

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 2006f) issued September 29, 2006, for the Rocky Flats Site (RFS). Prior to the CAD/ROD, cleanup and closure activities were completed in accordance with the requirements of the *Rocky Flats Cleanup Agreement (RFCA)* (CDPHE et al. 1996). Under the CAD/ROD, two Operable Units (OUs) were established within the boundaries of the Rocky Flats property: the Peripheral OU (POU) and the Central OU (COU). The COU consolidates all areas of the site that require additional remedial/corrective actions, while also considering practicalities of future land management. The POU includes the remaining, generally unimpacted portions of the site and surrounds the COU. The response action in the Final CAD/ROD is no action for the POU, and institutional and physical controls with continued monitoring for the COU. The Offsite Areas at Rocky Flats, known as OU 3, were addressed under a separate no-action CAD/ROD dated June 3, 1997.

The CAD/RODs for OU 3 and the POU determined that conditions in those OUs were suitable for unrestricted use. As such, the U.S. Environmental Protection Agency (EPA) published a Notice of Intent for Partial Deletion (NOID) of the Rocky Flats Site (Plant) from the National Priorities List (NPL) on March 13, 2007 (72 Federal Register [FR] 11313, March 13, 2007) to delete the POU and OU 3 from the NPL. The NOID was based on the results of the remedial investigations leading to the CAD/ROD no-action remedies being selected for these OUs. The NOID states that because no hazardous substances occur in the OUs above levels that allow for unlimited use and unrestricted exposure, no 5-year review was required for these OUs. EPA subsequently published a Notice of Partial Deletion from the NPL for the POU and OU 3 on May 25, 2007 (72 FR 29276, May 25, 2007).

On July 12, 2007, most of the property outside the COU was transferred to the U.S. Department of the Interior for establishment of a National Wildlife Refuge managed by the U.S. Fish and Wildlife Service (USFWS). EPA certified that cleanup and closure of Rocky Flats was complete and the COU remedy was operating properly and successfully, in accordance with requirements for DOE to transfer land to USFWS for establishing the Refuge. DOE retained the COU and is responsible for implementing the CAD/ROD final response action and ensuring that it remains protective of human health and the environment. The monitoring, surveillance, and maintenance activities for which quarterly, annual, and 5-year review reports are issued are included in the *Rocky Flats Legacy Management Agreement (RFLMA)*.

RFLMA, signed March 14, 2007, superseded RFCA. RFLMA is a Federal Facility Agreement and Consent Order under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the Colorado Hazardous Waste Act, between DOE, EPA Region 8, and the Colorado Department of Public Health and Environment (CDPHE). The purpose of RFLMA is to establish the regulatory framework for Attachment 2, "Legacy Management Requirements."

RFLMA Attachment 2, Section 7.0 requires DOE to provide reports pertaining to the surveillance and maintenance of the remedy prescribed in the CAD/ROD on a calendar quarter and annual basis. The fourth quarterly report information is to be included in the annual report.

The *Rocky Flats Site Operations Guide* (RFSOG) was prepared by DOE-LM as a document to guide work at the Site. The RFSOG provides details on the surveillance and maintenance needed to satisfy the requirements of the CAD/ROD as well as best management practices (BMPs) at the Site. As a “desktop procedure,” the RFSOG explains how DOE will fulfill its long-term surveillance and maintenance obligations at the Site.

1.1 Purpose and Scope

The purpose of this report is to inform the regulatory agencies and stakeholders of the surveillance, monitoring, and maintenance activities being conducted at the Site. DOE-LM provides periodic communications such as this report and through other means such as web-based tools and public meetings.

This annual report focuses on routine surveillance, maintenance, and monitoring activities that were conducted during calendar year (CY) 2007 and also includes information for fourth quarter CY 2007. Topics covered include site operations and maintenance (Section 2.0), and environmental monitoring including water, air, and ecological monitoring (Section 3.0). Data management, validation, and an assessment of data quality are also included in Section 3.0. References cited in this report are included in Section 4.0.

Supporting information is provided in a series of appendices. Appendix A provides the hydrologic data, while Appendix B provides the water-quality data. The fourth quarter CY 2007 landfill inspection forms for the Present Landfill (PLF) and Original Landfill (OLF) are included in Appendix C. RFLMA and RFSOG data evaluation flowcharts that were used are provided in Appendix D. Appendix E contains the Los Alamos National Laboratory (LANL) report titled “Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters.” The three hydrologic modeling reports generated for the site in 2007 are included in Appendix F. Appendix G contains the report “Treatability Studies for the Solar Ponds Plume at Rocky Flats, Phase 2,” and the RFLMA contact records issued during CY 2007 are included in Appendix H.

1.2 Background

Surveillance, maintenance, and monitoring activities are conducted according to RFLMA. RFLMA incorporates the following plans:

- Final Landfill Monitoring and Maintenance Plan, Rocky Flats Environmental Technology Site, Original Landfill (DOE 2006a); and
- Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan (DOE 2006b).

RFLMA Attachment 2 stipulates that DOE employ administrative procedures to control activities in accordance with the institutional controls and to meet quality assurance and control program requirements. Other Site procedures are established to guide work and implement BMPs. These procedures are referenced in the RFSOG and include:

- *Operations and Maintenance Plan for Rocky Flats Surface Water Control Project* (DOE 2008d)—in production;
- *Operations and Maintenance Manual for the Rocky Flats Ground Water Plume Treatment Systems* (DOE 2007c);

- *Rocky Flats Site, Colorado, Site Revegetation Plan* (DOE 2005b);
- *Erosion Control Plan for the Rocky Flats Property Central Operable Unit* (DOE 2007b);
- *Rocky Flats, Colorado, Site Vegetation Management Plan* (DOE 2005c);
- *Ecological Monitoring Methods Handbook* (DOE 2008c); and
- *Annual Rocky Flats Site Ecological Field Sampling Plan* (DOE 2008b); and
- LM CERCLA Sites Quality Assurance Project Plan.

1.3 RFLMA Contact Records

This section provides a summary of the status of activities addressed by RFLMA contact records issued during 2007. RFLMA references the use of contact records to document CDPHE oral approvals of field modifications to implement approved response actions (see RFLMA paragraph 34). RFLMA Attachment 2 also references the use of contact records to document the outcome of consultation related to addressing any reportable conditions (see RFLMA Attachment 2, Section 6.0). Finally, the Rocky Flats Site Legacy Management Public Involvement Plan, RFLMA Appendix 2 (PIP), also provides that a contact record of consultative process discussions between the RFLMA Parties will be made available to the Rocky Flats Stewardship Council and other interested stakeholders as early in the process as is practicable following signature approval by the parties. The PIP process to make contact records available is implemented by posting contact records on the Rocky Flats public website, and providing timely notice to stakeholders that the contact record is posted by an e-mail message.

The RFLMA Parties agreed, as documented in RFLMA Contact Record 2007-08, that the status of actions or activities in RFLMA contact records will be documented by DOE from time to time, and included in RFLMA quarterly and/or annual surveillance and maintenance reports for tracking purposes. The RFLMA Parties also agreed that to facilitate the status reporting contact records should include a short discussion of the anticipated actions or activities to close out the RFLMA contact record. Thus, RFLMA Contact Record 2007-08 and subsequent contact records will include the closeout discussion.

Table 1-1 lists the RFLMA contact records issued in 2007 and their status as of December 31, 2007. Because the status of RFLMA contact records issued in 2006 has not previously been reported, these are also included in Table 1-1. Appendix H contains copies of the contact records.

Table 1-1. Status of RFLMA Contact Records Issued in 2007

Contact Record No.	Purpose	Date Posted on Rocky Flats LM Website	Status as of December 31, 2007
2006-01	Disposition December 2005–May 2006 monitoring results for manganese at the Present Landfill (PLF) Treatment System (PLFTS)	3/15/2007	Actions completed—closed
2006-02	Disposition December–July 2006 monitoring results for boron at the PLFTS	3/15/2007	Actions completed—closed
2006-03	Disposition February–July 2006 monitoring results for arsenic at the PLFTS	3/15/2007	Actions completed—closed
2007-01	Notification of adverse biological condition, March 27, 2007, Central Operable Unit boundary fence wildlife deaths	4/11/2007	Actions completed—closed
2007-02	Discussion and approval of exploratory excavations to greater than 3 feet below grade around the former Interceptor Trench Pump House	6/7/2007	Actions completed—closed
2007-03	Discussion and approval of excavation greater than 3 feet below grade in FC-1 soil borrow area and placement of soil south of former Building 371 to eliminate ponding around well heads	6/7/2007	Actions completed—closed
2007-04	Discussion and approval of soil disturbance for Phase III road improvement work involving the construction of roadside drainage ditches that will not return excavation to preexisting grade	8/17/2007	Actions completed—closed
2007-05	Grading of the slump area south of FC-4 and former B991	10/1/2007	Actions completed—closed
2007-06	Evaluation of elevated nitrate in groundwater samples from AOC well B206989	10/16/2007	Continuing monitoring and evaluation
2007-07	Replacement of monitoring well 45605 (B991 slump)	12/10/2007	Open
2007-08	Changes to PLF inspection and monitoring frequencies and modification of the PLF Monitoring and Maintenance Plan	12/26/07	Open