

# 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  
Karen Imbierowicz

## **Board of Directors Meeting – Agenda**

**Monday, November 2, 2009, 8:30 – 11:30 AM**  
**Rocky Mountain Metropolitan Airport**  
**Terminal Building**  
**11755 Airport Way, Broomfield, Colorado**

8:30 AM Convene/Agenda Review

8:35 AM Business Items (briefing memo attached)

1. Consent Agenda
  - o Approval of September 14<sup>th</sup> meeting minutes and checks
2. Executive Director's Report

9:00 AM Public Comment

9:10 AM Approve Fiscal Year 2010 Work Plan (briefing memo attached)

- o The Board reviewed the draft work plan at the September meeting.
- o Changes from that draft are noted in redline strikeouts.

### **Action Item: Approve 2010 Work Plan**

9:20 AM Fiscal Year 2010 Budget Hearings (briefing memo attached)

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

### **Action Item: Hold hearings and approve 2010 budget**

9:30 AM Update from the Rocky Flats Cold War Museum (briefing memo attached)

- o The Museum last briefed the Stewardship Council Board at the October 2007 meeting.

- The Museum will update the Stewardship Council on its activities, including plans for an exhibit in Arvada in summer 2010, and will identify opportunities for future collaborations.

- 10:00 AM Host DOE Quarterly Meeting (briefing memo attached)
- DOE will brief the Stewardship Council on site activities for April – June, 2009.
  - DOE has posted the report on their website and will provide a summary of activities to the Stewardship Council.
  - Activities included surface water monitoring, groundwater monitoring, air monitoring, ecological monitoring, and site operations (inspections, maintenance, etc.).

10:45 AM Public comment

- 10:50 AM Updates/Big Picture Review
1. Executive Director
  2. Member Updates
  3. Review Big Picture

## **11:00 AM EXECUTIVE SESSION**

Adjourn

Next Meetings: February 1, 2010  
April 5, 2010

## **Business Items**

- September 14, 2009, draft board meeting minutes
- List of Stewardship Council checks

**Monday, September 14, 2009, 8:30 – 11:45 AM**  
**Rocky Mountain Metropolitan Airport, Terminal Building**  
**11755 Airport Way, Broomfield, Colorado**

**Board members in attendance:** Lorraine Anderson (Director, Arvada), Clark Johnson (Alternate, Arvada), Marc Williams (Alternate, Arvada), Lisa Morzel (Director, City of Boulder), Matt Jones (Alternate, City of Boulder), Meagan Davis (Alternate, Boulder County), David Allen (Alternate, Broomfield), Bill Fisher (Director, Golden), Shelley Stanley (Alternate, Northglenn), Andrew Muckle (Director, Superior), Bob Briggs (Director, Westminster), Jeannette Hillery (Director, League of Women Voters), Shirley Garcia (Director, Rocky Flats Cold War Museum), Karen Imbierowicz (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.), Erin Rogers (consultant).

**Attendees:** Vera Moritz (EPA), Carl Spreng (CDPHE), Scott Surovchak (DOE-LM), Rick DiSalvo (Stoller), Bob Darr (Stoller), John Boylan (Stoller), Linda Kaiser (Stoller), Steve Berendzen (USFWS), Jennifer Bohn (RFSC accountant).

**Convene/Agenda Review**

Chair Jeannette Hillery convened the meeting at 8:35 a.m. There were no changes to the agenda.

**Business Items**

The first business item was the consent agenda. David Allen noted a minor change to the June Board minutes. He noted that he was the person who had asked the question on page 2 about stream classification, not David Abelson. Bob Briggs moved to approve the June Board meeting minutes with the minor modification. The motion was seconded David Allen. The motion passed 10-0.

Lorraine Anderson moved to approve the Board's checks. The motion was seconded Karen Imbierowicz. The motion passed 10-0.

**Executive Director's Report**

David Abelson began by noting the Board's decision not to meet in July and August this year. He asked the members to consider whether this worked well or not, and to keep this in mind as the Board develops its meeting schedule for 2010.

Next, David noted that Don Rohlf had stepped down from his position with the Rocky Flats Cold War Museum Board, and therefore the Stewardship Council. His replacement will be Jack Swanzy.

David said that the Stewardship Council's tour of Rocky Flats on June 11 was excellent and that DOE and Rik Getty did great job of pulling it together. He pointed out that the two things that really stood out to him on the tour were the continuing challenges at the Solar Ponds treatment system and at the original landfill.

DOE-LM has not chosen a new Director yet. Dave Geiser, who had been Deputy LM Director and previously worked in EM, is serving as the Acting Director. David noted that the Stewardship Council is the only Legacy Management stakeholder organization at the moment and posited whether the Board should consider writing a letter of support, expressing its belief that Mr. Geiser's background and experience are a good match for the Director position. David will be in D.C. during the first week of October and will try to get better sense of whether someone is being considered for the job. He would like some guidance from Board members on this issue.

Another item David will be exploring on his D.C trip will be additional DOE funding for the Stewardship Council. There is also the question of funding for the Rocky Flats National Wildlife Refuge. On this trip, David will try to get better sense of what Congress might have in mind. He also noted that, as this trip also involves work for another client, the costs for the Stewardship Council will be lower.

As part of its support for the Charlie Wolf Act, the Stewardship Council asked Energy Communities Alliance (ECA) to support behind the bill. So far, there has not been any response from ECA. There is an Intergovernmental board meeting scheduled for mid-October at which David plans to request that ECA express whether it supports the Act. He said he will also pitch why this bill is important, and that the Rocky Flats community is looking for this group's active support. David may have a scheduling conflict that could prevent him from attending this meeting, but will keep the Board posted.

David noted that he may need the Board to make a minor modification to his management contract, due to a change in printing costs. This will be addressed at the November Board meeting. Andrew Muckle asked about electronic distribution of meeting packets. David said that only Board members receive hard copies, while all others are distributed electronically. Staff will check again with Board members to see what their preference is. He added that there is money in the budget to cover the excess costs, but that he may need the Board to approve the additional expenditures related to printing.

Andrew also asked if is there an update on the progress of the Charlie Wolf Act in Congress. David said that the GAO is currently conducting a study, and that they expect to have some initial findings back in December. David's understanding is that nothing will happen with the bill until the GAO reports. It is expected that the GAO report will expose additional problems with the nuclear worker compensation program and supply even more grounds for the changes to the Act.

Andrew next asked for a clarification regarding the funding process for the Refuge. David explained that the USFWS receives a certain budget and then must determine how to allocate the funding at its different sites. He said that what it really comes down to is the direction from HQ

to the Region that the Rocky Flats Refuge is a priority. He added that there is no need to lobby for changes in the authorization bill, but there is a need for USFWS to make Rocky Flats a funding priority.

The next item David discussed was the proposed Jefferson County Parkway. The Jefferson Highway Authority has submitted a request for 300 feet on the eastern boundary of Rocky Flats by easement or sale. David emphasized that the decision about whether to build this highway is not within the scope of the Stewardship Council. He added that, after some very delicate negotiations, the Rocky Flats National Wildlife Refuge Act did include a provision stating that if an appropriate authority moves forward with such a transportation improvement, they will be provided the land they request for this purpose.

David pointed out two questions about this process. The first question has to do with the requirements in the Rocky Flats Refuge Act that call for any action to be in compliance with applicable laws. There are two types of requirements to consider – hazardous/radioactive contamination, as well as general industrial activities that could negatively affect downstream water supplies. Since cleanup has been completed and the site has been delisted from CERCLA, that question regarding hazardous waste has been asked and answered. There is still a question of whether additional NEPA analysis needs to be done. According to Steve Berendzen (USFWS) a decision has been made on this question, but all parties have not been notified yet.

The second question is, if a NEPA analysis is required, whether this Board should engage in that process since it will not be directly related to Rocky Flats issues. David's counsel was that since most of the Stewardship Council members will be looking at these issues outside of this venue, the best course of action may be to not address the issues as a group, but just keep staff in the loop.

David also noted that the 300 foot corridor may be transferred, but the road not built. If so, there might be a reversion clause. In this instance, because it would be related to the boundaries of Rocky Flats, the Board may choose to participate in the discussion. Overall, the Board needs to determine the extent of its desired level of involvement in these issues. This will also be a question when developing the Board's work plan for next year.

Bob Briggs asked if there is an anticipated timeline for any of the highway decisions. David said that we will soon know what the NEPA decision is. There may be an Environmental Assessment performed for the actual transfer of land, rather than construction. He assumes we will have knowledge about this before the next meeting. Also, any transfer of land will pose challenges and take time, including such steps as a DOJ review. Shirley Garcia said that if the Board opposed the highway because of Rocky Flats issues, she is afraid we might be sending mixed messages to the public since the site has been delisted. David clarified that the Board would not weigh in on whether an analysis should be done. Rather, he is asking if the Board feels it should weigh in on any assessment if one is done.

David Allen said that he tended to agree that any Board participation should be limited to specific Rocky Flats issues, such as maintaining points of compliance and the Central Operable Unit (COU). He added that any land transfer would be a decision between the granting parties.

Clark Johnson stated that it would be quite hard for the Board to give any guidance at this point. He said there are too many uncertainties, and that this is going to be a very long process. Therefore, his recommendation would be to just have staff monitor the issues and update the Board as necessary. Lorraine Anderson said she agreed. She said CDOT has given an initial approval to the Jefferson Parkway Authority, and the next step will be to become part of DRCOG's fiscal plan, which take place in January or February. She added that this is a transportation issue, not an environmental issue. Jeannette Hillery interjected that she was hearing that Board members support being kept updated about this issue and do not feel that any other action is necessary at this time.

David Abelson suggested adding a provision to the work plan addressing the Board's desire to track this issue. He added that it might be a good idea to create a white paper in early 2010 that explains the environmental analyses that have already been done as part of cleanup in advance of any public questions on these issues.

David Allen asked David Abelson if he wanted to discuss direction from the Board regarding a potential letter of support for the LM Director position. Scott Surovchak stated that Mr. Geiser does not wish to have the Board convey such a letter. David Abelson said the Board will hold off then. Lorraine Anderson added that, if the Secretary of Energy asks if the Board supports Mr. Geiser as LM Director, it would be appropriate to answer in the affirmative. She said the Secretary did make this inquiry last time a Director was named.

### **Public Comment**

None

### **Host DOE Annual Meeting**

DOE next briefed the Stewardship Council on site activities for the first quarter of 2009 (January – March). Activities included surface water monitoring, groundwater monitoring, ecological monitoring, and site operations. DOE has posted the report on its website.

#### *Surface Water Monitoring and Operations.*

Pond operations saw no discharges, due to lack of precipitation. Pond levels averaged approximately 15% of capacity. The site is in the process of completing a dam breach project in order to reduce long term maintenance and to remove the dams from regulatory requirements. Breaching of Dams A-1, A-2, B-1, B-2, B-3, and B-4 was completed in March 2009. The next dams to be breached will be in 2012 and 2018. This will provide time to collect additional water quality data and see how the system is working at Pond A1. Shelley Stanley asked when the site plans to breach pond C-2. John Boylan and Scott Surovchak said that there is no firm plan in place, perhaps in 2012.

Hydrologic data during the quarter showed total precipitation of .45 inches, which was 35% of the average. Flow rates were very low (0-15% of average).

Water quality at all Points of Evaluation, except GS10, was below applicable standards. Reportable values for total uranium at GS10 continue to be observed. Uranium concentrations are impacted by reduced surface runoff and elimination of imported water after closure resulting in higher groundwater contribution to the creek. Upgradient groundwater wells and GS10 water show predominantly naturally occurring uranium.

Surface water quality results at the Original Landfill during first quarter 2009 triggered monthly sampling for silver. Silver was not detected in the first monthly sample collected during first quarter 2009. Therefore, monthly sampling was discontinued. Surface water quality results at the present landfill (PLF) triggered monthly sampling for vinyl chloride, selenium, and silver. These analytes were not detected in the first monthly sample. Therefore, monthly sampling was discontinued.

Lorraine Anderson asked if there is a plan to sample for these contaminants again in the future, since sampling was discontinued. John explained that they do not stop sampling completely, just that they do not have to sample monthly for these contaminants. Shelley Stanley asked if there was any plan to revegetate the mudflats. John said that those areas are wetlands and there has been quite a bit of revegetation already. David Allen asked about water being held in Pond B5 that may be released, and whether all sampling results have been clean. John said they were.

#### *Groundwater Monitoring and Operations.*

All Resource Conservation and Recovery Act (RCRA) wells were monitored during the quarter. The results will be included and evaluated in the 2009 Annual Report. All groundwater treatment systems continue to remove contaminants from the groundwater.

The next topic was the status of updates to the Solar Ponds Plume Treatment System (SPPTS). Phase I involved collecting additional contaminated groundwater and routing it through treatment cells. Phase II saw the installation of a new uranium treatment cell as first treatment step. These two phases are complete. Phase III involves conducting pilot-scale studies to identify preferred nitrate treatment media. Construction has been completed and the site is currently evaluating inert (plastic) media fed liquid carbon source and corn stover. John Boylan noted that recently a water storage sump developed a leak causing the system to automatically shut down. They removed the sump and revised the Phase II plumbing so the cell acts as the sump. So far, they are observing nitrate removal in both cells.

Phase IV will combine the findings from Phase III (media) and flows measured since the completion of Phase I to design and construct a full-scale nitrate treatment cell. This phase will be initiated following completion of Phase III in early FY 2010.

Vera Moritz asked about the expected lifespan of these media. John said that they calculate that the corn stover will last about 4 years. The black plastic media is never consumed, only the carbon they add to the water. However, they might clog up. Rik Getty pointed out to the Board how flexible and well-designed this system is, as they were able to re-route the plumbing and keep the system going.



David Abelson asked John to discuss some slumping that occurred around July 4. John explained that the water storage sump had subsided. The bottom portion lowered causing it to leak out the seam, which led to erosion and even more subsidence. It dropped total of about 8 inches. The most obvious probable cause was a 72-inch pipe that ran under this area. When it was removed, the trench was backfilled; however, there are no detailed records. John guesses that the backfill was probably not compacted enough. A former stream drainage also flowed close to this work area in the late-1970's. John said that they performed a geotechnical investigation, during which 6 boreholes were drilled. The report is not yet finalized, and there is no defined exact cause. They do know that there is locally poor compaction. They have moved forward to determine they will consider adding better supports during Phase IV. The project is currently back online and operational. Lisa Morzel asked how they found the leak. John responded that they are basically monitoring everything, and water levels triggered the automatic shutdown of system.

*Water Quality Control Commission (WQCC) Rulemaking process.*

At a January 2009 hearing, in response to a DOE petition, the WQCC revised the uranium standard and deleted gross alpha/beta standard for Walnut Creek and Woman Creek (Big Dry Creek segments 4a, 4b, and 5), effective March 30, 2009. The previous uranium standards were 10 pCi/L for Walnut Creek and 11 pCi/L for Woman Creek. Based on 0.67 pCi/μg uranium conversion factor, 16.8 μg/L equates to 11.3 pCi/L.

At a June 2009 hearing, part of the Triennial Review of the South Platte River Basin, the WQCC revised the current arsenic standard (50 μg/L) to conform with the new statewide water supply standard, effective January 10, 2010. The new standard will be 0.02 to 10 μg/L (the low being the WQCC risk-based water consumption and the high being EPA's maximum contaminant level [MCL] for drinking water supply). Water below the MCL (based on 85th percentile of data) is considered in attainment with standard. Rocky Flats is in attainment with new standard.

The WQCC also changed the segment 4b recreation use classification from N (no recreation use) to P (potential recreation use) based on the establishment of the Refuge outside of Central Operable Unit (COU), effective January 1, 2010. The E.coli standard will change from 630/100 ml to 205/100 ml. Segment 5 retains N classification. A portion of segment 4b now inside COU (from A-4 and B-5 terminal ponds to COU west boundary) will become segment 5. Also, a portion of segment 5 outside COU (North Walnut Creek west of COU boundary) will become segment 4b.

DOE did not propose any extension/changes to the expiring Temporary Modifications (TMs). Current Rocky Flats TMs (six VOCs, nitrate/nitrite) expire December 31, 2009. Changes will be incorporated in RFLMA Attachment 2, Table 1, Surface Water Standards, as part of the planned Attachment 2 modification.

*Annual COU Inspection*

Rick DiSalvo next provided an update on Annual COU inspection, which took place during the first quarter on March 25. This project encompassed an inspection and monitoring for evidence of significant erosion or adverse biological conditions. Site employees performed a visual

observation for precursors of significant erosion and evaluated the proximity of any significant erosion to subsurface features.

Another part of this project was to inspect the effectiveness of institutional controls (ICs). This effort included looking for any evidence of violation of ICs. It also included checking whether required signs were in place and verifying that the Environmental Covenant was in the Administrative Record and on file with Jefferson County. This was verified March 31, 2009.

David Abelson asked what it means to verify the Environmental Covenant. Rick said they look at the online public records. David asked if any county officials or employees know about this requirement. Rick said that the planning department looks at land records as part of their planning process.

In summary, no significant erosion or adverse biological conditions were noted. There was no evidence of IC violations, and signs were in place. Lisa Morzel asked why there were some sinkholes. Rick said these were in areas that were filled and compacted. He clarified that they were just surface subsidences, not technically sinkholes.

#### *Annual Site Operations.*

At the Original Landfill (OLF), monthly inspections were performed throughout the quarter, as well as a vegetation inspection in March. Seeps #4 and #7 were dry throughout the first quarter except for short durations following precipitation events. Seep #8 showed a surface flow of approximately 1 gpm throughout the first quarter. The West Perimeter Channel flowed at a rate of less than 1 gpm throughout the first quarter.

Settlement monuments were surveyed on March 24 and data were within the expected range per the OLF Monitoring and Maintenance Plan. Inclinometers were measured twice in February. No significant displacement was observed. At the Present Landfill (PLF), the quarterly inspection was completed in February, the vegetation inspection was completed in March, and the settlement monument surveys were completed in January.

A special inspection of the site, including the landfills, was completed on March 30 following the melting of a snow event of approximately 16 inches. No problems were encountered at any of the locations inspected.

David Allen asked about the reason for the inclinometers. Rick responded that they can be used to identify differential movement based on parameters that might cause such movement, such as heavy precipitation. One inch of movement is the approximate threshold for concern. He said they did see some movement during the 2nd quarter. David asked if the appendices were posted on the website. Bob Darr said they were.

David Abelson asked Scott Surovchak to say a few words about how he thinks things have been going at the site now compared to what he had expected now that we are a couple years into post-closure. Scott said that they underestimated the effort needed for things such as revegetation, erosion controls, and dam breaching. David also asked Scott about whether DOE continued to have any discussions about managing Rocky Flats out of the Grand Junction office

rather than maintaining an office locally. Scott said there have been no more discussions about moving this office. He believes that as long as there is a DOE-controlled COU, the office will be here.

### **Briefing by CDPHE and EPA on Role of Regulators**

CDPHE and EPA were the state and federal regulators during cleanup and continue regulatory oversight of Rocky Flats. They were asked to brief the Board on their respective roles and offer their perspectives on the effectiveness of the cleanup remedies and ongoing management activities. Carl Spreng began by speaking about the underlying regulatory authority and roles during cleanup and post-closure.

There were two major laws underlying the regulatory framework at Rocky Flats. One was the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), otherwise known as the Superfund Program. This Act created the National Priorities List, to which Rocky Flats was added in 1989. It identifies Applicable or Relevant and Appropriate Requirements (ARARs), and uses risk-based assessments to determine cleanup standards. Lisa Morzel asked where the list of ARARs could be found. Carl said they are posted on the CDPHE Hazardous Materials Division website.

The second major statute applicable to Rocky Flats was the Resource Recovery and Conservation Act (RCRA.) As an 'authorized state', Colorado enacted the Colorado Hazardous Waste Act which was required to be at least as stringent as the federal law. The State statutes contain virtually the same wording as the federal law. The State then develops policies and guidance in order to implement the regulations. The State has authority to regulate hazardous and mixed wastes. Other State regulations also applied at Rocky Flats, such as Radiation Control, Solid Waste Disposal, Air Pollution Prevention and Water Quality Control.

There have been several regulatory agreements at Rocky Flats over the years, beginning with the 1986 Compliance Agreement. This was followed by the 1989 Agreement in Principle, and the 1991 Interagency Agreement (IAG). The IAG identified 178 Individual Hazardous Substance Sites (IHSS's) organized into 16 Operable Units. It contained a rigid schedule with detailed milestones, which Carl believes helped lead to its downfall.

Beginning with the 1996 Rocky Flats Cleanup Agreement, the regulators took a more flexible and consultative position by allowing cleanup to be performed under 'interim actions' and in-the-field decisions. This was when major cleanup action really started at a rapid pace. For example, in one year, CDPHE provided 208 approvals. This agreement implemented both RCRA and CERCLA simultaneously. The State was the lead agency in the Industrial Area, and the EPA was lead in the Buffer Zone. It also called for rigorous public involvement in cleanup decisions.

There have been numerous community organizations focusing on Rocky Flats issues throughout the years, including local government groups, focus groups, oversight panels and technical working groups.

During the cleanup of the site, regulators provided oversight of building decommissioning and environmental cleanup, and were also involved in emergency preparedness and response planning. Some of these activities included independent monitoring of surface water discharges, setting and revising standards, approving monitoring protocols and sampling methodology, reviewing data, and air monitoring.

The Rocky Flats Legacy Management Agreement (RFLMA) was put in place in March 2007 as the post-closure agreement. It covers the monitoring and maintenance framework, reporting schedules, and defines the remaining Central Operable Unit. It also identifies contact records to review and approve major actions.

The State and EPA also entered into a Memorandum of Understanding (MOU) that defines post-closure regulatory roles. Under the MOU, the State is the lead for most regulatory actions, and consults with EPA. Joint approval is necessary for decisions that affect RFLMA.

Some of the roles of the regulators in the post-closure period include reviewing routine reports, sampling and analyzing water from terminal ponds prior to discharge, approving actions and changes proposed in Contact Records, coordinating with other State agencies, and Natural Resource Damage Restoration Projects. EPA is also charged with consultation, providing access to EPA resources and topic experts, conducting 5-Year Reviews, and de-listing.

Vera Moritz (EPA) clarified that RFLMA provides that the State is the lead agency for most actions. She reviewed EPA's responsibilities. She said that the amount of work during the post-closure period is about what she expected from seeing closure at other sites. She added that DOE and its contractor are addressing issues very responsively, and that it has been a good experience with many lessons learned

Carl said he has been surprised at how much effort has been required post-closure. He agreed that all issues have been handled very openly and professionally, and according to the agreement in place. Shirley Garcia offered her thanks to all three agencies for being so diligent and responsive. David Abelson noted that the regulatory agreement is crucial to keeping the process going, along with the ongoing public involvement. He added that part of the reason for this briefing was to make sure that everyone understood the checks and balances that are in place, and the roles and responsibilities of the various parties. Lorraine Anderson stated that the RFLMA agreement and the way Rocky Flats was cleaned up is a model for other sites being cleaned up around the country. She said she was just at Hanford and their contract is very similar to what was used at Rocky Flats. Lisa Morzel added that the cooperative effort of local governments and other members of the community at Rocky Flats was a surprise to many. She said these positive relationships allowed for accelerated cleanup and budget savings.

### **Board Review of Stewardship Council Activities for 2009 and Initial Review of 2010 Work Plan**

The 2009 Stewardship Council Work Plan provides that the Board review its work for the year. This review is to include an assessment of how the organization can improve in the coming year, focusing on areas of weakness and opportunities for improvement. The review is a first step in

the Board approving the 2010 Work Plan. Staff included a draft 2010 Work Plan in the packet distributed for this meeting. Formal approval of the 2010 Work Plan will take place at the November 2<sup>nd</sup> meeting.

David Abelson said that one of the new activities staff is looking at for 2010 is the development of a new website to be focused solely on the history and current conditions of Rocky Flats. Jeannette suggested ensuring linkages to other relevant organizations. Lisa Morzel suggested putting information YouTube, such as excerpts from the Oral Histories conducted by the Cold War Museum Board.

Shirley Garcia noted that David had called and talked to her about the Stewardship Council developing a new website. She said that the Museum does not have funding available to add to their website at this point. She said that the oral histories are posted on the website. They also publish a quarterly newsletter, which is informational and historical. She added that there is no need to generate new sites, which could lead to redundancy. Jeannette clarified that this was not meant to be an additional burden on the Museum. David Abelson said that that Stewardship Council website currently includes a great deal of historical information, but what is really missing is a one-stop shop for what happened, what is going on, and where are we going. Various sites have various pieces of this. If the Stewardship Council took on this initiative, it would be as a steward of the information only, not an owner. He was thinking about what kinds of names would be good for such as website, and would suggest something basic, such as 'RockyFlatsHistory' or 'RockyFlatsFacts'. Andrew Muckle said that the website could also be used by DOE-LM, which may provide funding for the website if this group is not around in the future. David said that part of problem is that, while DOE's website contains a great deal of information, it is very difficult to navigate and locate the specific information one is seeking. David Allen suggested that, before the Board takes on new venture, it would be important to review costs and sources of funding. David Abelson said that the Board could use the same person who created their website, and that there is \$4,500 in the budget for this type of activity. He said that a large amount of the work will be to simply organize and format existing information. He believes that \$4,000 might cover the website development, and hosting is minimal.

Shirley asked about the possibility of modifying the Museum website with this information instead of creating something new. David said that they could use an existing website, even that of the Stewardship Council. However, he added that this would complicate the task, as both the Stewardship Council and the Museum websites were designed for their own specific purposes. The entire structure of either existing site would have to be changed for this purpose. Also, he would not want to have to navigate political positions on Museum Board in terms of agreeing to what would be posted.

Andrew Muckle said he did not care how it is done, but he thinks it is a good idea. Bill Fisher said he also cared less about structure, and more about what issues such a website would address. The draft work plan had mentioned the idea of addressing 'misconceptions'. Bill said this approach would make it harder to avoid opinion, rather than fact. He said that he could see structuring it around specific purposes or questions that website visitors might have, such as contamination issues, the Refuge, or basic Rocky Flats history. David Abelson said that Bill

described the vision for the website better than he did – a different way of using the already existing information. The Stewardship Council website is about the Stewardship Council. The Museum website is about the museum. The way in which the information is presented is a key aspect of this endeavor.

Jeannette Hillery moved the discussion back to the work plan. Karen Imbierowicz said that Meagan Davis had to leave, but asked her to add that the Board should compile a white paper addressing Rocky Flats issues related to the Jefferson Parkway. Jeannette told Board members to let David know if there are any further comments on the Work Plan. David said he will accept all changes that were presented and then add points from Meagan about the white paper and Bill about misconceptions. Lorraine Anderson advised using positive language in crafting messages. David Allen proposed adding ‘federal’ to the section about monitoring state legislation. He also suggested that the Board develop an Annual Report of its activities and accomplishments. David Abelson addressed the need to reach out to state legislators, and said he sees this as more of a responsibility of elected officials to make this a more proactive part of their work. Clark Johnson added that it is also a responsibility for Stewardship Council staff to arm members with relevant information.

### **FY 10 Budget – Initial Review**

Formal FY10 budget hearings will take place at the November 2<sup>nd</sup> meeting. This agenda item was set up as a preliminary review. David Abelson said that the Board has reduced its budget for the fourth year in a row. One item that is going up, as mentioned earlier, is printing and copying. Clark Johnson asked for confirmation that all packets are being sent electronically except to Board members. David said they are. Barb Vander Wall noted that the draft budget needs to be submitted to the Board by October 15, which it was. After the hearing in November, the Board will adopt a resolution approving the budget.

David Allen asked if statutes require that revenue sources be listed in the budget. David Abelson said that revenue is included in the budget. He briefly explained how expenses are allocated according to revenue source. All expenses are charged to the Stewardship Council’s DOE grant except those that are prohibited, such as food, and trips to Washington, DC that could in any way be construed as lobbying. He said each check is assigned to specific account. This also shows up in the annual audit. David Allen went on to state that it would be helpful to have a 2-5 year projection regarding the budget. David Abelson responded that every quarterly report contains current grant/funding balances and noted that part of the nature of working off grants is the uncertainty. He confirmed that there will be ample opportunity and forecasting that will allow for planning ahead if funding is running out in the future. David Allen asked if they would have at least one year notice and was told they would.

### **Public Comment**

There was none.

### **Updates/Big Picture Review**

Bob Briggs announced an event commemorating the 150 year history of Jefferson County. It will take place on October 24, 5:30 – 7:30 pm at Copperfields in Wheat Ridge. The event will include the induction of people into Jefferson County's Hall of Fame. The event is free.

## **November 2, 2009**

### *Potential Business Items*

- Budget hearing for 2010 budget

### *Potential Briefing Items*

- Host LM quarterly public meeting
- Approve 2010 work plan
- Update on Cold War Museum
- Continue discussing interpretive signs for Rocky Flats

## **February 1, 2010**

### *Potential Business Items*

- Elect 2010 Officers
- Adopt resolution regarding 2010 meeting dates

### *Potential Briefing Items*

- Host LM quarterly public meeting
- Approve Washington, D.C. talking points
- Continue discussing interpretive signs for Rocky Flats
- DOE budget briefing

The meeting was adjourned at 11:30 a.m.

*Respectfully submitted by Erin Rogers.*

8:50 AM  
10/17/09

## Rocky Flats Stewardship Council Check Detail August 24 through October 17, 2009

| Type        | Num      | Date      | Name                      | Account                           | Paid Amount | Original Amount  |
|-------------|----------|-----------|---------------------------|-----------------------------------|-------------|------------------|
| Check       |          | 8/27/2009 |                           | <b>CASH-Wells Fargo-Operating</b> |             | <b>-2.00</b>     |
|             |          |           |                           | Admin Services-Misc Services      | -2.00       | 2.00             |
| TOTAL       |          |           |                           |                                   | -2.00       | 2.00             |
| Check       |          | 9/28/2009 |                           | <b>CASH-Wells Fargo-Operating</b> |             | <b>-2.00</b>     |
|             |          |           |                           | Admin Services-Misc Services      | -2.00       | 2.00             |
| TOTAL       |          |           |                           |                                   | -2.00       | 2.00             |
| Check       | 1378     | 9/5/2009  | Qwest                     | <b>CASH-Wells Fargo-Operating</b> |             | <b>-71.98</b>    |
|             |          |           |                           | Telecommunications                | -71.98      | 71.98            |
| TOTAL       |          |           |                           |                                   | -71.98      | 71.98            |
| Check       | 1379     | 9/5/2009  | VOID                      | <b>CASH-Wells Fargo-Operating</b> |             |                  |
| TOTAL       |          |           |                           |                                   | 0.00        | 0.00             |
| Check       | 1380     | 9/5/2009  | Qwest                     | <b>CASH-Wells Fargo-Operating</b> |             | <b>-26.99</b>    |
|             |          |           |                           | Telecommunications                | -26.99      | 26.99            |
| TOTAL       |          |           |                           |                                   | -26.99      | 26.99            |
| Check       | 1381     | 9/5/2009  | Exchange Monitor Publi... | <b>CASH-Wells Fargo-Operating</b> |             | <b>-495.00</b>   |
|             |          |           |                           | Subscriptions/Memberships         | -495.00     | 495.00           |
| TOTAL       |          |           |                           |                                   | -495.00     | 495.00           |
| Bill Pmt... | 1382     | 9/5/2009  | Erin Rogers               | <b>CASH-Wells Fargo-Operating</b> |             | <b>-500.00</b>   |
| Bill        | 7/29/... | 7/29/2009 |                           | Personnel - Contract              | -500.00     | 500.00           |
| TOTAL       |          |           |                           |                                   | -500.00     | 500.00           |
| Bill Pmt... | 1383     | 9/5/2009  | Jennifer A. Bohn          | <b>CASH-Wells Fargo-Operating</b> |             | <b>-476.00</b>   |
| Bill        | 09-71    | 8/31/2009 |                           | Accounting Fees                   | -476.00     | 476.00           |
| TOTAL       |          |           |                           |                                   | -476.00     | 476.00           |
| Bill Pmt... | 1384     | 9/13/2009 | Crescent Strategies, LLC  | <b>CASH-Wells Fargo-Operating</b> |             | <b>-7,328.75</b> |
| Bill        | 8/31/... | 8/31/2009 |                           | Personnel - Contract              | -6,850.00   | 6,850.00         |
|             |          |           |                           | Telecommunications                | -140.64     | 140.64           |
|             |          |           |                           | TRAVEL-Local                      | -63.25      | 63.25            |
|             |          |           |                           | Postage                           | -15.99      | 15.99            |
|             |          |           |                           | Supplies                          | -47.27      | 47.27            |
|             |          |           |                           | TRAVEL-Out of State               | -105.80     | 105.80           |
|             |          |           |                           | TRAVEL-Out of State               | -105.80     | 105.80           |
| TOTAL       |          |           |                           |                                   | -7,328.75   | 7,328.75         |
| Bill Pmt... | 1385     | 9/13/2009 | Tricia Marsh              | <b>CASH-Wells Fargo-Operating</b> |             | <b>-180.00</b>   |
| Bill        | 1182     | 9/11/2009 |                           | Website                           | -180.00     | 180.00           |
| TOTAL       |          |           |                           |                                   | -180.00     | 180.00           |
| Check       | 1386     | 10/5/2009 | Qwest                     | <b>CASH-Wells Fargo-Operating</b> |             | <b>-5.00</b>     |



8:50 AM  
10/17/09

**Rocky Flats Stewardship Council**  
**Check Detail**  
August 24 through October 17, 2009

| Type               | Num         | Date             | Name                            | Account                           | Paid Amount | Original Amount  |
|--------------------|-------------|------------------|---------------------------------|-----------------------------------|-------------|------------------|
|                    |             |                  |                                 | Telecommunications                | -5.00       | 5.00             |
| TOTAL              |             |                  |                                 |                                   | -5.00       | 5.00             |
| <b>Check</b>       | <b>1387</b> | <b>10/5/2009</b> | <b>Qwest</b>                    | <b>CASH-Wells Fargo-Operating</b> |             | <b>-70.53</b>    |
|                    |             |                  |                                 | Telecommunications                | -70.53      | 70.53            |
| TOTAL              |             |                  |                                 |                                   | -70.53      | 70.53            |
| <b>Bill Pmt...</b> | <b>1388</b> | <b>10/5/2009</b> | <b>Blue Sky Bistro (2)</b>      | <b>CASH-Wells Fargo-Operating</b> |             | <b>-255.00</b>   |
| Bill               | 76          | 9/14/2009        |                                 | Misc Expense-Local Government     | -255.00     | 255.00           |
| TOTAL              |             |                  |                                 |                                   | -255.00     | 255.00           |
| <b>Bill Pmt...</b> | <b>1389</b> | <b>10/5/2009</b> | <b>Crescent Strategies, LLC</b> | <b>CASH-Wells Fargo-Operating</b> |             | <b>-7,752.89</b> |
| Bill               | 9/30/...    | 9/30/2009        |                                 | Personnel - Contract              | -6,850.00   | 6,850.00         |
|                    |             |                  |                                 | Telecommunications                | -138.39     | 138.39           |
|                    |             |                  |                                 | TRAVEL-Local                      | -76.45      | 76.45            |
|                    |             |                  |                                 | Postage                           | -215.99     | 215.99           |
|                    |             |                  |                                 | Printing                          | -212.86     | 212.86           |
|                    |             |                  |                                 | Subscriptions/Memberships         | -221.00     | 221.00           |
|                    |             |                  |                                 | Misc Expense-Local Government     | -38.20      | 38.20            |
| TOTAL              |             |                  |                                 |                                   | -7,752.89   | 7,752.89         |
| <b>Bill Pmt...</b> | <b>1390</b> | <b>10/5/2009</b> | <b>Jennifer A. Bohn</b>         | <b>CASH-Wells Fargo-Operating</b> |             | <b>-408.00</b>   |
| Bill               | 09-82       | 9/30/2009        |                                 | Accounting Fees                   | -408.00     | 408.00           |
| TOTAL              |             |                  |                                 |                                   | -408.00     | 408.00           |

## **Work Plan**

- Cover memo
- Draft Work Plan

## **Budget Hearings**

- Cover memo
- Draft Budget
- Budget Resolution and Notice

## **Rocky Flats Cold War Museum Briefing**

- Cover memo

# ROCKY FLATS STEWARDSHIP COUNCIL

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

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(303) 412-1211 (f)

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  
Karen Imbierowicz

## MEMORANDUM

**TO:** Board

**FROM:** David Abelson

**SUBJECT:** Approval of 2010 Work Plan

**DATE:** October 22, 2009

---

I have scheduled 15 minutes for the Board to review and approve the attached draft 2010 Work Plan. The Plan is essentially the same one the Board reviewed at the September meeting, and includes the changes offered at the meeting. The changes are noted in redline.

**Action Item: Approve 2010 Work Plan**

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Karen Imbierowicz

## 2010 Work Plan

*Draft #2, October 2009*

### 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.

### Preface: 2010 Challenges and Opportunities

In 2007 jurisdiction over Rocky Flats transferred from DOE's Office of Environmental Management to both DOE's Office of Legacy Management and the Department of the Interior. With this transfer of management responsibility, the Stewardship Council fully stepped into its long-term mission – engage on the range of issues underpinning the long-term management of Rocky Flats and use and protection of the site as a national wildlife refuge.

As the sole Local Stakeholder Organization (LSO) in the DOE complex, the Stewardship Council has established the framework for how a successful LSO functions. The involvement of the four non-governmental entities on the Stewardship Council provides important ideas and opportunities for engaging broad audiences on issues and histories related to the site.

Some of the challenges and opportunities to address in 2010 will likely include:

- Continuing to strengthen the organization's relationship with DOE's Office of Legacy Management (LM)
- Strengthening relationships with the new Administration and new members of the Colorado Congressional delegation.
- Developing and circulating accurate information about protectiveness of Rocky Flats cleanup.
- Maintaining public awareness and interest in the ongoing management needs at Rocky Flats.

Deleted: Addressing misconceptions

Deleted: and ongoing risks

- Reviewing and modifying as necessary organizational systems to ensure members remain engaged and the Stewardship Council functions efficiently

## **Background:**

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

### Local Stakeholder Organization

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

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

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

### Rocky Flats National Wildlife Refuge

“The Rocky Flats National Wildlife Refuge Act of 2001” established that Rocky Flats shall become a national wildlife refuge following EPA certification that the site has been cleaned to the agreed-upon regulatory standards. In July 2007 DOE conveyed jurisdictional responsibility over nearly 4000 acres to the Department of the Interior for the Rocky Flats National Wildlife Refuge. Additional lands will likely be conveyed in 2010.

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

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

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

---

## **Work Plan Elements**

The Work Plan is divided into the following five sections:

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

### **DOE Management Responsibilities**

#### **Overview:**

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

#### **2010 Activities:**

1. Review information regarding the long-term stewardship and management of the Rocky Flats site, including but not limited to the results of the operational and performance monitoring data of site operations and DOE status reports.
2. Work with DOE on implementing its Post-Closure Public Involvement Plan (PCPIP), including the meetings DOE identified in the PCPIP.
3. Review DOE budgets for implementation of DOE responsibilities.
4. Participate in DOE, CDPHE and/or EPA assessment(s) of remedy operations and effectiveness.
5. As needed, evaluate legal and regulatory issues regarding implementation of site-wide long-term stewardship plans and provide information to the Stewardship Council and to the community.
6. Work with DOE and the regulators to understand technical data regarding implementation and effectiveness of cleanup remedies and long-term controls, and provide information to the Stewardship Council and to the community.
7. Transmit to appropriate officers and employees of the DOE questions and concerns of governments, persons and entities regarding Rocky Flats.
8. Work with USFWS and DOE on interpretative signage on refuge lands that includes history of Rocky Flats and cleanup, and ongoing DOE monitoring and surveillance program.

9. Support the Rocky Flats Cold War Museum efforts to establish a museum and on mechanisms for educating successive generations about the history of Rocky Flats, particularly about residual contamination and continued need for long-term stewardship.
10. Develop new website to help transmit history of Rocky Flats and ongoing management needs.
11. Track issues related to transfer of administrative jurisdiction over former mineral parcels from DOE to Department of the Interior for inclusion in the Rocky Flats National Wildlife Refuge.
12. [Tracking development of Jefferson County Parkway, including developing a white paper outlining DOE and USFWS environmental analyses that are applicable to use of the 300' right-of-way.](#)

## **Former Rocky Flats Workforce**

### **Overview:**

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

### **2010 Activities:**

1. Track issues related to the implementation of the Energy Employee Occupational Illness Program Compensation Act (EEOIPCA), including ongoing federal legislation and pending review of the program by the General Accountability Office. Respond as needed.
2. Communicate worker concerns to the Administration and to members of the Colorado Congressional delegation.

## **Outreach**

### **Overview:**

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

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

The Colorado congressional delegation likewise played a critical role in addressing Rocky Flats issues. The Stewardship Council shall remain an important vehicle for addressing issues of

concern to the delegation and for providing community interface with the delegation on the numerous site-specific issues and concerns.

**2010 Activities:**

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

## **Rocky Flats National Wildlife Refuge**

**Overview:**

A core function of the Stewardship Council is to engage on issues related to the development and management of the future Rocky Flats National Wildlife Refuge. This work includes tracking and addressing as necessary issues related to the interface of the Refuge to lands that DOE will retain as part of its management responsibilities.

**2010 Activities:**

1. As necessary, work with USFWS on implementation of Comprehensive Conservation Plan for the Rocky Flats National Wildlife Refuge.
2. Track Congressional action affecting funding for USFWS.
3. Provide a forum for the community to raise issues related to development of management plans and other issues affecting USFWS responsibilities at the Rocky Flats National Wildlife Refuge.



## **Business Operations**

### **Overview:**

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

### **2010 Activities:**

1. Operate Stewardship Council in compliance with state and federal regulations.
  2. Conduct financial audit.
  3. Prepare and adopt the annual work plan and the annual budget.
  4. Submit financial reports to DOE.
  5. Review and renew as necessary consulting agreements.
- 

## **Success Measurement Criteria**

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

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Karen Imbierowicz

## MEMORANDUM

**TO:** Board

**FROM:** David Abelson

**SUBJECT:** Fiscal Year 2010 Budget Hearings

**DATE:** October 22, 2009

---

At this upcoming meeting, the Board needs to hold budget hearings on the fiscal year 2010 Stewardship Council budget and approve a budget resolution adopting the budget. As a unit of local government under the Colorado Constitution, the Stewardship Council must hold this hearing prior to adopting a final budget.

The budget I am presenting is the same one the Board reviewed at the September 2009 meeting. No changes were offered at that meeting. The sole change I have made is to update the actual/projected expenses to include actual expenses through September. The initial draft reflected actual expenses through July.

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

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

**Action Item: Hold budget hearings and approve resolution adopting budget.**

**ROCKY FLATS STEWARDSHIP COUNCIL**  
 2010 Budget -- DRAFT #2 (no changes made from draft #1)

|  |                     | <u>2009 Budget</u>  | <u>2009 Actual/<br/>Projected<br/>Expenses*</u> |
|--|---------------------|---------------------|---|
| <b>A. Personnel</b>  | <b>\$ 93,000.00</b> | <b>\$ 96,000.00</b> | <b>\$ 82,200.00</b>                             |
| Executive Director and Technical Advisor (\$7750/month for 12 months)          |                     |                     |   |
| <b>B. Fringe Benefits</b>  | <b>\$ -</b>         | <b>\$ -</b>         | <b>\$ -</b>                                     |
| Benefits   | \$ -                |                     |   |
| Staff are contract employees   |                     |                     |   |
| <b>C. Travel</b>   | <b>\$ 5,700.00</b>  |                     |   |
| Out of State   | \$ 4,500.00         | \$ 4,200.00         | \$ 4,203.19                                     |
| National DOE-related trips \$1500/trip X 3 trips                               |                     |                     |   |
| Local Travel   | \$ 1,200.00         | \$ 1,200.00         | \$ 819.36                                       |
| \$100/month for 12 months  |                     |                     |   |
| <b>D. Computer Equipment</b>   | <b>\$ 500.00</b>    |                     |   |
| Purchase misc. hardware, software  | \$ 500.00           | \$ 500.00           | \$ -  |
| <b>E. Supplies</b>   | <b>\$ 1,200.00</b>  |                     |   |
| Supplies (\$100/month for 12 months)   | \$ 1,200.00         | \$ 1,200.00         | \$ 834.50                                       |
| <b>F. Contractual</b>  | <b>\$ 40,100.00</b> |                     |   |
| <b>Attorney &amp; Accounting Services</b>                                      | <b>\$33,500.00</b>  |                     |   |
| Legal Services (\$1400/ month for 12 months)                                   | \$ 16,800.00        | \$ 16,800.00        | \$ 9,053.67                                     |
| Accounting (\$850/month for 12 months)   | \$ 10,200.00        | \$ 10,200.00        | \$ 5,795.00                                     |
| Audit Report   | \$ 6,500.00         | \$ 6,500.00         | \$ 4,743.68                                     |
| <b>Admin. Services</b>   | <b>\$ 4,600.00</b>  |                     |   |
| Misc. Services: budget notices, etc.   | \$ 1,000.00         | \$ 1,000.00         | \$ 24.00  |
| Minutes Preparation (6 meetings)   | \$ 3,600.00         | \$ 3,600.00         | \$ 2,500.00                                     |
| <b>Local Government Expenses</b>   | <b>\$ 2,000.00</b>  | \$ 2,500.00         | \$ 1,275.00                                     |
| Miscellaneous expenses not covered by DOE funds<br>(includes meeting expenses) |                     |                     |   |
| <b>G. Construction</b>   | <b>\$ -</b>         | <b>\$ -</b>         | <b>\$ -</b>                                     |
| None   |                     |                     |   |
| <b>H. Other</b>  | <b>\$ 18,800.00</b> |                     |   |
| Printing & Copy  | \$ 2,000.00         | \$ 3,500.00         | \$ 863.75                                       |
| Postage  | \$ 1,500.00         | \$ 1,500.00         | \$ 591.88                                       |
| \$125/month for 12 months  |                     |                     |   |
| Liability Insurance  | \$ 4,000.00         | \$ 4,000.00         | \$ 3,480.82                                     |
| Property Contents/General Liability  | \$ 500.00           |                     |   |
| Board Members  | \$ 3,500.00         |                     |   |
| Telephone, email, etc  | \$ 3,400.00         | \$ 3,400.00         | \$ 2,615.60                                     |

|                                  |             |                    |                    |                    |
|----------------------------------|-------------|--------------------|--------------------|--------------------|
| <b>Website</b>                   |             | <b>\$ 5,000.00</b> | <b>\$ 3,250.00</b> | <b>\$ 1,311.60</b> |
| Hosting                          | \$ 500.00   |                    |                    |                    |
| Web master                       | \$ 4,500.00 |                    |                    |                    |
| <b>Subscriptions/Memberships</b> |             | <b>\$ 2,900.00</b> | <b>\$ 2,900.00</b> | <b>\$ 2,848.52</b> |
| Weapons Complex Monitor          | \$ 550.00   |                    |                    |                    |
| ECA membership                   | \$ 950.00   |                    |                    |                    |
| Conference registration fees     | \$ 750.00   |                    |                    |                    |
| Newspapers                       | \$ 650.00   |                    |                    |                    |

**J. Indirect Costs** **\$ -**

N/A

|                              |                      |                      |                      |
|------------------------------|----------------------|----------------------|----------------------|
| <b>TOTAL PROPOSED BUDGET</b> | <b>\$ 159,300.00</b> | <b>\$ 162,250.00</b> | <b>\$ 123,160.57</b> |
|------------------------------|----------------------|----------------------|----------------------|

Net Change from 2009 budget \$ (2,950.00)

**REVENUE FOR 2010**

|                                |                     |
|--------------------------------|---------------------|
| Local government contributions | \$ 8,000.00         |
| Department of Energy grant     | \$125,000.00        |
| RFCLG carry-over               | \$ 26,300.00        |
| <b>TOTAL</b>                   | <b>\$159,300.00</b> |

\*2009 Actual/Projected Expenses = actual January through September; projected July through December

STATE OF COLORADO

ROCKY FLATS STEWARDSHIP COUNCIL

The Board of Directors of the Rocky Flats Stewardship Council (“Stewardship Council”), State of Colorado, held a meeting at the Rocky Mountain Metropolitan Airport (formerly Jefferson County Airport), Mt. Evans Room, 11755 Airport Way, in Broomfield, Colorado 80021, on November 2, 2009 at the hour of 8:30 A.M., at which a quorum of the Board of Directors was present.

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

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

RESOLUTION

A RESOLUTION SUMMARIZING EXPENDITURES AND REVENUES FOR THE GENERAL FUND AND ADOPTING A BUDGET AND APPROPRIATING SUMS OF MONEY TO THE GENERAL FUND IN THE AMOUNTS AND FOR THE PURPOSES SET FORTH HEREIN FOR THE ROCKY FLATS STEWARDSHIP COUNCIL, STATE OF COLORADO, FOR THE CALENDAR YEAR BEGINNING ON THE 1ST DAY OF JANUARY, 2010, AND ENDING ON THE LAST DAY OF DECEMBER, 2010.

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

WHEREAS, upon due and proper notice, published in accordance with law as attached at Exhibit A, said proposed budget was open for inspection by the public at a designated place, a public hearing was held on November 2, 2009 and interested electors were given the opportunity to file or register any objections to said proposed budget; and

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

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

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

Section 1. Summary of 2010 Revenues and 2010 Expenditures. That the estimated revenues and expenditures for the general fund for fiscal year 2010, as more specifically set forth in the budget attached hereto, are accepted and approved.

Section 2. Adoption of Budget. That the budget as submitted, amended, attached hereto and incorporated herein, is approved and adopted as the budget of the Rocky Flats Stewardship Council for fiscal year 2010.

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

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

The foregoing Resolution was seconded by Director \_\_\_\_\_.

RESOLUTION APPROVED AND ADOPTED THIS 2nd DAY OF NOVEMBER, 2009.

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Signature Page to Rocky Flats Stewardship Council  
2010 Budget Resolution

ROCKY FLATS STEWARDSHIP COUNCIL

By: \_\_\_\_\_  
Jeannette Hillery, Chairman

ATTEST:

\_\_\_\_\_  
Secretary

RFSCo/RESO  
ST1408  
0756.0015(09)

STATE OF COLORADO  
ROCKY FLATS STEWARDSHIP COUNCIL

I, Jeannette Hillery, hereby certify that I am a Director and qualified Chairman of the Rocky Flats Stewardship Council, and that the foregoing constitutes a true and correct copy of the record of proceedings of the Board of Directors of said Stewardship Council, adopted at a meeting of the Board of Directors of the Rocky Flats Stewardship Council held on November 2, 2009 at the Rocky Mountain Metropolitan Airport (formerly Jefferson County Airport), Mt. Evans Room, 11755 Airport Way, in Broomfield, Colorado, as recorded in the official record of the proceedings of the Stewardship Council, insofar as said proceedings relate to the budget hearing for fiscal year 2010; that said proceedings were duly had and taken; that the meeting was duly held; and that the persons were present at the meeting as therein shown.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the official seal of the Stewardship Council this 2nd day of November, 2009.

---

Jeannette Hillery, Chairman



## **EXHIBIT A**

### **NOTICE AS TO PROPOSED 2010 BUDGET**

NOTICE IS HEREBY GIVEN that a proposed budget has been submitted to the **ROCKY FLATS STEWARDSHIP COUNCIL** for the fiscal year 2010. A copy of such proposed budget has been filed in the office Seter & Vander Wall, P.C. 7400 East Orchard Road, Suite 3300, Greenwood Village, Colorado, where same is open for public inspection. Such proposed budget will be considered at a meeting of the Rocky Flats Stewardship Council to be held at 8:30 A.M. on Monday, November 2, 2009. The meeting will be held at 11755 Airport Way, Mt. Evans Room, in Broomfield, Colorado. Any interested party may inspect the proposed budget and file or register any objections at any time prior to the final adoption of the 2010 budget.

**BY ORDER OF THE EXECUTIVE COMMITTEE:  
ROCKY FLATS STEWARDSHIP COUNCIL**

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

Publish in: The Denver Post  
Publish on: October 26, 2009

**ROCKY FLATS STEWARDSHIP COUNCIL  
2010 BUDGET MESSAGE**

**SUMMARY OF SIGNIFICANT ASSUMPTIONS**

Services Provided

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

Revenue

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

Expenditures

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

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

# ROCKY FLATS STEWARDSHIP COUNCIL

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

(303) 412-1200  
(303) 412-1211 (f)

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  
Karen Imbierowicz

## MEMORANDUM

**TO:** Board

**FROM:** David Abelson

**SUBJECT:** Rocky Flats Cold War Museum Briefing

**DATE:** October 23, 2009

---

I have scheduled 30 minutes for the Rocky Flats Cold War Museum to brief the Stewardship Council on its activities. The Museum last briefed the Board at the October 2007 meeting.

The mission of the Museum is “to document the historical, environmental, and scientific aspects of Rocky Flats, and to educate the public about Rocky Flats, the Cold War, and their legacies. These goals will be accomplished through preservation of key artifacts, and development of interpretive, educational, and outreach programs.”

The current board members are:

**Shirley Garcia**, President, Environmental Services Division, City of Broomfield  
**Jack Swanzy**, Vice President, Buildings 60 & 61 architect  
**Ann J. Lockhart**, Secretary, writer/editor; retired, CDPHE  
**Doug Parker**, Treasurer, retired, Rocky Flats  
**Ken Freiberg**, retired, Rocky Flats  
**Kim Grant**, Grants Administrator, City of Arvada  
**Ron Hellbusch**, former Public Works Director, City of Westminster; President, Friends of the Refuges (Rocky Flats & Rocky Mountain Arsenal)  
**LeRoy Moore**, Rocky Mountain Peace & Justice Center  
**Phil Saba**, Rocky Flats Homesteaders  
**Charles C. McKay**, Honorary Board Member, Church Ranch  
**John Boylan**, ex-officio, Rocky Flats Site Ground Water Lead, DOE Legacy Management

The Museum has three committees: collections, communications, and oral histories. For more information about the committees, go to <http://www.rockyflatscoldwarmuseum.org/committees.html>

## October 2007 Stewardship Council meeting minutes:

Board members from the Rocky Flats Cold War Museum recently participated in an ECA peer exchange on historical preservation at nuclear sites. Kim Grant began by thanking Lorraine Anderson for her leadership at ECA in beginning this dialogue on historical preservation beyond the Manhattan Project. Kim said they were able to learn a great deal from the groups that participated in this meeting, which included DOE, ECA, National Park Service, Atomic Heritage Foundation, Los Alamos, Hanford, Oak Ridge, Idaho Science Center, and Rocky Flats.

Kim reported that Atomic Heritage Foundation (AHF) president Cindy Kelly discussed a new book on the Manhattan Project, as well AHF's success in preserving the garage at Los Alamos National Laboratory used for assembly of the atomic device tested at the Trinity site. One of the challenges she mentioned facing preservation at these sites is allowing for public access at many of these facilities.

At Oak Ridge, one of the success stories is the Secret Cities Festival, which has grown into large local event attracting thousands of visitors each year. There are also efforts underway to preserve a portion of the K-25 U Historic Site (used to produce uranium-235), and the release of two documentary films related to the Oak Ridge community's role in the Manhattan Project. At Hanford, the focus is preservation of the B-Reactor site, the first large scale nuclear reactor that produced plutonium for the Trinity Test. They are also working to develop a National Monument in this area. The Idaho Science Center is a small local museum being developed which includes a partially buried nuclear submarine and other visitor attractions. There are also local efforts to preserve the history of DOE's Idaho National Laboratory. The Rocky Flats presentation focused on the Museum's efforts to preserve artifacts, oral history, as well as site planning and development issues.

Many common threads emerged from these discussions, including access to sites, the benefits of linking with other area/regional heritage organizations, the importance of having an online presence, and the need for ongoing federal presence and Congressional appropriations. One specific challenge at Rocky Flats is the number of constituencies and local governments that are part of the Rocky Flats area.

Kim also noted that the Museum has been invited to participate in a national oral history conference. In advance of this conference, Museum Board Members have developed an 8-minute video containing snippets of the Rocky Flats oral histories.

Ann Lockhart reported that the Museum Board has been putting out an electronic newsletter, which includes excerpts from some of the oral histories along with other museum information. They are trying to expand their distribution list. Kim and Ann have given presentations at several groups in community. They also conducted a phone consultation with a successful nuclear museum in New Mexico to gather fundraising tips. To date, the major fundraising successes for the Rocky Flats Museum have been due to Kim's efforts. She added that the Museum hopes to continue to do more oral histories. They have recently created a new exhibits committee which includes Shirley Garcia and Neils Schonbeck. There are also efforts underway to improve their website. Lori Cox said she has not received the newsletter and asked how to sign up. Ann said people can sign up through the website ([RockyFlatsMuseum.org](http://RockyFlatsMuseum.org)). David Abelson said he forwards copies via email to the Board Members. Chuck Baroch asked if groundbreaking is scheduled. Kim said they are not ready yet and that federal funding is key to making it happen. There are still a few zoning issues to work out. All the money raised by the museum so far has been used for projects, not construction. To undertake construction efforts, the Museum estimates it will need about \$4 million.

For more information about the Museum, please go to  
<http://www.rockyflatscoldwarmuseum.org/index.html>

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

## **DOE Quarterly Briefing**

- Cover memo
- Quarterly report (minus appendices)

# ROCKY FLATS STEWARDSHIP COUNCIL

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League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders  
Karen Imbierowicz

## MEMORANDUM

**TO:** Stewardship Council Board  
**FROM:** Rik Getty  
**SUBJECT:** DOE Quarterly Briefing  
**DATE:** October 20, 2009

---

We have scheduled 45 minutes for DOE to present its quarterly briefing for the second quarter (April through June) of 2009.

The quarterly report (172 pages) can be found at: [http://www.lm.doe.gov/Rocky\\_Flats/Documents.aspx](http://www.lm.doe.gov/Rocky_Flats/Documents.aspx)  
The first 38 pages are attached to this memo (there is no executive summary for this report). The remaining pages are the appendices which include all the water quality testing results and inspection reports.

DOE will brief on the following topics in a similar format 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 second quarter included:

- The water monitoring network successfully met the targeted monitoring objectives as required by RFLMA and in conformance with the Rocky Flats Site Operations Guide implementation guidance. The network consisted of 11 automated gauging stations, 10 surface water grab-sampling locations, 8 treatment system locations, 99 wells, and 8 precipitation gages. During the quarter, 76 flow-paced composite samples, 10 surface water grab samples, 12 treatment system samples, and 52 groundwater samples were collected.
- All water-quality data at the RFLMA Points of Compliance along Indiana Street remained well below the applicable standards.
- Pre-discharge samples are collected prior to terminal pond discharges 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 all three terminal ponds (Pond B-5 on April 22, and

Ponds A-4 and C-2 on May 4). Sampling results indicated that the water was suitable for discharge and the three ponds were subsequently discharged.

- As of April 2009, reportable 12-month rolling average total uranium (U) concentrations were no longer observed in surface water at RFLMA POE monitoring station GS10, which is located in South Walnut Creek upstream of Pond B-1 in the Walnut Creek Basin. This improvement in U water quality at GS10 resulted from higher-than-normal surface runoff quantities reaching the creek. This increased runoff effectively decreased the relative proportion of groundwater (a source of naturally occurring U) in the sampled streamflow at GS10.
- All other POE analyte concentrations remained below reporting levels. Erosion and runoff controls, as well as extensive revegetation efforts, have proven to be effective in reducing sediment transport and constituent concentrations. All of the POEs continued to show Pu-239,240 and Am-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, acceptable water quality is expected to continue.
- Maintenance of erosion control features continued during the quarter, especially following high-wind or precipitation events. Repairs were made to erosion wattles and matting loosened and displaced by high winds or rain. Erosion controls were installed and maintained for the various projects that were ongoing during the first quarter. Several areas were interseeded with additional native species to increase vegetation cover.
- Phase II and III upgrades to the Solar Ponds Plume Treatment System (SPPTS) were completed. The site is now commencing on a series of tests to determine optimum treatment conditions to remove both nitrate and uranium contamination from the groundwater in this area.

Please contact me if you have any questions.



Rocky Flats Site

**Quarterly Report of  
Site Surveillance and  
Maintenance Activities  
Second Quarter  
Calendar Year 2009**

October 2009



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

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**U.S. Department of Energy  
Office of Legacy Management**

**Rocky Flats Site**

**Quarterly Report of Site Surveillance and Maintenance Activities**

**Second Quarter Calendar Year 2009**

**October 2009**

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- Appendix C Analytical Results for Water Samples—Second Quarter CY 2009
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## Abbreviations

|         |  |
|---------|--|
| Am      | americium-241  |
| AOC     | area of concern                                      |
| CAD/ROD | Corrective Action Decision/Record of Decision        |
| CDPHE   | Colorado Department of Public Health and Environment |
| COU     | Central Operable Unit                                |
| CY      | calendar year  |
| DOE     | U.S. Department of Energy                            |
| ETPTS   | East Trenches Plume Treatment System                 |
| gpm     | gallons per minute                                   |
| GWIS    | Groundwater Intercept System                         |
| IC      | institutional control                                |
| LM      | Office of Legacy Management                          |
| µg/L    | micrograms per liter                                 |
| mg/L    | milligrams per liter                                 |
| M&M     | monitoring and maintenance                           |
| mL      | milliliters  |
| MSPTS   | Mound Site Plume Treatment System                    |
| OLF     | Original Landfill                                    |
| pCi/L   | picocuries per liter                                 |
| PLF     | Present Landfill                                     |
| PLFTS   | Present Landfill Treatment System                    |
| POC     | Point of Compliance                                  |
| POE     | Point of Evaluation                                  |
| Pu      | plutonium-239,240                                    |
| RCRA    | Resource Conservation and Recovery Act               |
| RFLMA   | <i>Rocky Flats Legacy Management Agreement</i>       |
| RFSOG   | <i>Rocky Flats Site Operations Guide</i>             |
| RPS     | Responsive Pre-Hearing Statement                     |
| Site    | Rocky Flats Site                                     |
| SPPTS   | Solar Ponds Plume Treatment System                   |
| TVS     | table value standard                                 |
| U       | uranium  |

WQCC            Water Quality Control Commission  
WQCD            Water Quality Control Division

## 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 Final Corrective Action Decision/Record of Decision (CAD/ROD) (DOE 2006a) issued September 29, 2006, for the Rocky Flats Site (the Site). DOE, the U.S. Environmental Protection Agency, and the Colorado Department of Public Health and Environment (CDPHE) have chosen to implement the monitoring and maintenance requirements of the CAD/ROD as described in the *Rocky Flats Legacy Management Agreement* (RFLMA) (DOE 2007a). Attachment 2 to RFLMA defines the Central Operable Unit (COU) remedy surveillance and maintenance requirements, the frequency for each required activity, and the monitoring and maintenance locations. The requirements include environmental monitoring; maintenance of the erosion controls, access controls (signs), landfill covers, and groundwater treatment systems; and operation of the groundwater treatment systems. RFLMA also requires that the institutional controls (ICs), in the form of use restrictions as established in the CAD/ROD, are maintained.

This report is required in accordance with Section 7.0 of Attachment 2 to RFLMA. 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 (e.g., 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 RFLMA and implement best management practices at the Site.

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

Landfill inspection and monitoring tasks follow the format and protocols established in the *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan* (PLF M&M Plan) (DOE 2008a) and the *Final Landfill Monitoring and Maintenance Plan, Rocky Flats Environmental Technology Site, Original Landfill* (OLF M&M Plan) (DOE 2006b). These plans include detailed information on monitoring groundwater, surface water, subsidence and consolidation, slope stability, soil cover, vegetation, storm water management structures, and erosion in surrounding features so that maintenance actions can be implemented in a timely manner.

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

This report addresses remedy-related surveillance, monitoring, and operations and maintenance activities conducted at the Site during the second quarter of calendar year (CY) 2009 (April 1 through June 30) and includes:

- 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; and
- Routine (in accordance with RFLMA and the RFSOG) water monitoring.

## 2.0 Site Operations and Maintenance

### 2.1 WQCC Proceedings Related to Rocky Flats

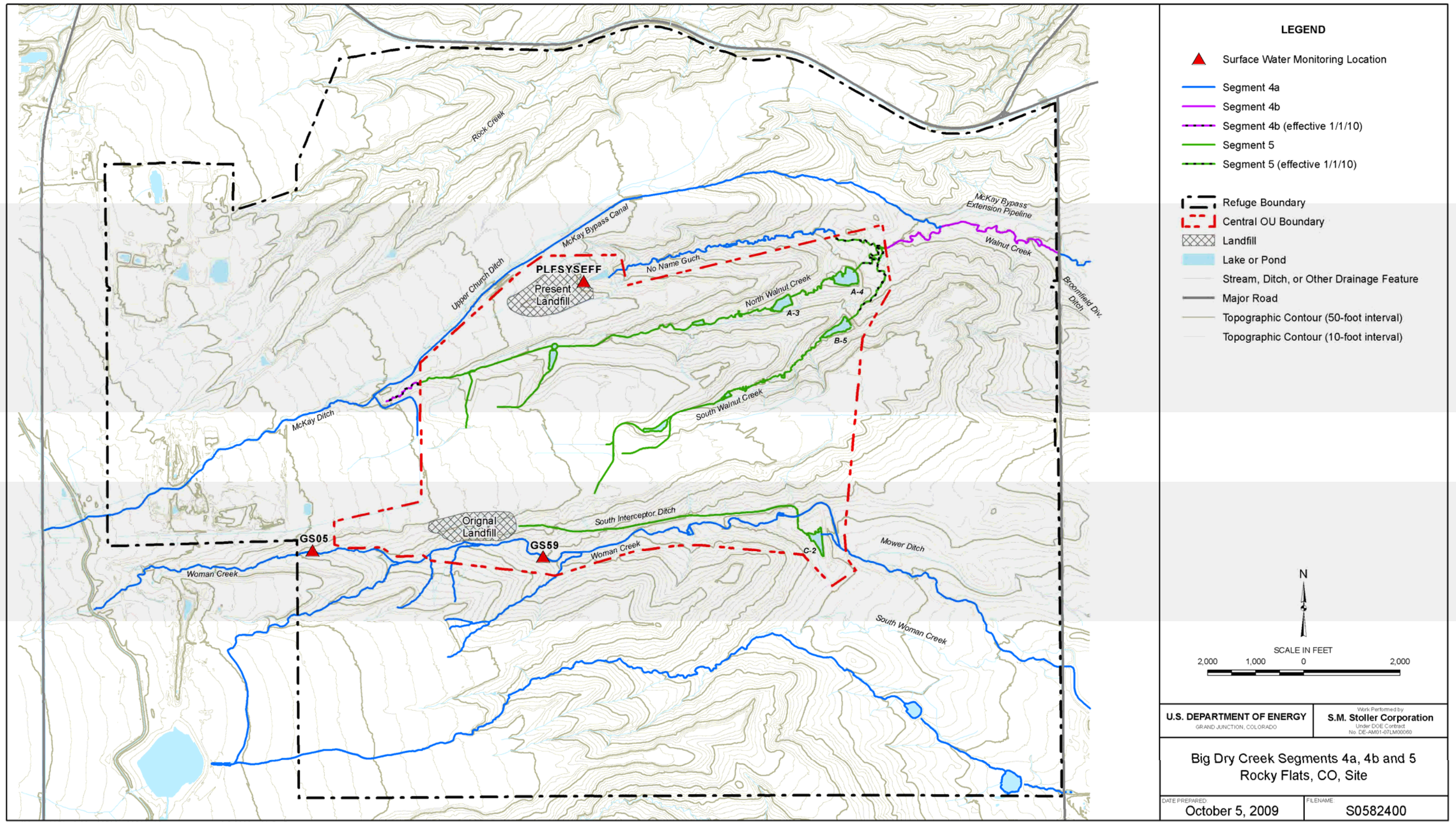
The status of ongoing Water Quality Control Commission (WQCC) proceedings has been routinely updated in quarterly and annual reports. The WQCC's triennial review of "Classifications and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin," Regulation 38 (Title 5 *Code of Colorado Regulations* 1002-38) (Regulation 38) was completed during this reporting period. Big Dry Creek segments 4a, 4b, and 5 on Rocky Flats property are part of the South Platte River Basin. The WQCC rulemaking hearing was held on June 8, 2009. Changes to Regulation 38 adopted by the WQCC for this triennial review are effective January 1, 2010.

Pursuant to the WQCC's November 17, 2008, directive resulting from the November 10, 2008, Triennial Review Issues Formulation Hearing and based on informal consultation with Water Quality Control Division (WQCD) staff, DOE provided timely notification to the WQCC administrator before January 15, 2009, that Rocky Flats would not be proposing any specific revisions to Regulation 38. Rather, any Rocky Flats proposed changes to standards or classifications would be in its Responsive Pre-Hearing Statement to the WQCD Proponent's Pre-Hearing Statement.

The WQCD filed its Proponent's Pre-Hearing Statement on March 24, 2009, and two potential issues for the Rocky Flats stream segments were identified by Rocky Flats staff. The first was related to the proposed lowering of the Site-specific arsenic standard from 50 micrograms per liter ( $\mu\text{g/L}$ ) to the basic statewide water supply standard of 0.02–10  $\mu\text{g/L}$ . The second was related to the proposed change of segment 4b and segment 5 recreational use classification from recreation class N (not primary contact recreation use) to recreation class E (existing primary contact use).<sup>1</sup> The segment 4a recreational use classification is recreation class E, and WQCD did not propose any change. Figure 1 shows the Rocky Flats stream segments.

---

<sup>1</sup> In the 2005 triennial review of "The Basic Standards and Methodologies for Surface Water," (Title 5 *Code of Colorado Regulations* 1002 31) (Regulation 31), the WQCC revised the recreational classification designation codes from recreation class 1a to recreation class E for "existing primary contact use," from recreation class 1b to recreation class P for "potential primary contact use," and from recreation class 2 to recreation class N for "not primary contact recreation use." The Regulation 38 triennial review included revising the designation codes to the new codes as specified by Regulation 31.



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Figure 1. Big Dry Creek Segments 4a, 4b, and 5

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A summary of the post-closure arsenic data for the locations where arsenic is monitored as one of the metal analytes (locations GS05, GS59, and PLFSYSEFF, which are also shown on Figure 1) was submitted to WQCD staff for consultation. The data indicated that the 50th percentile of the data did not exceed the higher value in the proposed standard range (10 µg/L). Ambient standards for total recoverable metals parameters (such as arsenic) are typically based on the 50th percentile of the data. Water bodies are considered in attainment of the standard as long as the existing ambient water quality does not exceed the highest number of the range for those standards that have a range. Arsenic is considered in attainment with the proposed revised standard, so the proposed revised standard was not an issue.

The proposed change to the recreation class for segments 4b and 5 was the remaining issue for Rocky Flats in the triennial review. The proposed recreational class change lowers the *E. coli* standard from 630/100 milliliters (mL) for class N waters to 205/100 mL for class P waters.

The cleanup and closure of Rocky Flats included removal of the sanitary sewer system and the Sewage Treatment Plant facility in 2005 and termination of the Sewage Treatment Plant discharge permit. Although the proposed change did not present an attainment issue for *E. coli*, the proposed use revisions did not reflect the post-closure restricted-access conditions at Rocky Flats.

The DOE Responsive Pre-Hearing Statement (RPS) was filed in accordance with the April 28, 2009, due date. The RPS included the evidentiary materials supporting DOE's objection to the WQCD proposed reclassification of both segments, because Rocky Flats is not open to public access that would allow recreational use of the water. The COU is subject to ICs and is posted with signs prohibiting public access. The property outside the COU is also currently not open to public access, and the National Wildlife Refuge will restrict visitors to designated trails when it is open.

Further consultation with the WQCD led to its agreement that segment 5 should not be reclassified and would remain recreation class N. However, the WQCD decided to proceed with recommending reclassification of segment 4b to class P, because the majority of the segment is on Refuge land, and the Refuge will be open to the public within the next 20 years.<sup>2</sup>

Prior to the hearing, WQCD and Rocky Flats staff consulted on recommending to the WQCC to change the segment 4b and 5 descriptions if segment 4b was reclassified to recreation class P, with the goal of ensuring the portions that would retain recreation class N were within the COU. The WQCC adopted the change to recreation class P for segment 4b and the change to the segment descriptions. Figure 1 shows the portions of segments 4b and 5 that are being moved from one segment to the other.

---

<sup>2</sup> Pursuant to Regulation 31.13 section 1.a, Class P (Potential Primary Contact Use) means surface waters have the potential to be used for primary contact recreation. This classification shall be assigned to water segments for which a reasonable level of inquiry has failed to identify any existing primary contact uses of the water segment, but primary contact uses may potentially occur in the segment within the next 20-year period. Pursuant to Regulation 31.5 (32), "Primary Contact Recreation" means recreational activities in which the ingestion of small quantities of water is likely to occur. Such activities include but are not limited to swimming, rafting, kayaking, tubing, windsurfing, water-skiing, and frequent water play by children.

The Statement of Basis and Purpose, Regulation 38, section 38.37 C., for the classification change is excerpted below:

The Department of Energy (DOE) provided information supporting the appropriateness of retaining the recreation N use classification for the portion of Big Dry Creek Segment 5 located within the Central Operable Unit (COU) in its responsive pre-hearing statement. The Hazardous Materials and Waste Management Division confirmed this information to be accurate. Recreational activities are currently prohibited within the COU and are expected to continue to be prohibited for the next 20 years. The final record of decision for the Rocky Flats Site, the Rocky Flats Legacy Management Agreement (RFLMA), and the environmental covenants currently prohibit recreational uses for the COU. Fences, “no trespassing” signs, and operational controls currently prevent public access to the COU. A portion of Big Dry Creek Segment 5, North Walnut Creek from its source to the western edge of the COU, lies outside of the COU. DOE proposed and the Commission agreed to move this portion of North Walnut Creek from Segment 5 to Segment 4b. Additionally, DOE proposed and the Commission agreed to move a portion of Big Dry Creek Segment 4b, which lies inside the COU, to Segment 5. Based on conditions that have changed from those originally limiting the recreational use in an existing Use Attainability Analysis, the following segment was converted from Recreation Class 2 to Recreation Class P with a 205/100 ml *E. coli* standard: Big Dry Creek Segment 4b.

## **2.2 Landfills**

### **2.2.1 Present Landfill**

The PLF is inspected quarterly in accordance with the requirements of the PLF M&M Plan (DOE 2008a) and RFLMA.

#### **2.2.1.1 Inspection Results**

The routine PLF inspection for second quarter CY 2009 was performed on May 26, 2009. An evaluation of the landfill cover vegetation was performed on May 13. No significant problems were observed during these inspections. Refer to Appendix A, which provides the landfill inspection forms, for more information. A special inspection of the PLF following a precipitation event in excess of 3 inches was completed on April 20, 2009, as required by RFLMA. No problems were observed during this inspection. Another special inspection of the PLF following a precipitation event of 1.1 inches was completed on May 26, 2009. No problems were observed during this inspection.

#### **2.2.1.2 Settlement Monuments**

The annual settlement monument surveys were performed on January 9, 2009. Additional information on the settlement monuments is included in the *Quarterly Report of Site Surveillance and Maintenance Activities, First Quarter Calendar Year 2008* (DOE 2008b).



## 2.2.2 Original Landfill

The OLF is inspected monthly, in accordance with the requirements in the OLF M&M Plan (DOE 2006b) and 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).

### 2.2.2.1 Inspection Results

Routine OLF inspections during second quarter CY 2009 were performed on April 30, May 26, and June 29, 2009. An evaluation of the landfill cover vegetation was performed on May 13. Refer to the completed inspection forms in Appendix A for additional information. A special inspection of the OLF following a precipitation event in excess of 3 inches was completed on April 20, 2009, as required by RFLMA. The center of the OLF between Berms 1 and 2 and 4 and 5 showed a small amount of erosion from surface flow following the precipitation event. The area was regraded by Site staff, seeded, and erosion matting and wattles were installed to help prevent future erosion problems in the area. Another special inspection of the OLF following a precipitation event of 1.1 inches was completed on March 30, 2009. No problems were observed during this inspection.

### 2.2.2.2 Seeps

Seeps at the OLF were evaluated during the monthly inspections as well as during unscheduled visits. Seep 7 showed surface flow during all three monthly inspections. The flow is originating from two locations: one is at the concrete pad of the casing for inclinometer Tt5, and the other is located approximately 10 feet east of Tt5. The inclinometer is within the location of the drain extension for Seep 7 constructed in 2008, and the area 10 feet east of the inclinometer is adjacent to the drain extension. The following section provides information on the Seep 7 drain extension and the steps taken to evaluate the cause of the observed flow.

Seep 4 showed areas of saturation during the second quarter of CY 2009 but had no surface flow. Seep 8 showed areas of active groundwater seepage at a rate of approximately 2 to 3 gallons per minute (gpm) throughout the second quarter. The West Perimeter Channel showed sustained flow at a rate of 2 to 3 gpm throughout the second quarter.

Other smaller seeps showed areas of wetness only temporarily after precipitation events. None produced any surface flow.

#### ***Seep 7 Drain Extension***

As discussed in the quarterly report for third quarter CY 2008 and the 2008 Annual Report (DOE 2009b, 2009c) regarding the OLF geotechnical investigation, an extension to the original Seep 7 subsurface drain was installed in September 2008. The drain extension is upgradient of the original Seep 7 drain in the general area where this seep has historically expressed (daylighted) on the surface and saturated the surrounding cover surface soil. The drain extension design is described and shown in Contact Record 2008-07, which is included for reference in

Appendix B. The drain extension consists of approximately 6 inches of drain rock wrapped in nonwoven geotextile fabric, and it is mostly located within the 2-foot soil cover. At its southern end, the extension necks down and is located below the cover material for a short distance to a depth of 4 to 5 feet to tie in to the existing drain.

After installation of the drain extension in September 2008, there was no surface expression in the Seep 7 area until after a number of heavy precipitation events that occurred throughout second quarter CY 2009. The seep water was observed flowing north to south along the approximate location of the eastern edge of the drain extension, and also from the south edge of the concrete pad for the casing for inclinometer 82508I.

To evaluate the subsurface along the eastern edge of the drain and determine whether water was flowing within the drain, several small hand-dug excavations (i.e., potholes) were made to a depth of 1 to 1.5 feet within the 2-foot soil cover to access the geotextile and drain rock layer. The CDPHE RFLMA project coordinator agreed by e-mail correspondence that this evaluation was within the scope of excavation for the drain extension work approved in Contact Record 2008-07. This correspondence is included in Appendix B. The potholing was conducted on May 14, 2009, as observed by the CDPHE project coordinator.

Potholing along a portion of the northeastern edge of the drain indicated that the geotextile fabric wrap was probably not sufficiently porous to allow water underneath and to the east of the extension of the drain to seep into the drain fast enough to carry the water away. It appeared that a small amount of seepage that could not easily enter the drain geotextile fabric wrapping was surfacing in the vicinity of the eastern edge instead. The geotextile wrapping also surrounds the inclinometer casing concrete, and a small amount of water is not effectively getting into the drain but is seeping up around the casing concrete. Potholing was also conducted at the southern edge of the drain extension where it formed a connection to the existing drain. This revealed that water was freely flowing inside the drain, so that the drain extension appeared to be functioning well to carry water that enters the drain in the subsurface.

A small section of the geotextile wrapping along the northeastern edge of the drain extension was cut away and replaced with more porous permanent erosion matting, which was covered with cobbles and soil to return the surface to surrounding elevation. This immediately resulted in the water entering the drain and the surface area quickly dried up in this location. The adjustment area was observed over the rest of the quarter, and no further surface expression in this localized area was noted. The seep water continued to surface approximately 5 to 6 feet farther to the south along the edge.

Thus, similar adjustment by hand excavation and opening the geotextile fabric to make the area porous to water along the portions of the eastern edge of the drain, and the base of inclinometer 82508I are planned to address the observed Seep 7 flow.

Appendix B also contains several photographs of the drain extension area evaluation.

### 2.2.2.3 Slumps

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, the areas do not have any surface cracks at this time.

Refer to the discussion on the results of the inclinometer monitoring below for additional information regarding slope stability monitoring.

A new crack in Berm 1 was observed on April 4, 2009. The crack extended for a short distance through diversion Berm 1 to the north side of the berm and then back to the south side of the berm. Other small discontinuous cracks were also noted in the area. These cracks were in the same general location of large cracks that appeared in 2006 and 2007 that, in part, prompted the geotechnical investigation discussed in Contact Record 2008-07, which is included in Appendix B. Figure 2 shows the location of the observed cracking. However, the narrow, discontinuous cracking noted during this quarter was not as severe as that occurring in 2006 and 2007. In particular, there was no noticeable vertical displacement associated with the cracking. The cracks were staked and their locations were recorded with a GPS unit. After consulting with the geo-technical engineer, Site staff made repairs to the cracks using hand tools to minimize infiltration of precipitation along the cracks. Erosion controls were also installed in the area to help prevent surface water from flowing into the area where the cracks were located. The main crack in Berm 1 was observed again on June 20, 2009. Site staff again repaired the crack with hand tools and the ATV bucket the same day. Subsequent nonroutine inspections have shown no new movement in the area where the crack was repaired.

#### 2.2.2.4 Settlement Monuments

The OLF settlement monuments were surveyed on June 23, 2009. Preliminary survey data indicate that settling at each monument does not exceed the limits published in the OLF M&M Plan. Refer to the survey results in Appendix A for additional information.

#### 2.2.2.5 Inclinometers

Seven inclinometers were installed in boreholes at the OLF in 2008 as part of the geotechnical investigation as discussed in the third quarter CY 2008 report and the 2008 Annual Report (DOE 2009b, 2009c). The inclinometers are also discussed in Contact Record 2008-07, which is included in Appendix B. Further detail regarding the installation of the inclinometers is included in the *Rocky Flats Original Landfill Geotechnical Investigation Report* (Tetra Tech 2008).

Movement of the inclinometers has been monitored approximately monthly since installation. Inclinometers deflect based on lateral movement of the ground in which the inclinometer is located, and can deflect enough to cause the inclinometer tube to break. Once an inclinometer tube breaks, it will no longer be monitored. Inclinometer monitoring data provide information on localized soil movement and serve to focus periodic inspections of the soil cover surface for 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 2006b). A modification to the OLF M&M Plan to revise the text as appropriate to recognize the implementation of the remedy under RFLMA and the completion of the geotechnical investigation work will be made as discussed in Contact Record 2008-07 (Appendix B).

Very little deflection of the inclinometers was noted after monitoring began in April 2008 until the monitoring in April 2009. Monitoring results from April 2009 through the end of the quarter (measurements taken on April 29, May 13 and 14, and June 11 and 16, 2009) showed higher deflection for several inclinometers. Most noticeable were the three inclinometers on the west side of the OLF, between diversion Berms 1 and 3 (inclinometers 82208I, 82308I, and 82408I), and this indicated that signs of localized movement on the cover surface may occur. This deflection occurred after the period of heavy precipitation events beginning in April 2009. Deflection was approximately 1.5 to 2.25 inches for inclinometers 82208I, 82308I, and 82408I from the initial monitoring.

The deflection appears consistent with the findings of the geotechnical investigation that there is an organic layer near the bedrock surface that 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 well. As described in Contact Record 2008-07, regrading of the West Perimeter Channel and the addition of a channel drain was done in 2008 to improve the stability of the western side of the OLF cover. A qualified geotechnical engineer is evaluating the inclinometer data, and results of subsequent monitoring will be reported in quarterly and annual reports.

## **2.3 Groundwater Treatment Systems**

Four groundwater treatment systems are operated and maintained in accordance with requirements defined in 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.

### **2.3.1 Mound Site Plume Treatment System**

Routine maintenance activities continued at the MSPTS through second quarter CY 2009. These activities included raking the media each week, checking and flushing filters, and inspecting influent and effluent flow conditions.

### **2.3.2 East Trenches Plume Treatment System**

Routine maintenance activities continued at the ETPTS through second quarter CY 2009. These activities included raking the media each week, checking and flushing filters, and inspecting influent and effluent flow conditions. Reductions in treatment effectiveness and media permeability initiated planning for media replacement activities later in 2009.



Figure 2. Original Landfill Observed Surface Cracking Location and Inclinometer Locations

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### **2.3.3 Solar Ponds Plume Treatment System**

Routine maintenance activities continued at the SPPTS through second quarter CY 2009. These activities included weekly inspections of the solar/battery system that powers the pump, operation of the pump, and influent and effluent flow conditions. Inspections of the newly completed (as of late October 2008) Phase I upgrades were performed as well and consisted mainly of inspecting the pump and its solar/battery system.

Construction of additional system upgrades (Phases II and III) was begun and completed in second quarter 2009. These upgrades were described in the 2008 Annual Report (DOE 2009c), which focused primarily on the Phase I portion. The Phase II and III portions will be described in detail in the 2009 Annual Report.

### **2.3.4 PLF Treatment System**

Routine maintenance activities continued at the PLFTS through second quarter CY 2009. These activities generally consisted of inspecting the system for any issues or potential problems.

## **2.4 Erosion Control and Revegetation**

Maintenance of the Site erosion control features required continued effort throughout second quarter CY 2009, especially following high-wind or precipitation events. Repairs were made to erosion wattles and matting loosened and displaced by high winds or rain. Erosion controls were installed and maintained for the various projects that were ongoing during the second quarter. Several areas were interseeded with additional native species to increase vegetation cover.

## **3.0 Environmental Monitoring**

This section provides a summary of the environmental monitoring that was conducted in accordance with RFLMA.

### **3.1 Water Monitoring**

This quarterly report presents data collected during second quarter CY 2009. This section includes:

- A discussion of analytical results for the Point of Compliance (POC), Point of Evaluation (POE), PLF, and OLF monitoring objectives; and
- 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 Attachment 2 of RFLMA and the RFSOG. Analytical water quality data for second quarter CY 2009 are provided in Appendix C.

### 3.1.1 Water Monitoring Highlights

During the second quarter CY 2009, the water monitoring network successfully met the targeted monitoring objectives as required by RFLMA and in conformance with the RFSOG implementation guidance. The 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, 76 flow-paced composite samples, 10 surface water grab samples, 12 treatment system samples, and 52 groundwater samples were collected.<sup>3</sup>

All water-quality data at the RFLMA POCs remained well below the applicable standards through second quarter CY 2009. Note that the uranium standard was revised by the WQCC from an activity concentration standard (picocuries per liter) to a mass concentration standard (micrograms per liter) effective the beginning of this quarter. The WQCC proceedings regarding the revised uranium standard are discussed in the 2008 Annual Report (DOE 2009c).

As of April 2009, reportable 12-month rolling average total U concentrations were no longer observed in surface water at RFLMA POE monitoring station GS10, which is located in South Walnut Creek upstream of Pond B-1 in the Walnut Creek Basin. This improvement in U water quality at GS10 was caused by higher-than-normal surface runoff quantities reaching the creek. This increased runoff effectively decreased the relative proportion of groundwater (a source of naturally occurring U) in the sampled streamflow at GS10. Further discussion can be found in the specific GS10 sections below.

The Site continues to evaluate, in coordination with CDPHE and under RFLMA, the measured U concentrations at GS10. Recent GS10 data continue to support the conclusion that the previously reportable U activities were likely a result of changing hydrologic conditions (particularly the increasing groundwater component with naturally occurring U in surface water flows at GS10, relative to conditions that prevailed prior to Site closure), and that no specific remedial action is indicated at this time. The data do not suggest a previously unknown localized source of contamination that warrants targeted action.

All other POE analyte concentrations remained below reporting levels as of the end of second quarter CY 2009. 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 second quarter CY 2009, all of the POEs continued to show Pu-239,240 and Am-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, acceptable water quality is expected to continue.

Groundwater monitoring results will be evaluated as part of the 2009 Annual Report.

### 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.

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<sup>3</sup> 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 second quarter CY 2009, the 76 flow-paced composites comprised 4,265 individual grabs.



### 3.1.2.1 Location GS01

Monitoring location GS01 is located on Woman Creek at Indiana Street. Figure 3 and Figure 4 show no occurrences of reportable 30-day averages for the quarter.

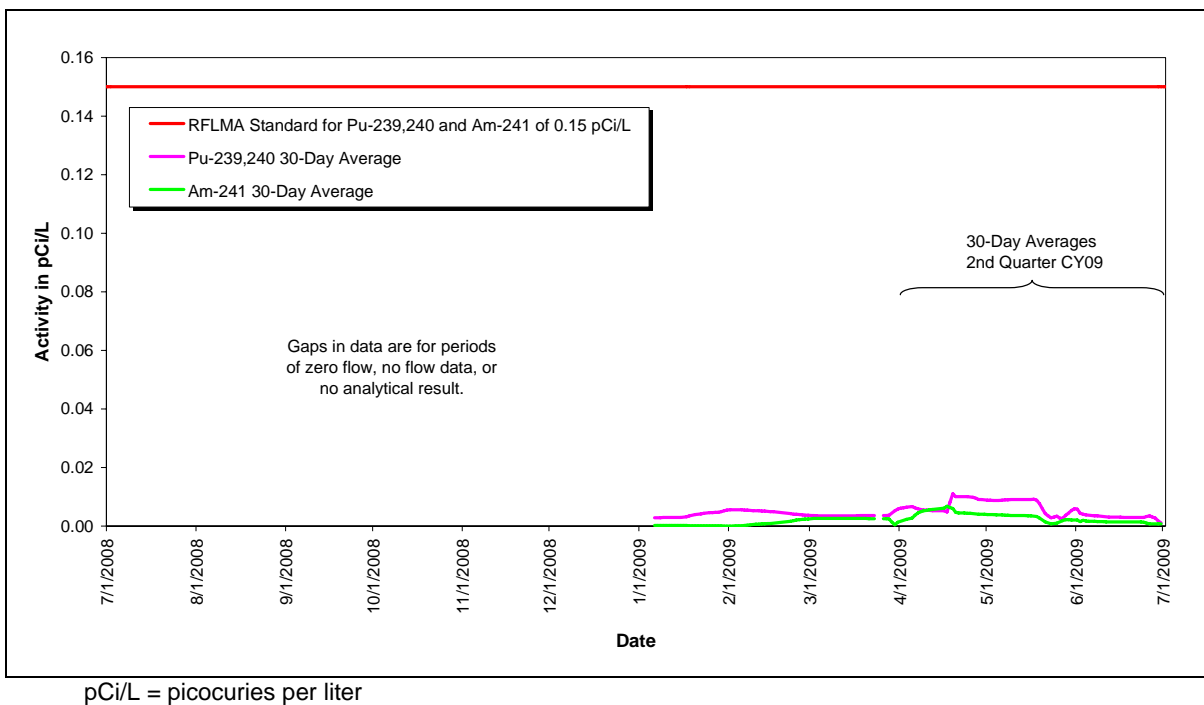


Figure 3. Volume-Weighted 30-Day Average Pu and Am Activities at GS01: Calendar Year Ending Second Quarter CY 2009

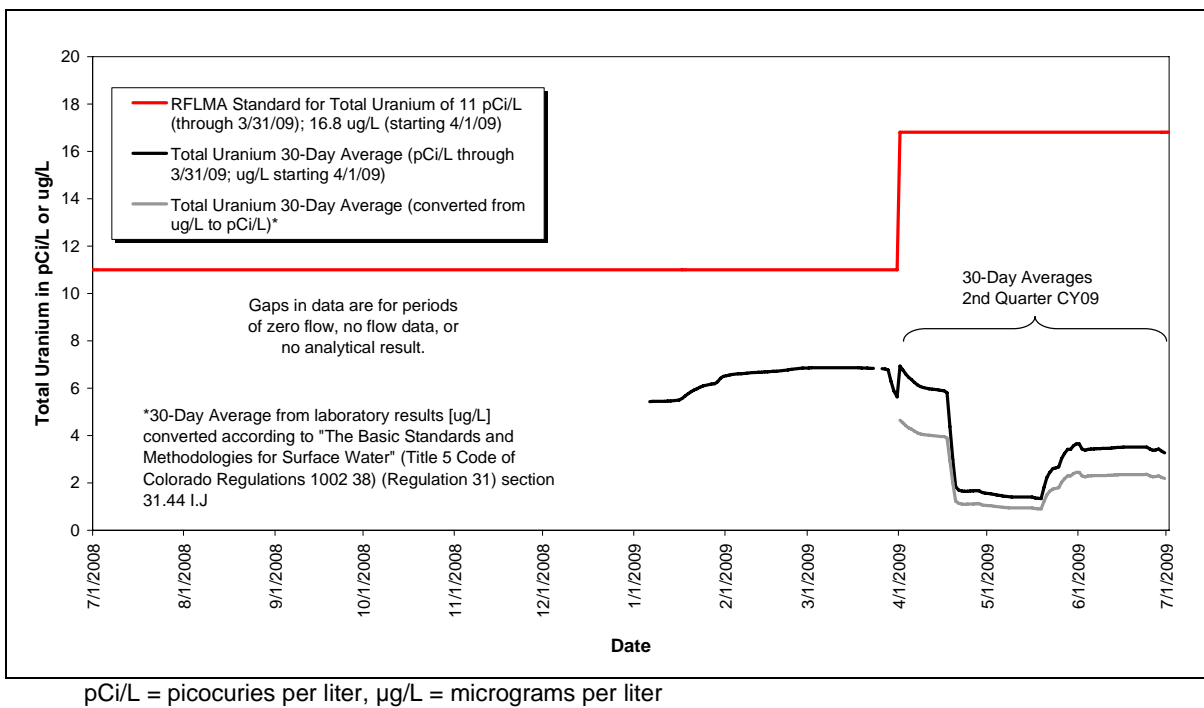


Figure 4. Volume-Weighted 30-Day Average Total U Activities at GS01: Calendar Year Ending Second Quarter CY 2009

### 3.1.2.2 Location GS03

Monitoring location GS03 is located on Walnut Creek at Indiana Street. Figure 5 and Figure 6 show no occurrences of reportable 30-day averages for the quarter.

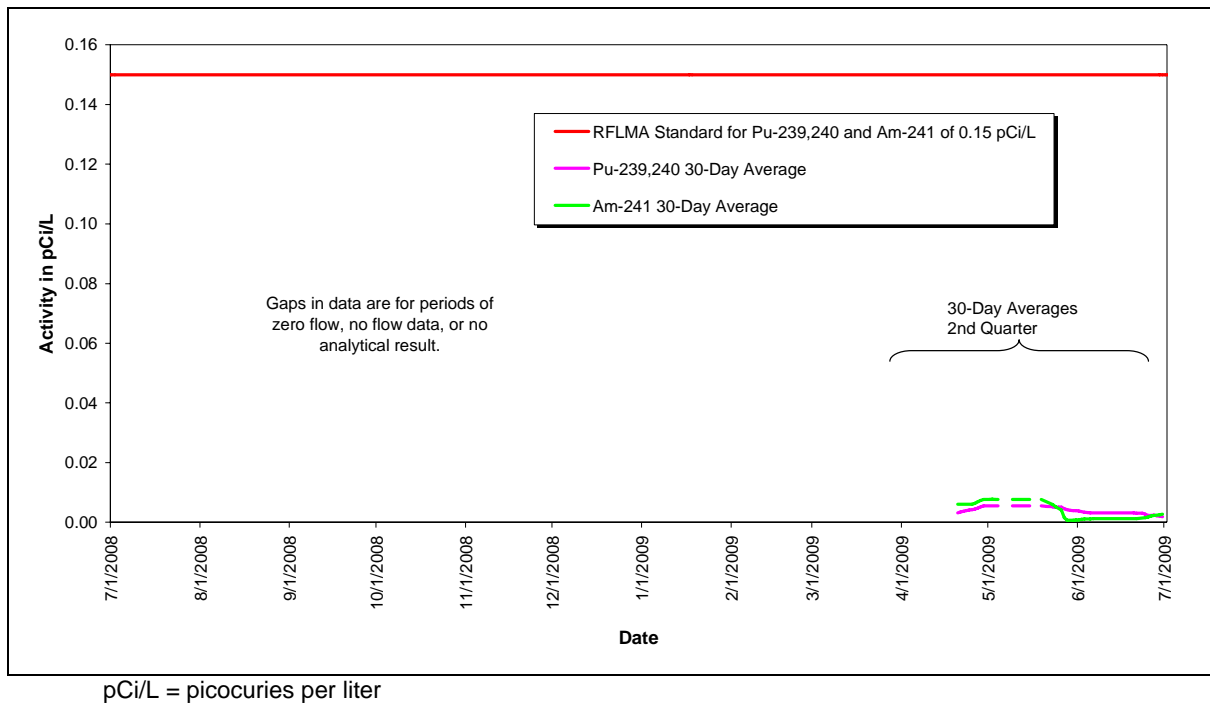


Figure 5. Volume-Weighted 30-Day Average Pu and Am Activities at GS03: Calendar Year Ending Second Quarter CY 2009

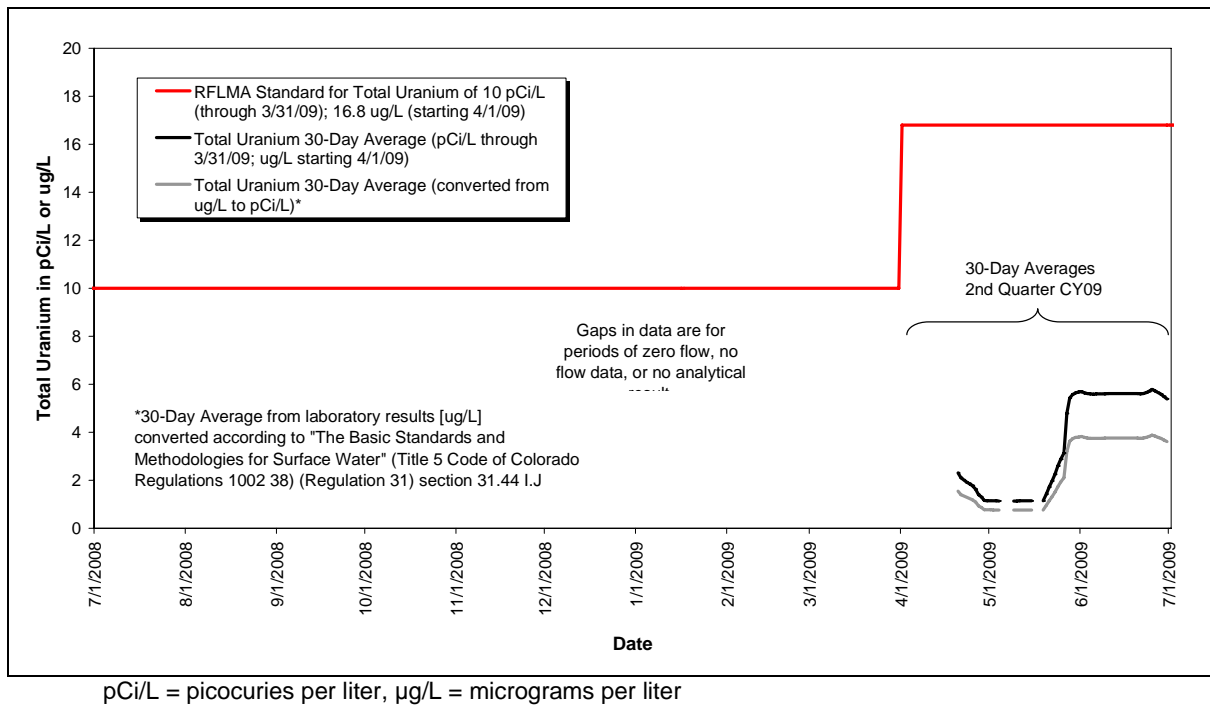


Figure 6. Volume-Weighted 30-Day Average Total U Activities at GS03: Calendar Year Ending Second Quarter CY 2009

### 3.1.2.3 Location GS08

Monitoring location GS08 is located on South Walnut Creek at the outlet of Pond B-5. Figure 7, Figure 8, and Figure 9 show no occurrences of reportable 12-month rolling averages for the quarter.

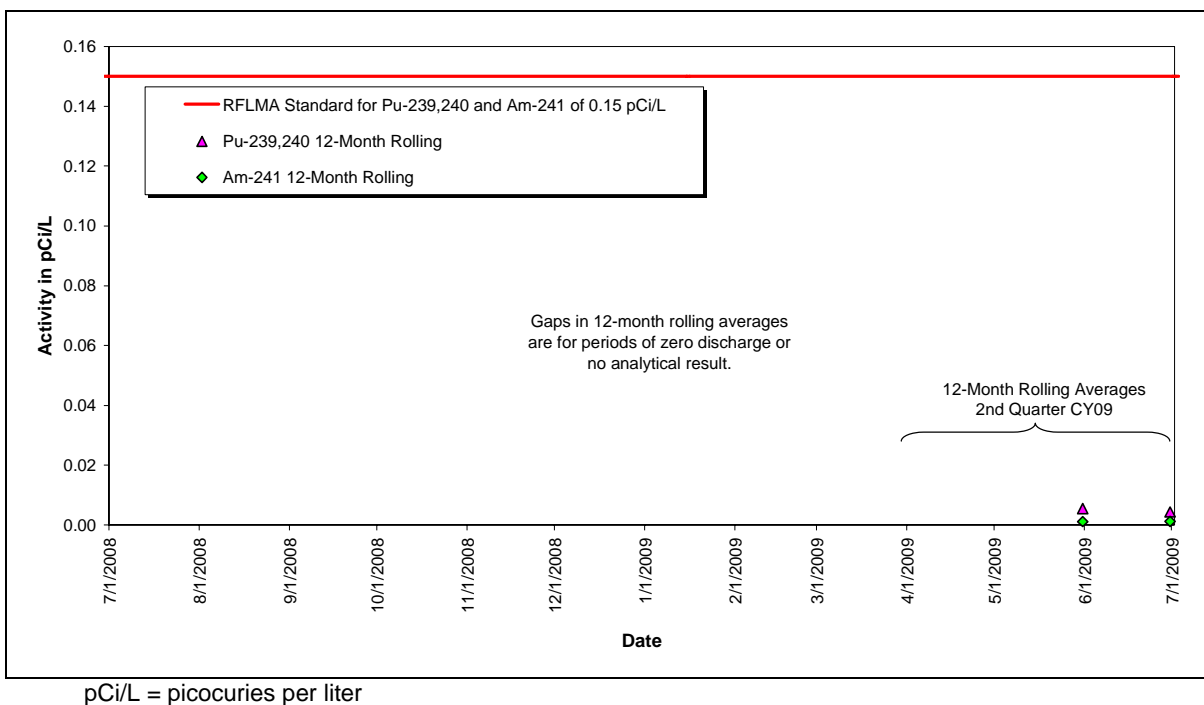


Figure 7. Volume-Weighted 12-Month Rolling Average Pu and Am Activities at GS08: Calendar Year Ending Second Quarter CY 2009

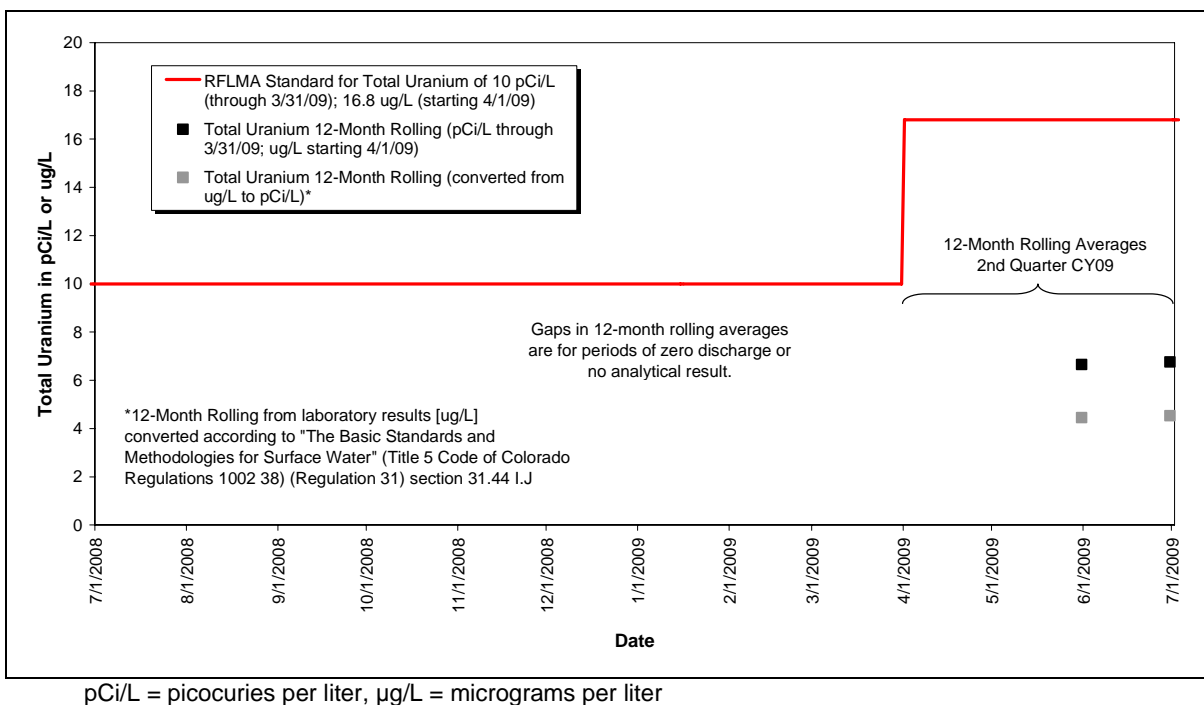
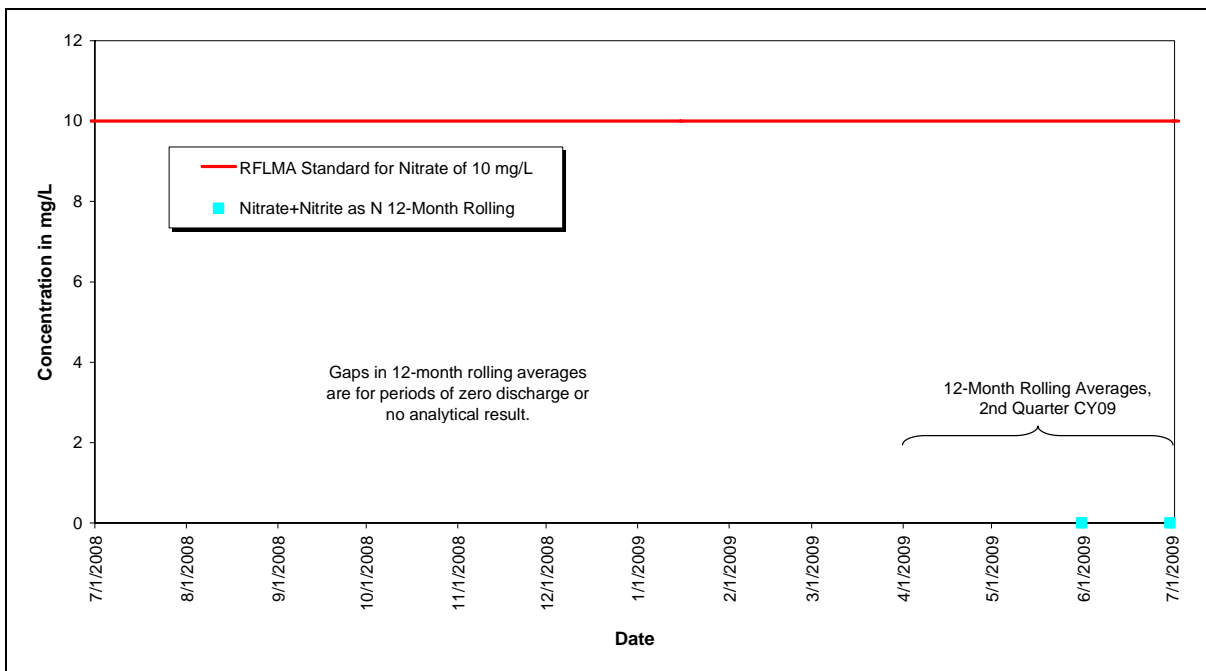


Figure 8. Volume-Weighted 12-Month Rolling Average Total U Activities at GS08: Calendar Year Ending Second Quarter CY 2009



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

Figure 9. Volume-Weighted 12-Month Rolling Average Nitrate + Nitrite as Nitrogen Concentrations at GS08: Calendar Year Ending Second Quarter CY 2009

### 3.1.2.4 Location GS11

Monitoring location GS11 is located on North Walnut Creek at the outlet of Pond A-4. Figure 10, Figure 11, and Figure 12 show no occurrences of reportable 12-month rolling averages for the quarter.

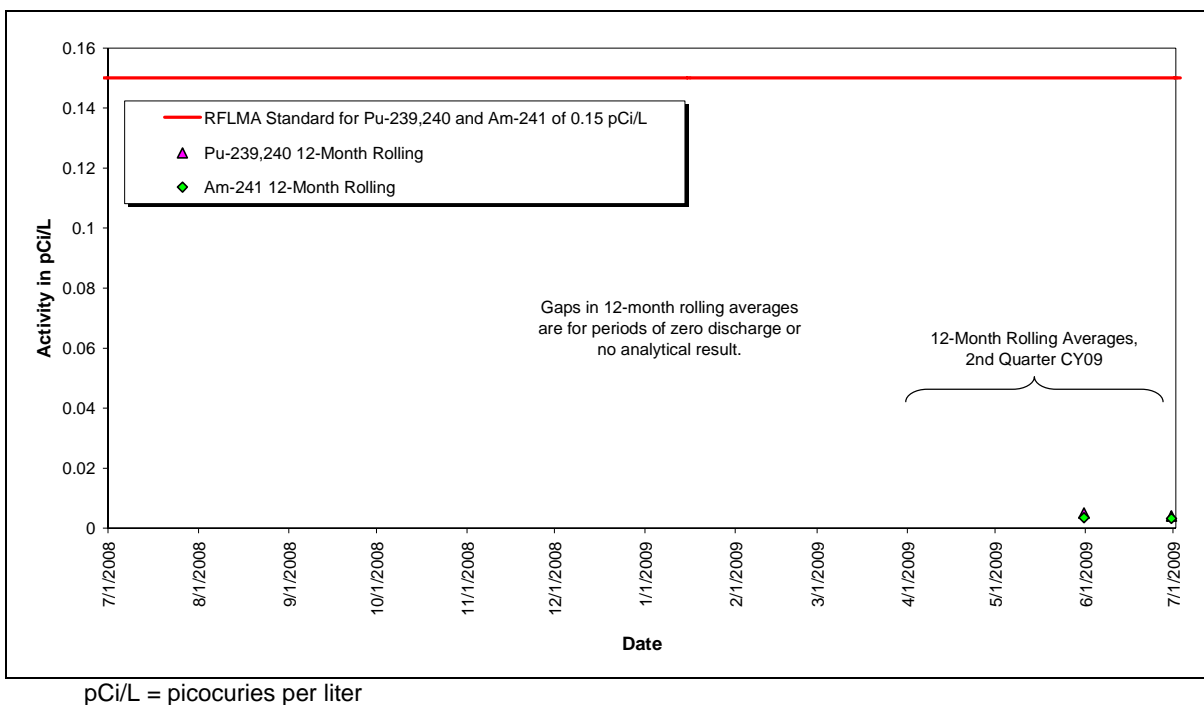


Figure 10. Volume-Weighted 12-Month Rolling Average Pu and Am Activities at GS11: Calendar Year Ending Second Quarter CY 2009

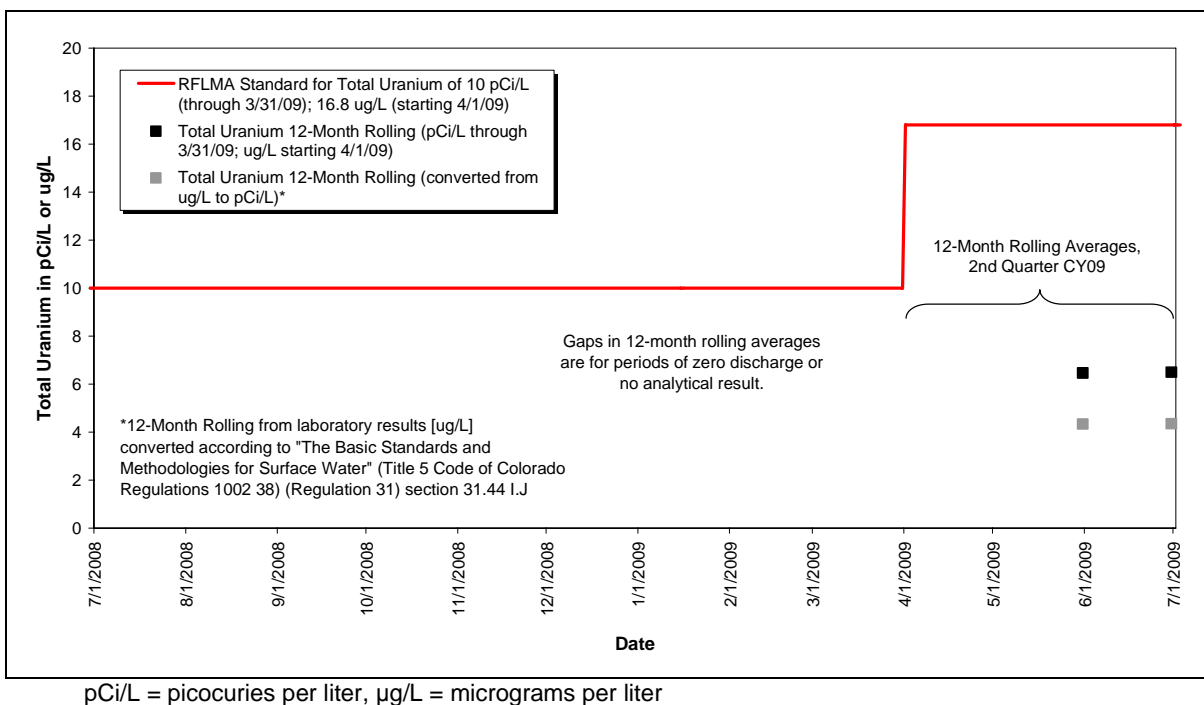
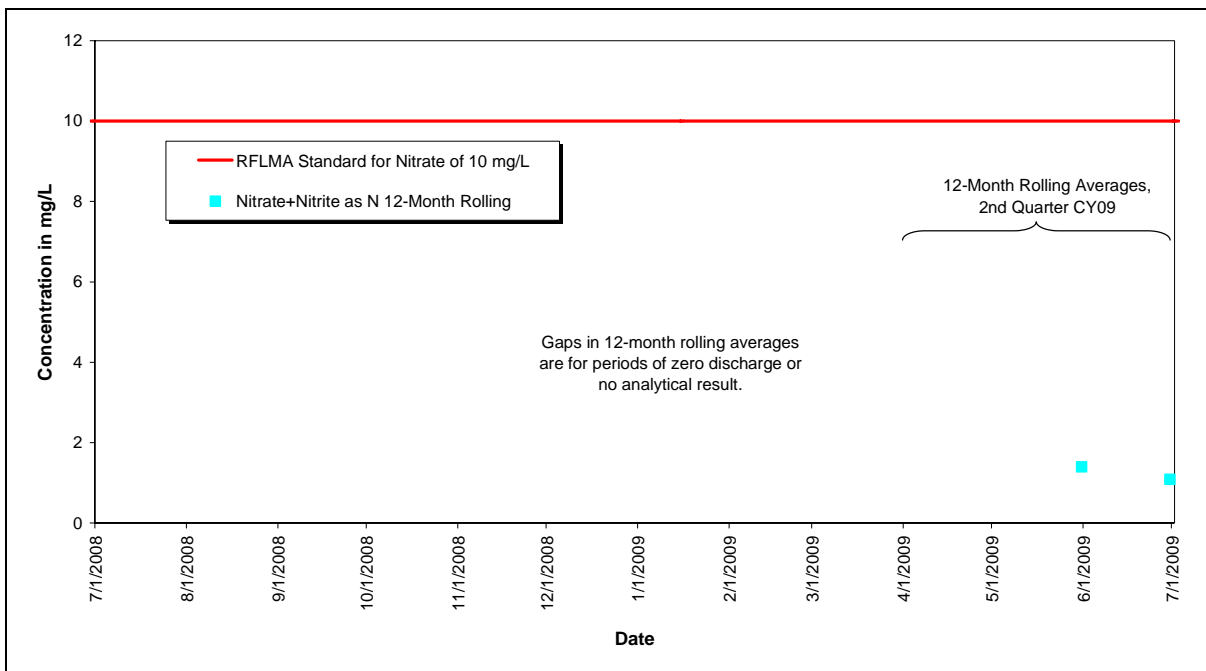


Figure 11. Volume-Weighted 12-Month Rolling Average Total U Activities at GS11: Calendar Year Ending Second Quarter CY 2009



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

Figure 12. Volume-Weighted 12-Month Rolling Average Nitrate + Nitrite as Nitrogen Concentrations at GS11: Calendar Year Ending Second Quarter CY 2009

### 3.1.2.5 Location GS31

Monitoring location GS31 is located on Woman Creek at the outlet of Pond C-2. Figure 13 and Figure 14 show no occurrences of reportable 12-month rolling averages for the quarter.

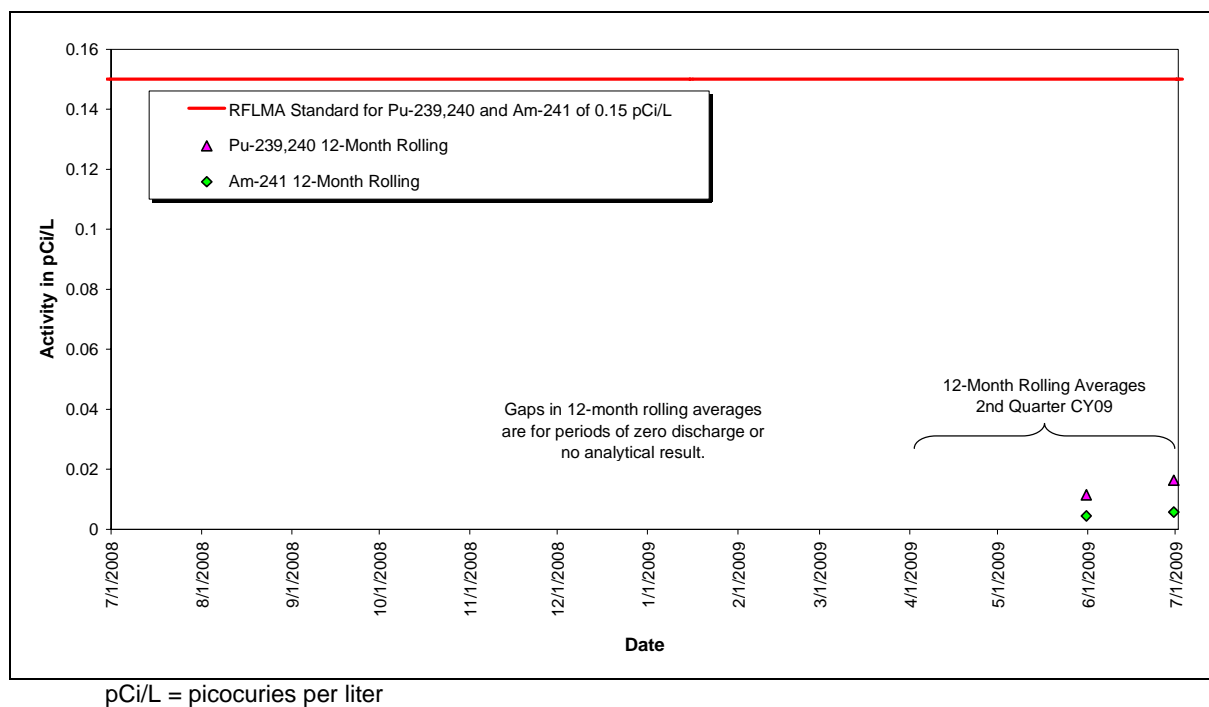


Figure 13. Volume-Weighted 12-Month Rolling Average Pu and Am Activities at GS31: Calendar Year Ending Second Quarter CY 2009

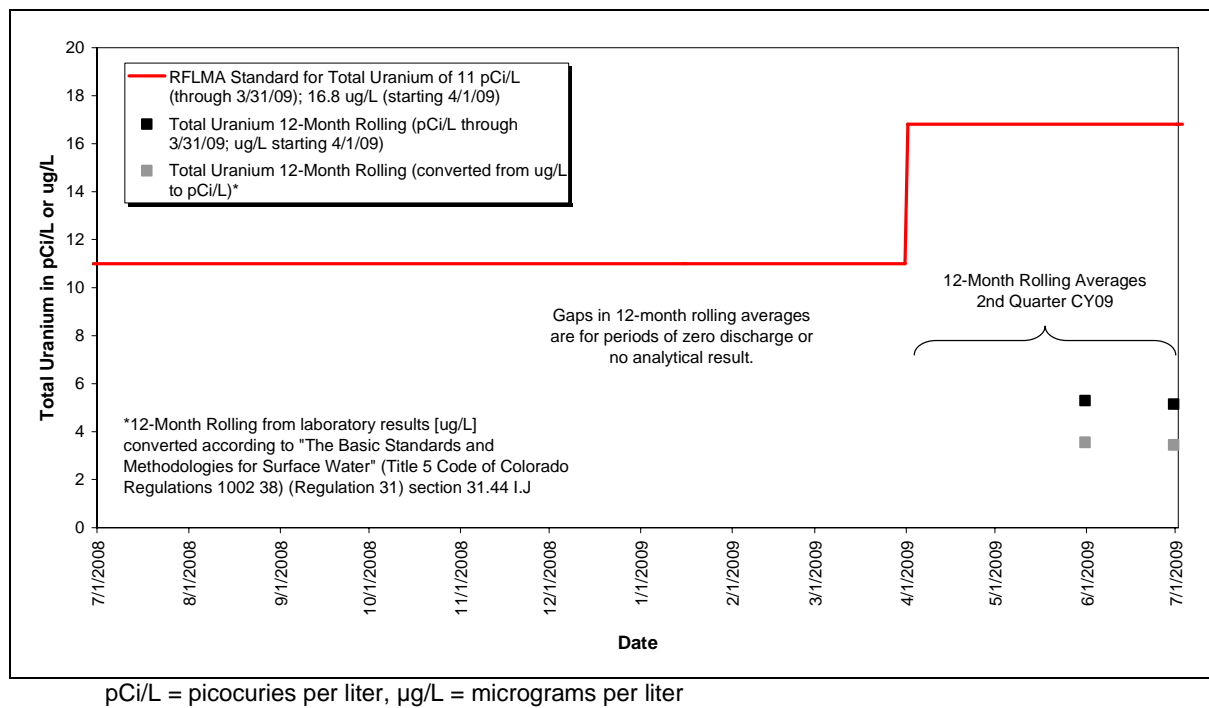


Figure 14. Volume-Weighted 12-Month Rolling Average Total U Activities at GS31: Calendar Year Ending Second Quarter CY 2009

### 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 Location GS10

Monitoring location GS10 is located on South Walnut Creek just upstream of the B-Series ponds. Figure 15 and Figure 16 show no reportable Pu, Am, or total U values during the quarter. In addition, none of the 85th percentile 30-day average metals concentrations were reportable for the quarter.

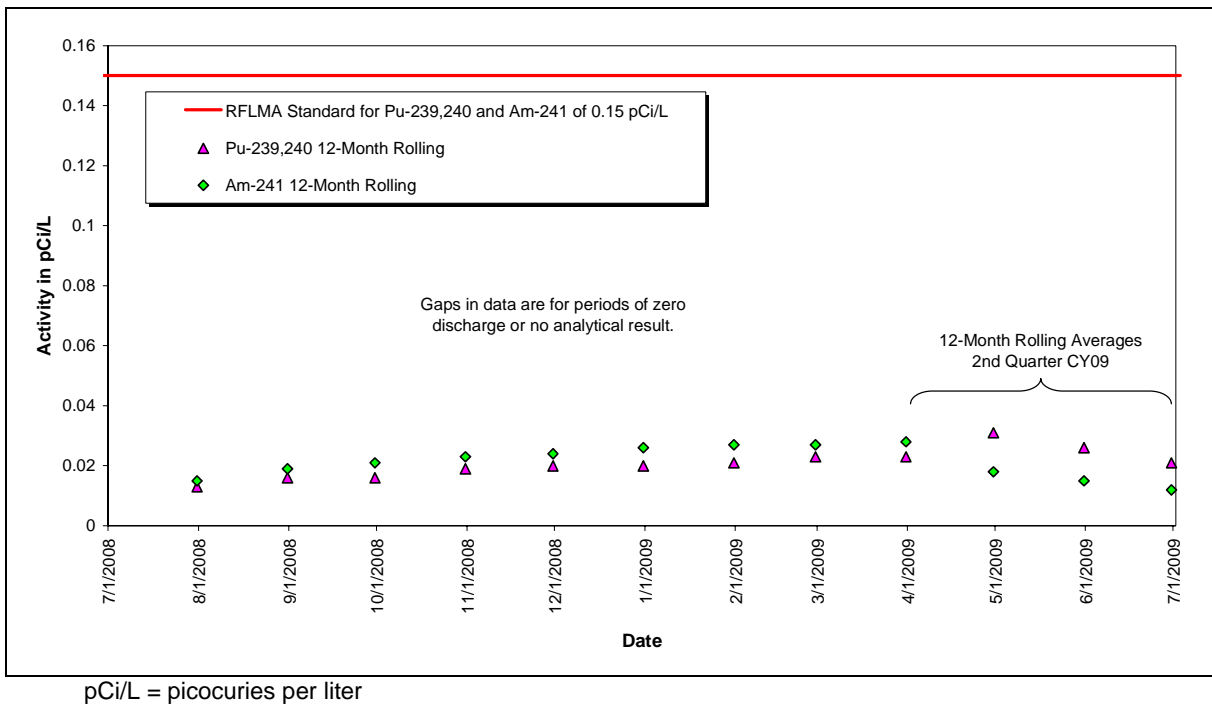


Figure 15. Volume-Weighted Average Pu and Am Compliance Values at GS10: Calendar Year Ending Second Quarter CY 2009



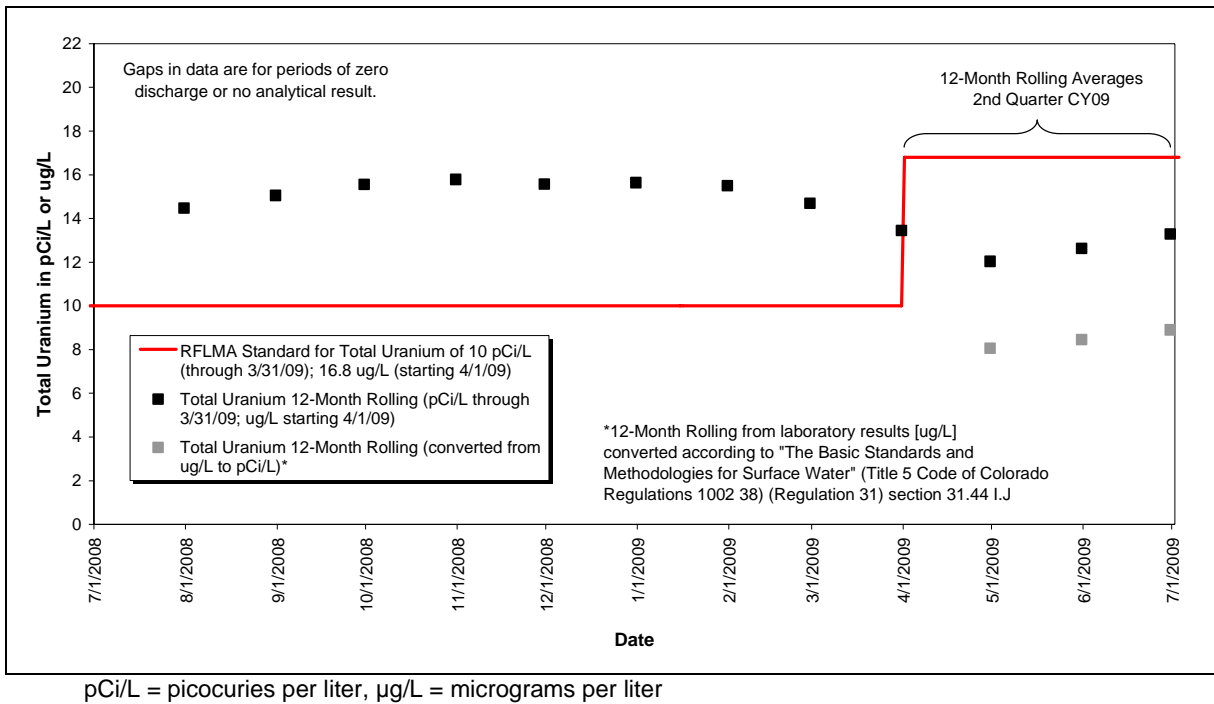


Figure 16. Volume-Weighted Average Total U Compliance Values at GS10: Calendar Year Ending Second Quarter CY 2009

### 3.1.3.2 Location SW027

Monitoring location SW027 is located at the end of the South Interceptor Ditch at the inlet to Pond C-2. There was no flow at SW027 for the entire period from July 1, 2008, through April 17, 2009. Flow began on April 18, 2009, and composite samples were collected as planned. However, the latest composite sample, started on April 24 and still in progress, currently does not contain a sufficient quantity for analysis (SW027 has been mostly dry since April 30, 2009). Since results from the April 24 sample are not available, the April 30, 2009, compliance values (and subsequent monthly values) cannot be calculated at this time. Therefore, no compliance values are calculated and no plots are presented.

### 3.1.3.3 Location SW093

Monitoring location SW093 is located on North Walnut Creek 1,300 feet upstream of the A-Series ponds. Figure 17 and Figure 18 show no reportable Pu, Am, or total U values during the quarter. None of the 85th percentile 30-day average metals concentrations were reportable for the quarter.

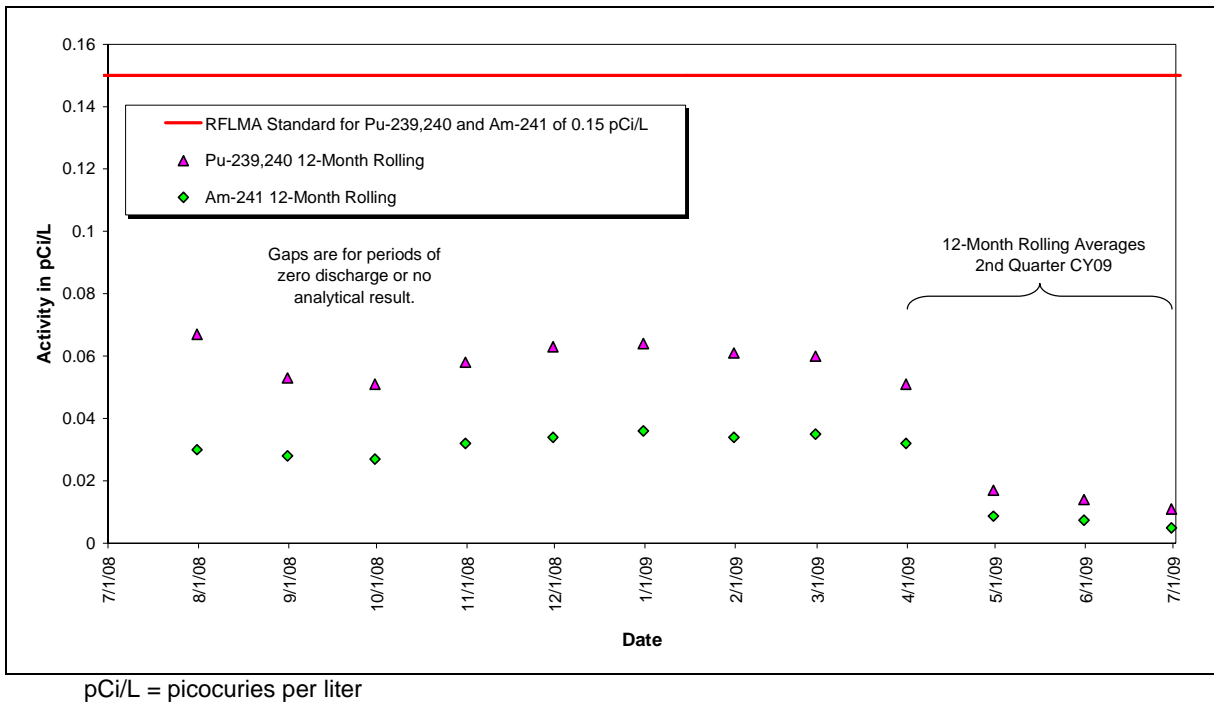


Figure 17. Volume-Weighted Average Pu and Am Compliance Values at SW093: Calendar Year Ending Second Quarter CY 2009

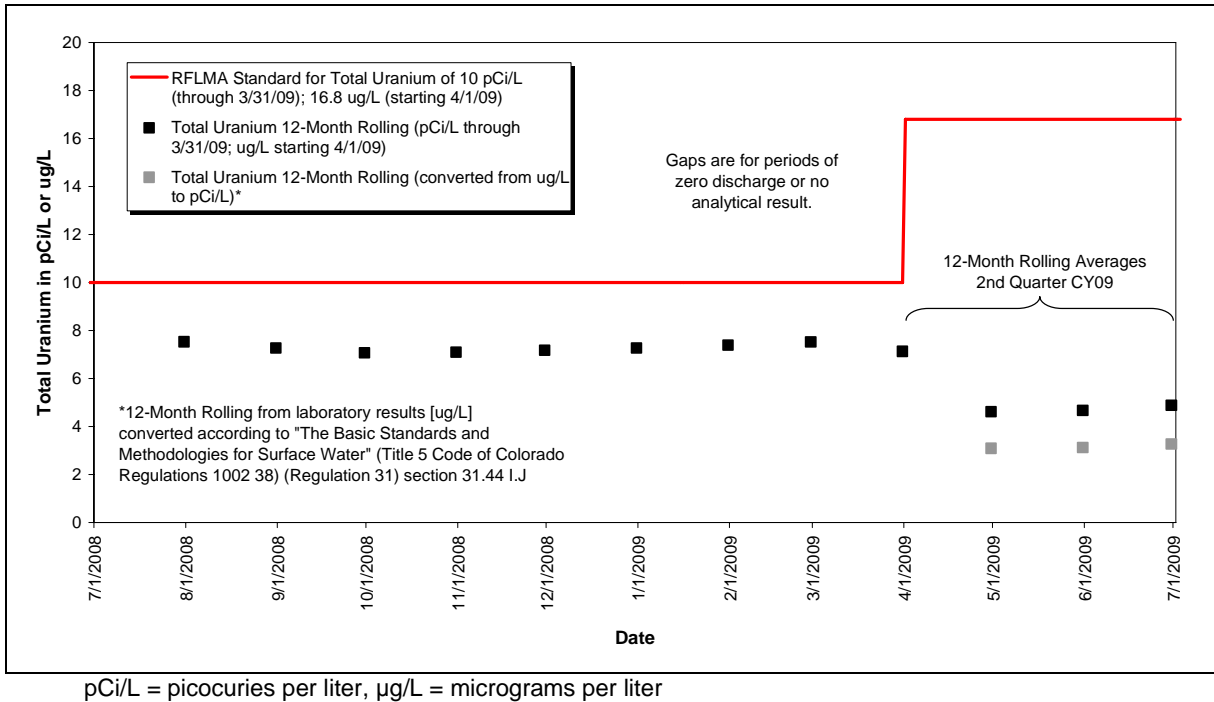


Figure 18. Volume-Weighted Average Total U Compliance Values at SW093: Calendar Year Ending Second Quarter CY 2009

### **3.1.4 AOC Wells and Surface Water Location SW018**

All AOC wells and SW018 were scheduled for RFLMA monitoring in second quarter CY 2009. No reportable conditions were indicated. Nitrate concentrations in groundwater samples from well B206989 continue to exceed the applicable standard (refer to Contact Record 2007-06, included for reference as Appendix D). Analytical results (Appendix C) will be discussed and statistically evaluated as part of the 2009 Annual Report.

### **3.1.5 Boundary Wells**

Both Boundary wells were scheduled for RFLMA monitoring in second quarter CY 2009. Analytical results (Appendix C) will be discussed and evaluated as part of the 2009 Annual Report.

### **3.1.6 Sentinel Wells**

All Sentinel wells were scheduled for RFLMA monitoring in second quarter CY 2009. Analytical results (Appendix C) will be discussed and statistically evaluated as part of the 2009 Annual Report.

### **3.1.7 Evaluation Wells**

No Evaluation wells were scheduled for RFLMA monitoring in second quarter CY 2009. Non-RFLMA samples were collected from Evaluation wells 18199, B210489, 07391, 33502, and 33604. Analytical results (Appendix C) will be discussed and statistically evaluated as part of the 2009 Annual Report.

### **3.1.8 PLF Monitoring**

All RCRA groundwater monitoring wells at the PLF were sampled during second quarter CY 2009. Analytical results (Appendix C) will be discussed and statistically evaluated as part of the 2009 Annual Report. Surface water monitoring at the PLF is discussed in Section 3.1.10.4.

### **3.1.9 OLF Monitoring**

All RCRA groundwater monitoring wells at the OLF were sampled during second quarter CY 2009. Analytical results (Appendix C) will be discussed and statistically evaluated as part of the 2009 Annual Report.

During second quarter CY 2009, when routine surface water sampling was performed at Woman Creek downstream of the OLF (GS59), all analytical results were less than the applicable surface water standards.

### **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 trench 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

All MSPTS monitoring locations were scheduled for RFLMA sampling in second quarter CY 2009. Analytical results (Appendix C) will be discussed and statistically evaluated as part of the 2009 Annual Report.

### 3.1.10.2 East Trenches Plume Treatment System

All ETPTS monitoring locations were scheduled for RFLMA sampling in second quarter CY 2009. Analytical results (Appendix C) will be discussed and statistically evaluated as part of the 2009 Annual Report.

### 3.1.10.3 Solar Ponds Plume Treatment System

All SPPTS monitoring locations were scheduled for RFLMA sampling in second quarter CY 2009 (Appendix C). Non-RFLMA samples were also collected at the SPIN, SPOUT, and SPPDISCHARGE GALLERY locations, as well as several newly established locations within the Phase II and Phase III upgrades, to support ongoing treatment system upgrades and evaluation efforts. These data will be discussed in the 2009 Annual Report.

### 3.1.10.4 PLF Treatment System

During collection of the April 6, 2009, sample at the system influent (location PLFSEEPINF), the flow rate was 1.14 gpm. As of June 30, 2009, the Landfill Pond outlet remained in an open configuration.

During second quarter CY 2009, routine sampling of the treated effluent exiting the system (location PLFSYSEFF) showed that vinyl chloride, selenium, and dissolved silver concentrations were greater than the applicable surface water standards (Table 3–1). All other second quarter CY 2009 data were below applicable surface water standards.

*Table 3–1. PLFTS Effluent (PLFSYSEFF): Summary of Routine Second Quarter CY 2009 Grab-Sampling Analytical Results Exceeding RFLMA Surface Water Standards, April 6, 2009, Sample*

| Analyte           | Result | Unit | RFLMA Standard | Basis for Standard <sup>a</sup> |
|-------------------|--------|------|----------------|---------------------------------|
| Vinyl chloride    | 0.265  | µg/L | 0.2 (PQL)      | W+F                             |
| Selenium          | 5.33   | µg/L | 4.6            | AL                              |
| Silver, dissolved | 1.37   | µg/L | 1.0 (PQL)      | TVS                             |

Note: <sup>a</sup>Basis abbreviations: W+F = Water plus Fish; AL = Aquatic Life; TVS = table value standard (table value standards for metals are based on a toxicity equation, which uses a hardness value of 143 mg/L). µg/L = micrograms per liter; PQL = practical quantitation limit.

For the Table 3–1 analytes at the PLFSYSEFF, the routine quarterly results triggered monthly sampling according to the RFLMA flowchart (see Table 3–2 for detail). All three analytes were undetected in the subsequent monthly sample. Given these results, monthly sampling of the PLFTS effluent for the Table 3–1 analytes was discontinued.

Table 3–2. PLFTS Effluent (PLFSYSEFF): Summary of Monthly Analytical Results

| Analyte           | Sample Date   | Result  | Unit        |
|-------------------|---------------|---|-------------|
| Vinyl chloride    | <b>4/6/09</b> | <b>0.265</b>                                      | <b>µg/L</b> |
|                   | 5/14/09       | nondetect   | µg/L        |
|                   | Status:       | Discontinue monthly sampling for vinyl chloride   |             |
| Selenium          | <b>4/6/09</b> | <b>5.33</b>                                       | <b>µg/L</b> |
|                   | 5/14/09       | nondetect   | µg/L        |
|                   | Status:       | Discontinue monthly sampling for selenium         |             |
| Silver, dissolved | <b>4/6/09</b> | <b>1.37</b>                                       | <b>µg/L</b> |
|                   | 5/14/09       | nondetect   | µg/L        |
|                   | Status:       | Discontinue monthly sampling for dissolved silver |             |

Note: The initial result triggering monthly sampling is shown in **bold**. The routine quarterly sample results are shown in *italics*.  
µg/L = micrograms per liter

### 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 all three terminal ponds during second quarter CY 2009 (Pond B-5 on April 22, and Ponds A-4 and C-2 on May 4). Results from all pre-discharge samples indicated that the retained water was suitable for discharge. See Section 3.1.2 for the results of POC monitoring during the subsequent discharges.

## 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 second quarter CY 2009.

## 5.0 References

DOE (U.S. Department of Energy), 2006a. *Corrective Action Decision/Record of Decision for Rocky Flats Plant (USDOE) Peripheral Operable Unit and Central Operable Unit*, September.

DOE (U.S. Department of Energy), 2006b. *Final Landfill Monitoring and Maintenance Plan, Rocky Flats Environmental Technology Site, Original Landfill*, Rocky Flats Environmental Technology Site, Golden, Colorado, February.

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

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

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

DOE (U.S. Department of Energy), 2008b. *Rocky Flats Site Quarterly Report of Site Surveillance and Maintenance Activities, First Quarter Calendar Year 2008*, Office of Legacy Management, July.

DOE (U.S. Department of Energy), 2009a. *Rocky Flats Site Operations Guide*, LMS/RFS/S03037, Office of Legacy Management, January.

DOE (U.S. Department of Energy), 2009b. *Rocky Flats Site Quarterly Report of Site Surveillance and Maintenance Activities, Third Quarter Calendar Year 2008*, Office of Legacy Management, January.

DOE (U.S. Department of Energy), 2009c. *Rocky Flats Site Annual Report of Site Surveillance and Maintenance Activities, Calendar Year 2008*, Office of Legacy Management, April.

Tetra Tech, 2008. *Rocky Flats Original Landfill Geotechnical Investigation Report, Jefferson County, Colorado*, June 4.