

**Appendix E**  
**Public Participation Summary**

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## Public Participation Summary

The following table provides a summary of the questions and responses by the Rocky Flats Legacy Management Agreement (RFLMA) Parties at the Rocky Flats Stewardship Council Meetings on September 14, 2011; November 14, 2011; and February 6, 2012.

Question	Response
Is a formal public review and comment period provided for the report?	A formal public review and comment period is not required by Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations and is also not specified in the U.S. Environmental Protection Agency's (EPA's) CERCLA Five-Year Review Guidance.
Is there a project plan for the review and the report?	No formal project plan is needed because the review will be conducted and the report will be prepared in accordance with the CERCLA Five-Year Review Guidance.
Will the names of all persons performing the review be published in the review report?	The Five-Year Review Guidance specifies that the agencies and contractors participating in the review be identified, but not individual names.
If recommendations for changes to monitoring requirements are made in the five-year review, how will the changes be incorporated into remedy implementation requirements?	Recommendations for changes to monitoring requirements made by the U.S. Department of Energy (DOE) resulting from the five-year review will be followed up in accordance with RFLMA requirements for modifications to existing requirements. The public will be notified of proposed modifications through RFLMA contact records or other written correspondence, and proposed modifications are subject to review and approval by the Colorado Department of Public Health and Environment (CDPHE) and EPA. Modifications that constitute a significant change from existing requirements shall be subject to public comment.

**Abbreviations:**

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

CDPHE = Colorado Department of Public Health and Environment

DOE = U.S. Department of Energy

EPA = U.S. Environmental Protection Agency

The following table provides a summary of the questions and the responses by the U.S. Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) RFLMA Project Coordinators at a February 13, 2012, meeting requested by staff members from local municipal governments of several downstream communities and from the Woman Creek Reservoir Authority. Questions were initially transmitted by e-mail to the EPA and CDPHE RFLMA Project Coordinators on February 10, 2012. The EPA and CDPHE RFLMA Project Coordinators provided this information to the U.S. Department of Energy (DOE) RFLMA Project Coordinator. The DOE RFLMA Project Coordinator agreed that, although the questions were not also sent to DOE by e-mail on February 10, 2012, these questions and the other questions raised at the meeting (which are synopsized in the following table) and the responses should be included in the public participation summary.

Question	Response
Will the RFLMA Project Coordinators have meetings with downstream communities or a "series of public meetings" to discuss the five-year review process/scope?	There is no restriction on discussing any five-year review items at any stakeholder meeting. These include opportunities at the April 4, 2012, Rocky Flats Stewardship Council public meeting and the April 4, 2012, Rocky Flats Adaptive Management Plan (AMP) annual status report public meeting.
Will the plans for dam breaches be discussed in this five-year review, or is that "off-limits" in this review because dams not part of remedy?	Dam breaches are included in the introductory part of the Five-Year Review Report to explain changes in the surface water configuration in the Central Operable Unit (OU), but there is no plan to specifically include dam breach plans in the technical review of remedy performance. RFLMA monitoring results are used to evaluate protectiveness regardless of the dam breaches.

Question	Response
<p>Related to the foregoing question regarding dam breaches, will the Rocky Flats AMP sampling be discussed? If yes, can the review include the purpose and evaluation of AMP results in subsequent 5-year reviews?</p>	<p>AMP data, like other non-RFLMA sampling data, such as the Los Alamos National Laboratory (LANL) analysis to compare pre-and post-closure uranium signatures, could be useful in relation to RFLMA-required data for some limited purposes. Since the AMP is a commitment by DOE as part of its National Environmental Policy Act evaluation of the dam breach environmental impacts, it should not be confused with the purpose of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) five-year review. All monitoring data collected under the AMP monitoring plan is evaluated by DOE and reported to the public.</p>
<p>There have been reportable conditions at Points of Evaluation GS10 and SW027 during this review period. Given DOE's intent to breach the terminal dams, will EPA ask for a careful watch of water quality at the reportable condition locations and will the water quality be addressed in issues, recommendations, and follow-up actions?</p>	<p>Yes, the status of reportable conditions will be included in the review. But evaluation and monitoring of reportable conditions is being done in accordance with the RFLMA consultative process regardless of the five-year review. Contact records, other written correspondence, and RFLMA-required reports will be used to report the status of the evaluations and what, if any, mitigating actions are required to be taken by DOE in response to the reportable conditions to protect human health and the environment.</p>
<p>Will there be an evaluation of the comparability of results based on parallel data collection for the new Points of Compliance (POCs)—i.e., WALPOC, WOMPOC, and POCs GS01 and GS03—over the next 2 years? Will such an evaluation be required before GS01 and GS03 are removed as RFLMA POCs?</p>	<p>There is no plan to do this as part of a five-year review. POC data are continuously evaluated per RFLMA requirements. Maintaining GS01 and GS03 as RFLMA POCs for 2 years was the RFLMA Parties' response to requests in public comments regarding continuing enforceability and reportable condition evaluations outside of the Central OU boundary for some period of time after new POCs were operational.</p>
<p>Is there anything new being discussed by the RFLMA Parties in terms of data analysis not presented in 2007 Five-Year Review Report?</p>	<p>Nothing new was being discussed at the time of this question. Since there is extensive data analysis in the RFLMA annual reports prepared during this review period, there was no need to include any new data analysis in this review.</p>
<p>For five-year review Question C, will LANL results showing a different uranium signature at GS10, or similar topics, be discussed?</p>	<p>As discussed above, additional data that could be relevant to the technical evaluation will be considered.</p>
<p>Given that institutional controls (ICs) are preventing onsite exposure, would there have to be exceedances of RFLMA surface water standards at the Central OU boundary POCs for the RFLMA Parties to have concerns about remedy protectiveness?</p>	<p>The review evaluates remedy implementation of ICs as well as other remedy components, such as the results of monitoring at locations upstream of the POCs that are intended to provide short- and long-term protectiveness. An exceedance at a POC at the Central OU boundary would certainly trigger evaluation (and would be an RFLMA reportable condition) to determine if it indicates remedy components are not performing as intended to provide adequate protection.</p> <p>POC results are not the only remedy performance indicators evaluated by the RFLMA Parties. Other indicators include surface water monitoring results from locations upstream of POCs, groundwater monitoring results, landfill inspection results, treatment systems O&amp;M monitoring and performance monitoring results, and observations during inspections.</p>
<p>If the terminal pond dams are breached, the remedy requires any new monitoring and compliance points to consider groundwater in alluvium. What's the intent – is it assuring that the monitoring at WOMPOC measures all water exiting the Central OU that is surface water?</p>	<p>This question was addressed in the response to comments for the RFLMA Attachment 2 modification regarding the establishment of the new POCs, WALPOC and WOMPOC. Groundwater in alluvium was considered in determining that the new POCs would be as effective as the upstream POCs being replaced in determining impacts to surface water quality from contaminated groundwater in the alluvium.</p>
<p>Are there plans to quickly terminate post-closure care at the Original Landfill (OLF)? If so, is this initiative about eliminating monitoring or just reducing it?</p>	<p>The steps being taken to monitor the OLF now are to evaluate post-closure performance in accordance with the CDPHE policy for termination of post-closure care criteria. DOE is following the CDPHE process and, while some recommendations to reduce monitoring may result, there is no plan to quickly terminate post-closure care.</p>

Question	Response
What is the status of review of the groundwater flow model?	At the time of this question the review was in progress. The conclusions are included in this report.
Would the same quality assurance criteria apply to POC samples that were applied to the evaluation and disposition of the results of the rerun of the plutonium/ americium for the 7/21/11-8/24/11 Point of Evaluation GS10 sample, as discussed in Contact Record 2011-08?	Yes.

**Abbreviations:**

AMP = Adaptive Management Plan  
 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act  
 IC = institutional control  
 LANL = Los Alamos National Laboratory  
 OLF = Original Landfill  
 OU = Operable Unit  
 POC = Point of Compliance

**Additional Information Regarding Operable Unit (OU) 3 and the Peripheral OU**

This third five-year review is for the remedy in the Central OU, but DOE is aware of several press reports at the end of 2011 and the beginning of 2012 related to residual levels of plutonium in soil in eastern edge of the Peripheral OU and OU 3. The articles DOE is aware of are listed in the References section, below.

The RFLMA Parties believe that these reports should be considered similar to information that might be raised in interviews.

Interviews were not conducted for this five-year review for the reasons discussed in this Five-Year Review Report, Section 6.2, and the topics raised by the press reports were in fact raised in previous public review and comment periods for RFLMA Attachment 2 modifications and the Corrective Action Decision/Record of Decision (CAD/ROD) amendment during this five-year review period.

The press reports were related to public controversy over the U.S. Fish and Wildlife Service proposed action to transfer the 300-foot-wide strip of land on the eastern edge of the Refuge for a transportation corridor as provided in the Refuge Act. The transportation corridor, if transferred, would be part of a proposed highway known as the Jefferson Parkway. In summary, concerns were reported regarding whether the residual plutonium levels in soils would pose a significant risk for the construction and subsequent use of the land for a highway.

To help keep the public informed as part of the five-year review process, DOE believes it would be helpful to provide references related to the risk from residual contamination, including plutonium contamination in the soil, on and east of the Refuge.

**OU 3 RCRA Facility Investigation/Remedial Investigation (OU 3 RFI/RI) (DOE 1996)**

In addition to summarizing the results of the environmental investigations in OU 3, the OU 3 RFI/RI contains a human health and ecological risk assessment.

The OU 3 RFI/RI is available on the electronic Rocky Flats Administrative Record (Volumes I, II, and III, respectively):

[http://www.lm.doe.gov/cercla/documents/rockyflats\\_docs/OU03/OU03-A-000465.pdf](http://www.lm.doe.gov/cercla/documents/rockyflats_docs/OU03/OU03-A-000465.pdf)

[http://www.lm.doe.gov/cercla/documents/rockyflats\\_docs/OU03/OU03-A-000466.pdf](http://www.lm.doe.gov/cercla/documents/rockyflats_docs/OU03/OU03-A-000466.pdf)

[http://www.lm.doe.gov/cercla/documents/rockyflats\\_docs/OU03/OU03-A-000467.pdf](http://www.lm.doe.gov/cercla/documents/rockyflats_docs/OU03/OU03-A-000467.pdf)

The human health and ecological risk assessments are in Volume II.

### **OU 3 Final Corrective Action Decision/Record of Decision (DOE, EPA, and CDPHE 1997)**

The OU 3 CAD/ROD concluded that the excess cancer risks calculated in the Human Health Risk Assessment of the RFI/RI Report from exposure to the contaminants of concern are all within or well below the EPA guidance for protecting human health.

Radiation exposures calculated for OU 3 resulting from contamination there were extremely small compared to the soil action levels and compared to average background radiation doses. Conditions in OU 3 pose no unacceptable or significant risks to human health or the environment; future unacceptable or significant exposures will not occur there as a result of past contamination. DOE concludes that no action is necessary in OU 3 for the protection of human health and the environment. Low levels of hazardous substances will remain in the soils and reservoir sediments in OU 3, but in concentrations so low that they pose no threat to human health and the environment and will not compromise natural resource values.

The OU 3 CAD/ROD is available in the electronic Rocky Flats Administrative Record at:

[http://www.lm.doe.gov/cercla/documents/rockyflats\\_docs/OU03/OU03-A-000551.PDF](http://www.lm.doe.gov/cercla/documents/rockyflats_docs/OU03/OU03-A-000551.PDF)

### **Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Assessment (ATSDR 2005)**

The ATSDR was established by Congress in 1980 under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Since 1986, ATSDR has been required by law to conduct a public health assessment at each of the sites on the EPA National Priorities List (NPL). The aim of these evaluations is to find out if people are being exposed to hazardous substances and, if so, whether that exposure is harmful and should be stopped or reduced. If appropriate, ATSDR also conducts public health assessments when petitioned by concerned individuals. Public health assessments are carried out by environmental and health scientists from ATSDR and from the states with which ATSDR has cooperative agreements. The public health assessment program allows the scientists flexibility in the format or structure of their response to the public health issues at hazardous waste sites. For example, a public health assessment could be one document or it could be a compilation of several health consultations—the structure may vary from site to site. In any case, the public health assessment process is not considered complete until the public health issues at the site are addressed.

The 2005 ATSDR public health assessment included assessment of onsite and offsite exposures, including residual contamination in OU 3. The 2005 ATSDR report, Section VII, “Conclusions,” states:

The conclusions for past exposures are based largely on the extensive dose reconstruction study conducted by expert scientists and critically reviewed by CDPHE and an independent health advisory panel. The conclusions for current and future exposures are based largely on ATSDR’s interpretation of sampling data recently collected by multiple parties. Overall, ATSDR did not identify any environmental exposures at levels of public health concern for past and current exposures ...

The 2005 ATSDR report also references ATSDR’s 1997 *Health Consultation, Rocky Flats Environmental Technology Site, Operable Unit 3*. This consultation evaluated soil, sediment, and surface water contamination found in areas east of the site. The 1997 health consultation concluded that concentrations of uranium, radium, and fission products were present at, or near, natural background levels, but that levels of plutonium and americium isotopes were higher than would be normally expected in the environment. ATSDR’s dose calculations, however, found that residents are not exposed to plutonium or americium isotopes at levels that would pose a public health hazard for current or anticipated future land uses at the site.

The 1997 ATSDR health consultation report is available on the electronic Rocky Flats Administrative Record at:

[http://www.lm.doe.gov/cercla/documents/rockyflats\\_docs/OU03/OU03-A-000530.PDF](http://www.lm.doe.gov/cercla/documents/rockyflats_docs/OU03/OU03-A-000530.PDF)

### **EPA’s Notice of Intent for Partial Deletion and Notice of Partial Deletion**

The CAD/RODs for OU 3 and the Peripheral OU (DOE, EPA, and CDPHE 2006) determined that conditions in those OUs are suitable for unrestricted use.

EPA published a Notice of Intent for Partial Deletion (NOIPD) of the Rocky Flats Site (also known as the Plant) from the NPL on March 13, 2007 (*72 Federal Register* [FR] 11313, March 13, 2007) (EPA 2007a) to delete the Peripheral OU and OU 3 from the NPL. The NOIPD was based on the results of the remedial investigations leading to the CAD/ROD no action remedies being selected for these OUs. The NOIPD states that no hazardous substances occur in the OUs above levels that allow for unlimited use and unrestricted exposure, and therefore no five-year review is required for these OUs. EPA subsequently published a Notice of Partial Deletion from the NPL for the Peripheral OU and OU 3, which includes a responsiveness summary, on May 25, 2007 (*72 FR* 29276, May 25, 2007) (EPA 2007b).

The two EPA notices provide a summary of the investigation of the release of hazardous substances and the risk assessments for OU 3 and the Peripheral OU. The EPA notices are available on the electronic Rocky Flats Administrative Record at:

[http://www.lm.doe.gov/cercla/documents/rockyflats\\_docs/PD/PD-A-000013.PDF](http://www.lm.doe.gov/cercla/documents/rockyflats_docs/PD/PD-A-000013.PDF)

[http://www.lm.doe.gov/cercla/documents/rockyflats\\_docs/PD/PD-A-000020.PDF](http://www.lm.doe.gov/cercla/documents/rockyflats_docs/PD/PD-A-000020.PDF)

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ATSDR (Agency for Toxic Substances Disease Registry), 1997. *Health Consultation, Rocky Flats Environmental Technology Site, Operable Unit 3*, U.S. Department of Health and Human Services, Public Health Service, Federal Facilities Assessment Branch, Division of Health Assessment and Consultation, February 6.

ATSDR (Agency for Toxic Substances Disease Registry), 2005. *Public Health Assessment for the Rocky Flats Environmental Technology Site, U.S. Department of Energy, Golden, Colorado, EPA Facility ID: CO7890010526*, U.S. Department of Health and Human Services, Public Health Service, Federal Facilities Assessment Branch, Division of Health Assessment and Consultation, May 13.

DOE (U.S. Department of Energy), 1996. *Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation Report, Operable Unit 3 (Offsite Areas)*, June.

DOE, EPA, and CDPHE (U.S. Department of Energy, U.S. Environmental Protection Agency, and Colorado Department of Public Health and Environment), 1997. *Corrective Action Decision/Record of Decision, Operable Unit 3, The Offsite Areas, Rocky Flats Environmental Technology Site*, Golden, Colorado, April.

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

EPA (U.S. Environmental Protection Agency), 2007a. "Notice of Intent for Partial Deletion of the Rocky Flats Plant from the National Priorities List," *Federal Register*, Vol. 72, No. 48, pages 11313–11319, March 13.

EPA (U.S. Environmental Protection Agency), 2007b. "Notice of Partial Deletion of the Rocky Flats Plant from the National Priorities List," *Federal Register*, Vol. 72, No. 101, pages 29276–29277, May 25.

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Public News Service, 2011. "Rocky Flats – Safe for Jefferson Parkway development?," June 29.

Salazar-Moreno, Quibian, 2011. "Plutonium parkway – activists say a highway or bikeway through Rocky Flats site may present hazards," *Boulder Weekly*, July 21.

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Aguilar, John, 2012. "Environmental groups sue feds over proposed Jefferson Parkway land swap," *Boulder Daily Camera*, February 15.

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Calhoun, Patricia, 2012. "Rocky Flats critics want radioactive material testing before Jefferson Parkway construction," *Westword*, February 21.

Iversen, Kristen, 2012. "Nuclear fallout," *New York Times*, March 10.

Carroll, Vincent, 2012. "Again, raising a false alarm," *Denver Post*, March 21.

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