item number 9, Present Landfill Pond dam breaching, has been added to the list of discussion topics.

1. Institutional Control prohibiting excavations below 3 feet in non-remedy areas.
    a. Risk assessment of sub-surface soils in regard to the IC
    b. Environmental Covenant in regard to the IC
2. Monitoring points
3. Monitoring protocols
4. What is DOE's obligation/commitment under EA/AMP for water quality monitoring?
5. Water lease with Broomfield.
6. Standley Lake Protection Project operating agreement.
7. Contingency plan
8. Explanation of the reason or basis for going forward with the proposed action.
9. Present Landfill Pond dam breaching

The next AMP development meeting will be held at 1 p.m. on Thursday, Jan. 13, 2011, at the Rocky Flats Legacy Management office at 11025 Dover St., Suite 1000, Westminster, CO.

Below is a summary of proposed additions to the Draft EA that are being considered for inclusion in the final EA.

Rocky Flats Surface Water Configuration Environmental Assessment (EA)
Proposed changes from the Draft EA released to the public in April 2010, based on concerns stated in the public comment letters.

Proposed changes:

- Changing timeframe of breaching of terminal dams to 2018-2020.
- C-2 dam timeframe changed to terminal dam breaching of 2018 to 2020.
- Continue monitoring at Indiana Street.
- Additional monitoring data reported to stakeholders and used to inform decision making.
- If a regulatory concern over water quality is raised during flow-through operation, DOE would close the valve at the appropriate terminal pond.
    - The valve would remain closed until the regulatory review determines the next cause of action.

- Revegetation during flow-through operations.
- Additional seeding of wetland and upland areas and installation of erosions controls after the breaching of any dam occurs.
- Revegetation monitoring conducted in accordance with the RFS Revegetation Plan.
- Wetland monitoring conducted in accordance with the RFS Wetland Mitigation Monitoring and Maintenance Plan.

From Cities of Northglenn and Westminster, the Woman Creek Reservoir Authority, Jefferson County Public Health, and the City and County of Broomfield

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List of Outstanding Rocky Flats Issues and Concerns

December 16, 2010

1. **INSTITUTIONAL CONTROLS**
   All the Department of Energy Legacy Management's (DOE-LM) proposed activities must comply with all applicable laws, regulations, and statues, as well as any agreements and leases.

   a. The proposed construction of the new monitoring points as part of an amendment to the Rocky Flats Legacy Management Agreement (RFLMA), as well as the breaching of the dams which is being considered as a separate action under the National Environmental Policy Act (NEPA) process, violates the institutional control which prohibits excavations greater than 3 feet per Table 4 of the RFLMA and per Section 17, *Selected Remedy/Corrective Action For The Central Operable Unit* of the Corrective Action Decision/Record of Decision (CAD/ROD). Alternative 2, Institutional and Physical controls is the basis for the chosen remedial action.

   b. Any changes or modifications to the Institutional Controls requires EPA, CDPHE, and DOE approval by a formal amendment to the CAD/ROD through means of a public process.

2. **APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS**
   DOE-LM is applying state regulations and EPA guidance for Applicable or Relevant and Appropriate Requirements (ARAR) pertaining to groundwater and applying their justification for a separate media, surface water.

3. **JUSTIFICATION FOR RELOCATION OF POINTS OF COMPLIANCE**
   DOE-LM's justifications for relocating the Points of Compliance (POCs) are not consistent with the CAD/ROD requirement that any relocation of the established POCs must be "forced." per section 17, *Selected Remedy/Corrective Action for the Central OU* of the CAD/ROD.

4. **GROUNDWATER DATA AND MOINTORING**
   DOE-LM has not provided any data or modeling studies to support the statement that groundwater emerges to surface water before leaving the Central OU. The proposed changes must include additional remedial action objective evaluations

5. **PRESENT LANDFILL POND DAM BREACH**
   Breaching the Present Landfill (PL) Pond Dam is contrary to the requirements established pursuant to the Resource Conservation and Recovery Act (RCRA) and Colorado Hazardous Waste regulations, 40 CFR, 265.280, Closure and Post-closure requirements.

6. **CONTINGENCY PLAN**
   DOE has not provided the downstream communities with a Contingency Plan to ensure surface water is contained on-site in the event of an exceedance. Modeling has not been performed for major storm events, fires or other catastrophes. A contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

7. **ADAPTIVE MANAGEMENT PLAN**
   The process for developing, preparing, and implementing the proposed Adaptive Management Plan (AMP) does evaluate the proposed actions holistically. To work collaboratively, all RFLMA Parties must have decision making authority based on input from the downstream communities.
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8. TECHNICAL WORKING GROUP

A technical workgroup needs to be formally established and language in the revised RFLMA should identify the workgroup to address long-term stewardship issues as they arise in the future.

The issues listed above are not intended to be exhaustive. Additional technical concerns will be identified as more information becomes available.

From: LeRoy Moore [leroymoore@earthlink.net]
Sent: Saturday, December 11, 2010 3:36 PM
To: Surovchak, Scott; RFInfo
Cc: dabelson@rockyflatssc.org
Subject: Surface Water Configuration Issue

Rocky Mountain Peace and Justice Center
P. O. Box 1156, Boulder, CO 80306 USA 303-444-6981 Fax 720-565-9755 www.rmpjc.org

December 12, 2010

To: Scott Surovchak, DOE LM, Rocky Flats
From: LeRoy Moore, PhD
Re: Surface Water Configuration Issue

The December 9, 2010, meeting on the Adaptive Management Plan for the Surface Water Configuration Environmental Assessment intrigued me. On display was the fear of some parties that DOE had already decided to breach the dams and to relocate the points of compliance and that the AMP process was intended either to get them on board or to provide public-participation cover for DOE. I could see that you were patiently trying to convince those present that decisions had not yet been made and that their concerns will be taken seriously. Yet your declaration that in the end the DOE will make the decision, while true, was not very reassuring to those who showed the greatest anxiety.

I attended the meeting because I share concerns of people from downstream communities. But being there made me realize that at age 79 I personally have neither the time nor the patience required to be a regular participant in the AMP meetings. Having been very active in half-a-dozen Rocky Flats advisory or oversight bodies for a decade-and-a-half I've paid my dues. I continue to be concerned about Rocky Flats, but I will be putting my energies elsewhere. I do, however, want to put before you and others a key reason why I think DOE's proposal to breach the dams and relocate the POCs is unwise.

DOE personnel must assume that the proposed action will not result in exceedance of the Colorado standard for plutonium in surface water. This is a questionable assumption.

The conclusion of the Actinide Migration Evaluation (AME) done as part of the cleanup process was that plutonium remaining in the Rocky Flats environment after completion of the cleanup would be "relatively immobile." This conclusion was a principal basis for the legally-binding radionuclide soil action levels established in the final Rocky Flats Cleanup Agreement.

In fact, however, the AME team's conclusion of inconsequential plutonium migration at Rocky Flats flies in the face of one of their own reports, namely, their February 2001 Report on Soil Erosion and Surface Water Sediment Transport Modeling. This document concludes that cleanup of plutonium in the soil at Rocky Flats even to 10 picocuries per gram rather than the 50+ actually adopted would result in failure at certain downstream areas to meet the Colorado State standard for plutonium in surface water of 0.15 picocuries per liter. So far as I know, there was never any correction to or refutation of this February 2001 AME report.

There is a physical record that supports the report's conclusion. Twice in 1997, before the referenced report was written, the quantity of plutonium in Walnut Creek at the downstream boundary of the Rocky Flats site exceeded the state standard. My recollection is that the source of this plutonium could not be identified. In addition, in 2004 and 2005 there were exceedances of the state standard at two Points of Evaluation on Woman Creek. What are the implications for relocating POCs upstream of having POE exceedances so close in time to completion of the cleanup?

Before deciding to breach any of the dams or to relocate the points of compliance away from Indiana Street, DOE

needs to prepare a detailed analysis of the 2001 AME Report on Soil Erosion and Surface Water Sediment Transport Modeling. The same needs to be done regarding the exceedances of the state surface water standard in Walnut Creek in 1997. In addition, the complete sampling record needs to be searched to see if there were any other exceedances of the state plutonium-in-surface-water standard at either POEs or POCs along either Walnut or Woman Creek for which the source of the exceedance was not irrefutably identified.

The result of the requested analysis needs to be made available for public review with ample time for study and comment.

Cc: Rocky Flats Stewardship Council

1. Kaiser-Hill Co., Actinide Migration Evaluation Pathway Analysis Summary Report, ER-108 (April 2004).
2. Kaiser-Hill Co., Report on Soil Erosion and Surface Water Sediment Transport Modeling for the Actinide Migration Evaluation at the Rocky Flats Environmental Technology Site, 00-RF-01823/DOE-00-93258 (February 2001), pp. E-3, E-4.
3. J. E. Law, Rocky Mountain Remediation Services, L.L.C., Memo to D. C. Shelton, K-H. Environmental Compliance, dated August 18, 1997, Re: Recent elevated plutonium and americium in water at RFCA point of compliance, Walnut Creek at Indiana Street.
4. Documentation for exceedances at the GS10 and SW093 POEs was included in an April 25, 2005, memo from Ken Korkia to members of the Rocky Flats Citizens Advisory Board.

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LeRoy Moore, Ph.D.
Rocky Mountain Peace and Justice Center
P. O. Box 1156, Boulder, Colorado 80306-1156 USA E-mail address: leroymoore@earthlink.net

Stewardship Council History

- Cover memo
- LSO authorizing legislation
- Letter from DOE to the Rocky Flats Coalition
- DOE's letter approving the LSO
- Fiscal year 2005 Congressional funding authorization

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MEMORANDUM

TO: Board

FROM: David Abelson

SUBJECT: Discussion of the History of the Rocky Flats Stewardship Council

DATE: January 26, 2011

Earlier this year, the board requested that we discuss the history of the Rocky Flats Stewardship Council, focusing on the reasons for the organization. I've scheduled 30 minutes for this discussion. This discussion has originally been scheduled for November.

Background

In 1999, the Rocky Flats Coalition of Local Governments (the predecessor organization to the Stewardship Council) and the Rocky Flats Citizens Advisory Board (CAB) formed a joint dialogue, the Rocky Flats Stewardship Working Group. The group's dialogue focused on incorporating into cleanup decisions post-closure management needs and requirements (what we called "long-term stewardship"). A key component of long-term stewardship is establishing institutional controls. Institutional controls, as the name implies, include institutions such as a site manager (DOE), regulators (EPA and CDPHE), a community oversight group, and legal/regulatory controls. (Institutional controls stand in contrast to physical controls [e.g., fences, monitoring stations, signs, etc.].)

The Rocky Flats cleanup project benefitted greatly from the active and consistent involvement of the Coalition and CAB, among others. In 2003, it became clear that post-closure management would likewise benefit from ongoing local government and community oversight. Accordingly, in 2004, as DOE's Office of Environmental Management (EM) was nearing completion of active remediation activities, and Congress and DOE were taking steps to establish the Office of Legacy Management (LM), Senator Wayne Allard secured legislation establishing Local Stakeholder Organizations (LSO). The legislation (attached) authorized establishing LSOs at Rocky Flats, Mound (Ohio) and Fernald (Ohio). For different reasons, the local governments and communities surrounding Mound and Fernald opted not to establish LSOs for their sites.

Members
After a challenging public dialogue, and the involvement of Senators Allard and Salazar, and Representatives Udall and Beauprez, DOE agreed to appoint nine governments (with Golden and Northglenn serving in rotating positions) and four community organizations/individuals.

Choosing the governments was challenging and somewhat political. During cleanup, the seven Rocky Flats Coalition governments were highly engaged, so it was clear that these governments would be part of the Stewardship Council. Golden was also engaged through one of their former councilors, Bob Nelson. Among other things, Bob actively participated in the aforementioned Rocky Flats Stewardship Working Group meetings, and attended the majority of the Coalition board meetings. Northglenn was not engaged outside of their membership in the Woman Creek Reservoir Authority. Yet, like Golden, they wanted to be formally involved in the Stewardship Council.

So, a deal was struck where Golden and Northglenn would both be board members. They would participate in all of the meetings. The only difference is that in alternating years they would have a vote.

The other challenge the Coalition faced was the Stewardship Council membership being dominated by local governments. The members of the CAB wanted greater community representation. Part of the challenge was that the LSO legislation provided in part that the LSO

> shall be composed of such elected officials of local governments in the vicinity of the closure site concerned as the Secretary considers appropriate to carry out the responsibilities set forth in subsection (c) who agree to serve on the organization, or the designees of such officials.

The other part of the deal that Allard et al. worked out with DOE was to establish a board of 12, with four seats for community members/groups. That agreement did not appease the CAB's concerns, but was still adopted.

Local Stakeholder Organization (LSO) Mission
As provided in the LSO legislation, the LSO are charged with

1. soliciting and encouraging public participation in appropriate activities relating to the closure and post-closure operations of the site;
2. disseminating information on the closure and post-closure operations of the site to the State government of the State in which the site is located, 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;
3. transmitting to appropriate officers and employees of the Department of Energy questions and concerns of governments, persons, and entities referred to paragraph (2) on the closure and post-closure operations of the site; and
4. performing such other duties as the Secretary and the local stakeholder organization jointly determine appropriate to assist the Secretary in meeting post-closure obligations of the Department at the site.

The Stewardship Council in turn adopted the following 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.

Funding is provided through a grant from DOE. Initial funding came through a 2005 direct Congressional appropriation; subsequent funding came directly from DOE at the agency's discretion.

Focus Since Closure

DOE and its prime contractor, Kaiser-Hill, completed active remediation activities in October 2005. The cleanup was certified as complete by the EPA in September 2006. Despite this huge success, remediation activities continue as DOE continues to treat contaminated groundwater. (Because DOE is still treating groundwater, the DOE retained lands remain on the CERCLA National Priorities List.)

From its inception in March 2006, the Stewardship Council's primary focus in 2006 and 2007 was on the final cleanup regulatory documents, and on the post-closure regulatory documents, including the Rocky Flats Legacy Management Agreement. In 2007, we also worked on the first post-closure CERCLA review. (The next CERCLA review is scheduled for 2012.)

While addressing these macro regulatory issues, we've also focused more narrowly on specific areas of the site. That work can be divided into remediation challenges – e.g., 991 hillside slump, original landfill, solar ponds – and changes DOE is making to the site – e.g., changes in monitoring locations, changes in site standards, dam breaching.

The organization has also focused on communications. That includes (but is not limited to):

1. participating in national forums;
2. preparing and circulating briefing information to community members, congressional staff, and others;
3. developing fact sheets and addressing questions and concerns member groups raise; working with USFWS on signage for the site;
4. meeting with Congressional staff; and
5. developing and managing the website.

Biggest Challenge

When Congress authorized the creation the LSO, there was great uncertainty regarding how community involvement post-closure would change from structures we established during cleanup. There was no roadmap – and in fact, the Stewardship Council is setting the model for how to work in this regulatory environment. While the work is no less important than it was

during closure, the nature of the work (and the issues we tackle) has changed. Our role is to oversee and to communicate, and to provide a public forum to discuss issues. However, save for a few issues, there are no great disputes that tend to energize the group and focus attention. And yet, with this changing emphasis, the board has remained committed to our role as the LSO.

Documents
Attached to this memo are a few documents worth reviewing:

1. LSO authorizing legislation
2. Letter from DOE to the Rocky Flats Coalition stating membership shall be eight governments and four non-elected groups/individuals. Local government membership was later increased to nine, with Golden and Northglenn annually alternating voting.
3. DOE's letter approving the LSO
4. Fiscal year 2005 Congressional funding authorization (funds were provided to the Rocky Flats Coalition to use in establishing the Stewardship Council; $400,000, the balance remaining from the $500,000, was subsequently transferred from the Coalition to the Stewardship Council).

108th CONGRESS
2d Session
Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005

AN ACT

To authorize appropriations for fiscal year 2005 for military activities of the Department of Defense, for military construction, and for defense activities of the Department of Energy, to prescribe personnel strengths for such fiscal year for the Armed Forces, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the `Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005'.

SEC. 3118. LOCAL STAKEHOLDER ORGANIZATIONS FOR 2006 CLOSURE SITES.

(a) Establishment. –

(1) The Secretary of Energy shall establish for each Department of Energy 2006 closure site a local stakeholder organization having the responsibilities set forth in subsection (c).

(2) The local stakeholder organization shall be established in consultation with interested elected officials of local governments in the vicinity of the closure site concerned.

(b) Composition. – A local stakeholder organization for a Department of Energy 2006 closure site under subsection (a) shall be composed of such elected officials of local governments in the vicinity of the closure site concerned as the Secretary considers appropriate to carry out the responsibilities set forth in subsection (c) who agree to serve on the organization, or the designees of such officials.

(c) Responsibilities. – A local stakeholder organization for a Department of Energy 2006 closure site under subsection (a) shall –

(1) solicit and encourage public participation in appropriate activities relating to the closure and post-closure operations of the site;

(2) disseminate information on the closure and post-closure operations of the site to the State government of the State in which the site is located, 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;

(3) transmit to appropriate officers and employees of the Department of Energy questions and concerns of governments, persons, and entities referred to paragraph (2) on the closure and post-closure operations of the site; and

(4) perform such other duties as the Secretary and the local stakeholder organization jointly determine appropriate to assist the Secretary in meeting post-closure obligations of the Department at the site.

(d) Deadline for Establishment. – The local stakeholder organization for a Department of Energy 2006 closure site shall be established not later than six months before the closure of the site.

(e) Department of Energy 2006 Closure Site Defined. – In this section, the term ``Department of Energy 2006 closure site" means the following:

(1) The Rocky Flats Environmental Technology Site, Colorado.

(2) The Fernald Plant, Ohio.

(3) The Mound Plant, Ohio.

Department of Energy
Washington, DC 20585

June 27, 2005

Mr. Shaun McGrath, Chair
Rocky Flats Coalition of Local Governments
8461 Turnpike Drive, Suite 205
Westminster, CO 80031

Dear Mr. McGrath:

This is in response to your letter dated June 6, 2005, regarding the Rocky Flats Coalition of Local Governments (RFCLOG) approach to establishing the Rocky Flats Local Stakeholder Organization (LSO). We understand that your approach is consistent with the guidance provided in the April 26, 2005, letter from Senators Allard and Salazar and Congressmen Udall and Beauprez.

The Office of Legacy Management (LM) concurs with your approach to membership of eight local elected officials and four non-elected officials, all with equal stature, and the establishment of the LSO no later than six months prior to regulatory closure. As stated in Secretary Bodman's letter dated June 13, 2005, to Senators Allard and Salazar and to Congressmen Udall and Beauprez, "the LSO will be established at least six months prior to signature of the final Record of Decision for the site."

As next steps, LM is requesting that the local elected officials develop a plan that addresses how the three main activities required by Section 3118 of the Fiscal Year 2005 National Defense Authorization bill will be conducted. The plan should explain how the LSO anticipates working within the context of the draft Rocky Flats post-closure public involvement plan (PIP). The plan should include a timeline of the actions/activities identified by the LSO including the stand-up of the Rocky Flats LSO.

The plan should also include the approach to be used for determining how the non-elected officials will be nominated to serve on the LSO. At this point, LM is interested in the method; the membership of the LSO will not be determined until LM has reviewed the Rocky Flats LSO plan. Finally, LM requests that all elected officials sign the Rocky Flats LSO plan; we understand that this currently includes the City of Golden and the seven members of the RFCLOG.

LM encourages you to develop and discuss your plan with members of the public and other key stakeholders (e.g., the Rocky Flats Citizens Advisory Board, retiree/workers groups, environmental groups as well as other interested key stakeholders). Specifically, It would be valuable to discuss the types of information and the levels of participation that will be needed after the Corrective Action Document/Record of Decision (CAD/ROD) is signed and the site is in long term surveillance and maintenance.

LM looks forward to working with you and receiving the Rocky Flats LSO proposed plan by October 31, 2005. Please contact me or Scott Surovchak at 303-966-3551 (email: scott.surovchak@rf.doe.gov) with any questions or concerns.

Sincerely,

Michael W. Owen
Director
Office of Legacy Management

Cc: Senator Wayne Allard
Senator Ken Salazar
Congressman Mark Udall
Congressman Bob Beauprez
Gerald L. DePoorter, RFCAB

Department of Energy
Washington, DC 20585

December 21, 2005

DEC 28 2005

Mr. Shaun McGrath
Chairman
Rocky Flats Coalition
of Local Governments
8461 Turnpike Drive, Suite 205
Westminster, CO 80031

Mr. McGrath,

This is in response to your letter dated November 16, 2005, that forwarded the *draft Local Stakeholder Organization (LSO) Plan* to me for approval. The Department of Energy approves the enclosed plan, as amended. We see this plan as the set of activities that will be done by the LSO on behalf of DOE. A summary discussion of the amendments is provided below:

- Amendments to the LSO responsibilities section of the document included moving two items from sub-section 4. (Perform other duties...) to sub-section 2. (Disseminate information) to better reflect the scope of the LSO.

- References to working with the U.S. Fish and Wildlife Service and Congress were removed as inappropriate. We can not direct an organization to work with another federal agency nor can we fund an organization to represent us before the Congress.

- A statement on educating the public on integration of contaminant management and refuge management was deleted. Management of the Rocky Flats National Wildlife Refuge is the responsibility of the U.S. Fish and Wildlife Service; we expect that agency to determine how to best interact with the communities surrounding the site.

- The paragraph addressing direct communication between LM and the communities was removed as unnecessary; it was never intended that the LSO would be the only forum for stakeholders to communicate with DOE.

- Finally, specific reporting requirements such as those used as examples in the proposed plan are addressed in other, regulatory documents such as the *Interim Surveillance and Maintenance Plan* and will be including in the *Long-term Surveillance and Maintenance Plan* following the completion of the CERCLA Record of Decision (ROD) for the site.

The Office of Legacy Management appreciates your efforts to develop this plan and looks forward to its implementation. If you have any questions, please contact Scott Surovchak locally at 303-966-3551, or Tony Carter in our Washington D.C. office at 202-586-3323.

Sincerely,

Michael W. Owen
Director
Office of Legacy Management

Local Stakeholder Organization Plan

As Amended
DOE Office of Legacy Management
December 14, 2005

Background

In a June 27, 2005 letter to the Board of Directors of the Rocky Flats Coalition of Local Governments, Legacy Management (LM) requested the Coalition spearhead the development of a Local Stakeholder Organization (LSO) Plan. Per LM's request, the LSO Plan should "address how the three main activities required by Section 3118 of the Fiscal Year 2005 National Defense Authorization bill will be conducted." The letter further requests the LSO plan identify how the LSO anticipates working within the context of the Rocky Flats Post-closure Public Involvement Plan (or PCPIP) and include "the approach for determining how the non-elected officials will be nominated to serve on the LSO." This Plan addresses these issues.

Local governments represent constituencies closest to the Site, and through their exercise of representative government, they are able to pull groups together to address issues. The partnership that has developed between DOE and local governments needs to be maintained, and thus governments are charged with spearheading the development of this plan.

The PCPIP includes the following relevant information (quoting from the PCPIP):

Public Meetings

- **Site Transition:** Public meetings will be held as needed to address significant transition issues. In addition, EM and LM will present information about ongoing transition activities from EM to LM during regular RFCLoG and RFCAB meetings.
- **Post-Closure:** The establishment of a Rocky Flats LSO will provide the post-closure forum for stakeholders to continue a dialogue with DOE. LM plans to coordinate with the LSO to hold three quarterly and one annual general public meetings during the first 2 years post-closure to discuss post-closure issues of importance to stakeholders. These meetings will provide information about LTS&M activities being conducted at the site and will present the results of annual site inspections.

Briefings for Local, State, and Federal Elected Officials

- **Site Transition:** Rocky Flats will continue to hold briefings throughout site transition. LM will participate in or hold its own meetings with elected officials as needed to discuss specific topics related to site transition.
- **Post-Closure:** LM plans to continue briefing elected officials through the LSO to discuss new data trends or the evaluation of post-CAD/ROD changes.

Meetings With Stakeholder Groups

- **Site Transition:** Rocky Flats will continue to support and participate in RFCAB and RFCLOG meetings. LM will frequently attend, especially when issues related to post-closure activities are on the agenda. EM and LM will continue to meet with stakeholder groups as requested through site transition.
- **Post-Closure:** Stakeholder groups will be included in the LSO public meetings held post-closure.

The following LSO responsibilities, which draw on these sections of the PCPIP, track the responsibilities set forth in Section 3118 of the Fiscal Year 2005 National Defense Authorization Act.

NDAA Section 3118 – LSO Responsibilities

To ensure maximum buy-in by the LSO Board of Directors, the LSO Plan that LM will approve must be a high-level document with final decisions about the work plan being reserved for the yet-unnamed LSO Board, in consultation with LM.

Section 3118 of the Fiscal Year 2005 Defense Authorization Act includes the following provisions. The legislative language is in **bold**; actions that the LSO will likely take to meet each responsibility are in *italics*. Note, because of the interrelated nature of the responsibilities Congress established in Section 3118, the specific actions that have been identified can fall under more than one subsection below.

> **(c) RESPONSIBILITIES.--A local stakeholder organization for a Department of Energy Environmental Management 2006 closure site under subsection (a) shall—**
>
> 1. **Solicit and encourage public participation in appropriate activities relating to the closure and post-closure operations of the site.** These actions include:
>   a. *Host regular, public meetings for LSO members and the general public, including Board meetings, the frequency to be determined by the LSO Board. Meetings will provide an opportunity:*
>   i. *To discuss with federal, state, and local elected officials and agencies issues related to the long-term stewardship and management of the Rocky Flats site;*
>   ii. *To be briefed on the results of the operational and performance monitoring data of site operations.*
>   iii. *Other items as necessary.*
>   b. *Work with DOE on implementation of Post-Closure Public Involvement Plan, including meetings identified in the PCPIP.*
>   c. *Work with DOE to identify the role of the LSO in the four public meetings LM identified in the PCPIP.*
>   d. *Provide opportunities at meetings and between meetings for education and feedback.*
>   e. *Provide interface and communicate with federal, state, and local elected officials and agencies.*

f. Provide a mechanism for LSO members and the general public to review annual DOE budgets for implementation of DOE responsibilities.

g. Participate in CERCLA Five-Year Reviews and other reviews that DOE, the State, or EPA undertake.

2. **Disseminate information on the closure and post-closure operations of the site to the State government of the State in which the site is located, 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.** These actions include:

   a. Develop and implement mechanisms for LSO members and the general public to be informed of the results of the monitoring data and other relevant information, recognizing that not all communication between LM and Rocky Flats constituencies will flow through the LSO. Potential options include:

      i. Periodic newsletters and/or annual reports

      ii. Email updates

      iii. Other mechanisms as necessary

   b. Provide a mechanism for educating succeeding generations about the residual hazards at Rocky Flats and the continued need for a comprehensive site-wide stewardship program.

   c. Evaluate legal and regulatory issues regarding implementation of site-wide long-term stewardship plan and provide information to the LSO Board and to the community.

   d. 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 LSO Board and to the community.

   e. Track, and communicate as necessary, issues related to former site workers.

   f. Work with DOE on funding for LSO operations and other related legislative and regulatory issues that affect the management of Rocky Flats and the LSO.

3. **Transmit to appropriate officers and employees of the Department of Energy questions and concerns of governments, persons, and entities referred to paragraph (2) on the closure and post-closure operations of the site.** These actions include:

   a. Solicit and transmit to the appropriate DOE organization community comments on regulatory closure and post-closure documents, including

      i. CAD/ROD

      ii. Delisting/EPA certification

      iii. Post-closure RFCA

      iv. CERCLA Five-Year Reviews

      v. Other items as necessary

b. *Solicit and transmit to DOE comments on long-term surveillance and maintenance issues as other issue as necessary.*

4. **Perform such other duties as the Secretary and the local stakeholder organization jointly determine appropriate to assist the Secretary in meeting post-closure obligations of the Department at the site.**
   a. *Additional activities may be assigned as conditions or circumstances dictate.*

The challenge in developing the LSO Plan comes is detailing the specific actions the LSO will take to meet the work scope identified in the PCPIP. LM notes that as activities at Rocky Flats decrease, LM anticipates a corresponding reduction in topics that warrant communication with stakeholders. The LSO Plan and corresponding LSO work plan will need to evolve to address the changing needs at the site. For that reason, the specifics of how the LSO will work with LM to implement the PCPIP must, for the purposes of the LSO Plan, remain at a high level.

Timeline For Standing Up LSO

The LSO must be established no later than six months prior to regulatory closure of Rocky Flats. Given that regulatory closure is, based on best estimates, scheduled for fall 2006, the LSO should be established on or around February 1, 2006. The following timeline is based on this date.

July – October:

- Prepare LSO Plan for submittal to DOE

November – January:

- Work with DOE to identify non-elected members for the LSO
- Draft IGA and present it to member governments for their approval
- Draft LSO bylaws for modification and approval by LSO
- Draft policies and procedures, including procurement policy, for modification and approval by LSO
- Analyze LSO staffing needs
- Draft LSO work plan for modification and approval by LSO
- Draft LSO budget for modification and approval by LSO

February:

- Hold initial LSO meetings – modify and approve work plan and budget
- Hire staff and/or consultants as determined by LSO Board of Directors
- Finalize bylaws and policies and procedures

Process for identifying non-elected officials to serve on the LSO

There is no single formula for determining which non-elected officials should serve on the LSO. In determining membership, LM should look to balance people with knowledge of Rocky Flats with adding new perspectives and engaging constituencies not traditionally engaged on Rocky Flats issues, including non-elected officials who represent organizations or individuals who have experience or skills that would benefit the LSO.

Membership should be tied to the LSO work plan. Characteristics that could serve to guide membership include:

1. Impacted by and interested in a majority of the scope topic areas of the LSO
2. Willingness to invest time and energy on all of the topic areas
3. Some familiarity with Rocky Flats history, the cleanup process, etc.
4. Represent a broad constituency with a wide diversity of viewpoints
5. Bring new ideas to the table

LM has indicated that entities considered for membership should include Rocky Flats retirees/former workers, environmental groups, and educational institutions. Individuals who have established a history of involvement in Rocky Flats issues also may be considered.

As for government representatives, following the Coalition's June 6, 2005, recommendation, LM tentatively set government membership of the LSO as the seven Coalition governments and the City of Golden. Subsequently the City of Northglenn formally expressed interest in serving on the LSO. In light of this request, the Coalition now recommends that the seven Coalition governments get permanent seats of the LSO and that the cities of Golden and Northglenn serve annually on a rotating basis.

Colorado Sunshine Act

The LSO will likely be organized as a unit of local government under the Colorado Constitution. As such the LSO shall comply with the Colorado Sunshine Law (§ 24-6-402). Compliance with this law will, in part, ensure that meetings are open to the public, that notice is provided, that actions are not taken without a quorum of the Board, that minutes of the meetings are recorded, and that meetings cannot be held in closed session unless they qualify under a limited number of circumstances as provided in law. Further, as a unit of local government, the LSO would be subject to the Colorado Open Records Act (§ 24-72-201). By following both laws, the LSO would ensure greater openness than is specified under the Federal Advisory Committee Act.

from FY05 Omnibus Appropriations – statement of the managers

Legacy Management

Small caps

The conferees support the established mission of the office of legacy management to manage the long-term stewardship responsibilities at the department's clean up sites. The conference agreement provides a total of $46,895,000 for the office of legacy management of which $13,201,000 is provided for program direction. Within available funds, the conferees provide $8,000,000, to remain available until expended, for planning, design, construction, and land acquisition, if necessary, to establish a records management facility centrally located near sites transferring into Legacy Management status, and in close proximity to the Office of Legacy Management's records management capability. The conferees urge the Department to accelerate these activities with the goal of such a facility being ~~operation~~ operational by early fiscal year 2007. From within available funds, the conference agreement provides $1,200,000 to complete transition of the STAR Center in Pinellas County, Florida and $4,000,000 for the final payment, subject to the existing requirement for matching funds, to the Miamisburg Mound Community Improvement Corporation. From available funds, $500,000 is provided to establish a Local Stakeholder Post-Closure organization in the State of Colorado.

U.C

Funding for Defense Activities in Idaho

Small Caps

The conference agreement provides $114,347,000 for defense-related activities at the Idaho National Laboratory (INL) and associated Idaho cleanup sites.