

# ROCKY FLATS STEWARDSHIP COUNCIL

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September 12, 2006

Mr. Frazer Lockhart  
United States Department of Energy  
12101 Airport Way, Unit A  
Broomfield, CO 80021-2583

## **Re: Proposed Plan**

Dear Mr. Lockhart,

On behalf of the Board of Directors of the Rocky Flats Stewardship Council, we are pleased to offer the following comments on the draft Proposed Plan for the Rocky Flats Environmental Technology Site. The Stewardship Council appreciates the hard work of the Department of Energy (DOE), Environmental Protection Agency (EPA), and Colorado Department of Public Health and the Environment (CDPHE) in developing this document and its companion document, the Remedial Investigation/Feasibility Study (RI/FS).

While most of the following issues stem from decisions captured in the Proposed Plan, not all do. The Stewardship Council strongly believes DOE, EPA, and CDPHE cannot approve the Proposed Plan without duly considering and discussing the full suite of issues that comprise regulatory closure. For that reason, in discussing the Proposed Plan, the Stewardship Council is raising issues that will be addressed later in other, related decision documents.

As the Local Stakeholder Organization for Rocky Flats, the Stewardship Council asks DOE to not simply reply to these issues in writing but to discuss as necessary and as appropriate these issues directly with the Board. Further, while the Stewardship Council represents a broad segment of the community, there are various perspectives in the community regarding the cleanup and Proposed Plan. The Stewardship Council encourages DOE, EPA, and CDPHE to continue to consider all points of view.

The Stewardship Council supports Alternative 2 and asks that the following issues be addressed prior to approval of the Proposed Plan.

## **Groundwater Treatment Systems**

The Stewardship Council is concerned about the short-term and long-term effectiveness of the four groundwater treatment systems, particularly the Solar Ponds treatment system. All four treatment systems – Solar Ponds, Mound, East Trenches, and Present Landfill leachate – are important elements of the Proposed Plan. As stated in the Proposed Plan, “continued operation of these systems serves to protect surface water quality over short- and intermediate-term periods by removing contaminant loading to surface water.” These systems “also serve to meet long-term goals of returning groundwater to its beneficial use of surface water protection.”

While all four groundwater treatment systems have experienced a variety of maintenance needs ranging from minor maintenance to severe operational problems over the lifetime of the units, recent operational problems with the Solar Ponds groundwater treatment system calls into question its ability to function as described in the Proposed Plan. The Solar Ponds treatment system was installed in 1999 to treat both uranium and nitrate contamination in groundwater before it emerges as surface water in North Walnut Creek. Between 1999 and 2005 the treatment system effectively lowered nitrate and uranium concentrations in groundwater that passed through the treatment cells. In 2005 a series of operational problems began to degrade the effectiveness of the treatment system. System component failures were discovered which included both nitrate treatment media ineffectiveness and material failures (piping, valves, etc.).

As we have known since the system was first installed, part of the problem is due to the siting of the system, which has resulted in some contaminated groundwater bypassing the treatment system. The optimal location for the treatment system is near the discharge gallery which is very near North Walnut Creek. However, this location is prime Preble’s Meadow Jumping Mouse habitat and DOE and Kaiser-Hill elected to locate the treatment cells about one hundred yards upgradient from the optimal location due to concerns over mouse habitat. By installing the treatment system at its present location, some contaminated groundwater between the treatment cells and discharge gallery is not treated. This isolated pocket of nitrate and uranium contamination results in high levels of nitrate being introduced into North Walnut Creek. Monitoring data gathered at the discharge gallery show a moderate upward trend of both contaminants. It is unknown how long it will take for the isolated pocket of contamination to be flushed out. It is also not known if there is another source of the contamination besides the isolated pocket contributing to the high discharge gallery levels.

The Stewardship Council recognizes DOE and its contractors are investigating the reasons for the poor performance of this treatment system. We appreciate DOE’s continued commitment to openly communicate its concerns with Stewardship Council staff, downstream municipalities and other interested members of the community. Based on these conversations we understand DOE, EPA, and CDPHE have started taking steps to fix the treatment problems which may include redesigning and possibly relocating the treatment system. In particular we support the agencies’ decision to perform a bench scale test to help ensure the design changes and changes to the treatment media are appropriate to address the site-specific contaminants and environmental conditions.

We applaud these steps but question the regulatory basis for determining that all applicable regulations have been met. The treatment system has recently experienced severe operational

problems and the discharge gallery has had rising contamination levels since 2000 due to the treatment system location. The Stewardship Council believes DOE, EPA, and CDPHE have not demonstrated that the treatment system can meet the Rocky Flats Cleanup Agreement requirements or the goals identified in the Proposed Plan.

Adding to our questions and concerns is a recent comment by DOE that the agency may petition the Colorado Water Quality Control Commission to raise the allowable level of nitrates in surface water at Rocky Flats. The current standard for nitrate, which is in force until 2009, is an interim standard of 100 milligrams/liter (mg/l) that the agencies adopted with the consent of the cities of Broomfield and Westminster. This interim standard was adopted with the recognition that the standard of 10 mg/l could not be met until the treatment system was installed and operating properly, so an interim cleanup standard was adopted. If the interim nitrate standard became permanent this change would likely obviate the need to fix the Solar Ponds treatment system and/or treat all of the contaminated groundwater.

This idea, if pursued, is troubling for two reasons. First, DOE would be abandoning its commitment to treat contaminated groundwater to meet the Rocky Flats Cleanup Agreement action levels, levels that were adopted to protect surface water quality on-site, not simply meet the regulatory water quality standards at the site boundary. Second, if DOE intends on petitioning the Commission to grant regulatory relief, this action should be clearly identified in the Proposed Plan. By not discussing the possibility of surface water quality standard relief in the Proposed Plan, DOE may not be accurately portraying how, consistent with the Proposed Plan, it intends to “protect surface water quality over short- and intermediate-term periods by removing contaminant loading to surface water.”

Similarly, even if the treatment system is repaired and operates as designed, the elevated contamination levels at the discharge gallery from the untreated isolated pocket of contaminated groundwater remains problematic. If the contamination levels do not drop between now and 2009 when the 10 mg/l standard takes effect, DOE will have problems meeting the standard. This issue must be addressed so DOE should discuss possible alternatives in the Proposed Plan for the Solar Ponds system including treatment system relocation and discharge gallery issues.

#### **Access Controls, Including Types of Controls**

The Stewardship Council strongly supports the decision to prohibit access to DOE-retained lands. The Board understands the RI/FS and Proposed Plan provide DOE will install a cattle fence along the boundary between United States Fish and Wildlife Service (USFWS) lands and DOE lands, with signs every 50' noting access to DOE-retained lands is prohibited. The Board further understands DOE and the regulatory agencies do not consider the fence to be part of the cleanup remedy; it is instead a land management tool USFWS and DOE will utilize to assist each agency in accomplishing their respective responsibilities.

The Stewardship Council believes a fence is warranted and DOE must agree to maintain the fence. We further believe that as discussed at length in the Board's June 15, 2006, letter to USFWS, signage throughout the site remains critical. Taken together, the fence and signs will not deter those intent on disturbing the remedies and the monitoring systems, but should protect the remedies from those who would otherwise unintentionally wander into DOE lands.

Yet, a boundary fence with signs is not alone sufficient, so following the recommendation of the National Research Council in its August 2000 report to DOE on long-term stewardship, long-term stewardship controls must be layered to protect the remedies. Layering could include signage or fencing around the two landfills, signage or fencing adjacent to or surrounding the A-, B-, and C-series ponds, and signs around the three groundwater treatment systems reminding DOE personnel (including contractor personnel) that digging is prohibited and activities should be minimized in these areas if not associated with monitoring or surveillance. These types of controls are, importantly, designed to protect the remedies from people and not people from the remedies.

The Stewardship Council is not prepared to specify at this time the remedy-specific controls that DOE, EPA, and CDPHE should adopt. Instead the Proposed Plan and/or other appropriate regulatory documents should identify the need for additional controls and DOE, EPA, and CDPHE should continue the ongoing public dialogue about the types of controls that are needed.

### **Institutional Controls**

Along these lines, one of the critical post-closure responsibilities is implementation of a comprehensive site-wide stewardship program. In addition to physical controls (e.g., fences and signs) DOE, EPA, and CDPHE, along with USFWS, must also develop and implement legal controls (otherwise known as “institutional controls”).

Towards this end, the RI/FS identifies the following prohibitions: (1) constructing buildings; (2) excavating, drilling or other intrusive activities below 3’, with the exception of remedy-related purposes; (3) grading, tilling, or other disturbance of surface soils, except in accordance with an erosion control plan approved by CDPHE or EPA; (4) using any surface water above the terminal ponds (A-4, B-5, C-2) for drinking water or agricultural purposes; (5) using groundwater (but the agencies can dig new wells for remedies); (6) disturbing landfill caps (e.g., no digging, driving on, grading, etc.) unless for remedy-related purposes; and (7) disturbing any remedies, including treatment systems, monitoring wells and stations, and landfill caps. The Stewardship Council believes these prohibitions are complete and as DOE, EPA, and CDPHE proceed with regulatory closure, the agencies must specify in detail how such restrictions will be legally enforced (e.g., regulatory closure documents, state environmental covenant) and how such information will be communicated to the appropriate people, including but not limited to both DOE and USFWS personnel (e.g., signage, staff trainings).

One shortfall of the Proposed Plan is that it only addresses those areas DOE will retain. Nevertheless, as we know DOE will be charged with managing monitoring stations on refuge lands. It is therefore imperative that the Proposed Plan and any other applicable regulatory documents specify that these controls also apply to those areas of the refuge that include these monitoring stations.

As both the Rocky Flats Coalition of Local Governments (Coalition) and the Rocky Flats Citizens Advisory Board (CAB) advocated, the state of Colorado, through CDPHE, must have an enforcement role post-closure. The Stewardship Council understands the draft post-closure regulatory agreement currently provides such a role for CDPHE, thereby guaranteeing that both

EPA and CDPHE will continue to influence DOE decisions and actions. The Stewardship Council strongly supports this agreement.

### **Monitoring Programs**

Monitoring is another critical post-closure stewardship responsibility. That is why this issue was a critical element of the Coalition and CAB's work on long-term stewardship and why the Stewardship Council places great emphasis on the post-closure monitoring program, particularly the surface water and groundwater monitoring program.

The Stewardship Council feels confident the process DOE, EPA, CDPHE utilized in developing the monitoring program and the decisions made (e.g., the siting of the approximately 120 groundwater wells and approximately 30 surface water monitoring stations) is comprehensive based on the existing data. There was substantive local government and community involvement and the decisions reflect important technical and policy considerations. While the number and nature of decisions to be made post-closure are fewer and more narrowly focused, it remains important that the Stewardship Council, downstream municipalities and others in the Rocky Flats community are able to continue to partner with DOE, EPA, and CDPHE as decisions are revisited and changes to the monitoring system are made. Towards this end we ask that DOE, EPA, and CDPHE address the following issues.

#### Integrated Monitoring Plan

Central to the development, implementation, and modification of the monitoring program is the Integrated Monitoring Plan (IMP). The IMP served two roles. First and most important, the IMP codifies the monitoring network and regulatory basis for making changes to the current surface water, air, ecological and groundwater monitoring system. The IMP also establishes the frequency and process by which DOE notifies the community of problems with the system and potential changes. This process, which has also included collaborating with community members on the establishment of the post-closure monitoring network, has been extremely valuable and the Stewardship Council wants to ensure this important dialogue continues post-closure.

The RI/FS and Proposed Plan mention the current IMP process but are silent on the process DOE, EPA, and CDPHE will follow post-closure to modify, as necessary, the monitoring system. The Stewardship Council understands DOE, EPA, and CDPHE will likely use the Long-Term Surveillance and Maintenance Plan (LTSMP) to codify the post-closure monitoring requirements, but we do not know if the LTSMP will include the process established in the current IMP where local government and other community members actively participate in decision making. The Stewardship Council therefore strongly recommends DOE, EPA, and CDPHE continue the ongoing dialogue with the community that is currently the practice under the IMP.

#### Landfill Inspections and Seepage Monitoring

Landfill inspections and seepage monitoring are captured in both the landfill decision documents and in the RI/FS and Proposed Plan. The Stewardship Council believes DOE, EPA, and CDPHE have done a thorough job in detailing the inspection and monitoring requirements. Consistent with the above discussion about the IMP process, any problems with the remedies

that arise and/or any changes to the inspection and monitoring programs should be discussed with the Stewardship Council and other interested members of the community. Such discussions should begin when problems (or potential problems) are first known and solutions are being developed, not once agreement has been reached amongst DOE, EPA, and CPDHE.

#### Pond Management

As you are aware, one of the issues the Woman Creek Reservoir Authority and the City and County of Broomfield hired consultants to evaluate in 2005 concerned management of the retention ponds, and specifically the terminal ponds. One policy the aforementioned parties and the Coalition adopted was that the terminal ponds (A-4, B-5, C-2) should be discharged when they reach 20% of capacity.

DOE's initial response to the Coalition included the following provision: "[DOE] has consistently maintained that its optimal operating practice for the ponds would be to keep the amount of water in them as low as possible to provide optimum storage, and so we agree with this recommendation. Generally, when the ponds have filled, it has been because we were awaiting analytical results prior to discharge, which has been the preferred mode of operation from the downstream cities' standpoint. Since the ponds will be receiving considerably less water in the future, we anticipate that water levels in the ponds will be commensurately lower."

Since that time Broomfield and Westminster have modified their position and now support the release criteria established in the Interim Surveillance and Maintenance Plan. The Stewardship Council supports this position.

A related issue concerns testing water in years where there are no discharges. Specifically, water in the terminal ponds is only tested prior to releases – and yet, in some years there will be no discharges. Thus, in those years, water in the terminal ponds will not be tested. The Stewardship Council strongly recommends that in the event water is not discharged in a given year, DOE should nevertheless test water in the terminal ponds no less than one time per year to measure water quality and thus help determine remedy effectiveness. In offering this recommendation, the Stewardship Council understands DOE, EPA, and CPDHE believe that monitoring systems upstream of the terminal ponds would record any and all contaminants flowing downstream. While we believe the surface water and groundwater monitoring program is comprehensive, there nevertheless may be contamination flow paths that are not captured by the upstream monitoring network. If these flow paths exist, annual sampling of the terminal paths would help identify the presence of these contaminants and would therefore be a prudent best management process. Such language should be captured in all applicable regulatory documents.

As a matter of sound science and sound public policy, it remains imperative that DOE, EPA, and CDPHE keep apprised of the extent of contamination in the terminal ponds. Such information provides an important gauge of the effectiveness of the \$7 billion cleanup, thereby increasing public confidence of the long-term protectiveness of the site and of the future Rocky Flats National Wildlife Refuge. Under the Stewardship Council's proposal, at most over a five-year period such a policy would result in an additional 15 water samples taken and analyzed. The

cost associated with this sampling is small compared to the billion dollar cleanup and a multi-million dollar long-term stewardship program.

**Remedy Surveillance and Maintenance**

Another critical post-closure stewardship requirement is surveillance and maintenance of the remedies. Activities include site-wide inspections to insure that (1) the erosion controls and revegetation efforts are proceeding as designed, (2) monitoring stations have not been damaged, and (3) there has not been any unauthorized digging or other soil disturbance activities plus much more. The Stewardship Council feels confident that the Interim Surveillance and Maintenance Plan, which will be adopted as the LTSMP (with slight modifications) after approval of the CAD/ROD, is thorough and we urge its adoption.

As the LTSMP gets finalized, the Stewardship Council will track the following issues: (1) maintaining local government and community involvement on decisions that concern the post-closure monitoring programs, (2) determining the frequency of periodic reviews and reporting requirements, and (3) developing, as needed, processes to address problems and/or remedy failure.

**Determination about Which Lands Will Be Transferred to USFWS and Which Will Be Retained By DOE**

Currently the RI/FS and Proposed Plan include a map delineating the lands to be transferred to USFWS and the lands to be retained by DOE. The RI/FS notes that the boundaries may be adjusted and any such adjustments would be included in the CAD/ROD and not the Proposed Plan. The Stewardship Council is comfortable with that approach, but strongly believes that while the CAD/ROD is not a public comment document, DOE, EPA, and CDPHE must continue to brief and work with the Stewardship Council on the development of that important regulatory document.

Thank you for your continued commitment to work with the Stewardship Council, communities downstream of Rocky Flats and others on these important issues. An ongoing and active dialogue remains imperative to the long-term success of the cleanup of Rocky Flats.

Sincerely,



Lorraine Anderson  
Chairman



David M. Abelson  
Executive Director

Cc: Senator Wayne Allard  
Senator Ken Salazar  
Representative Mark Udall  
Representative Bob Beauprez  
Mike Owen, DOE  
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