



# ROCKY FLATS

## ENVIRONMENTAL RESTORATION

### UPDATE



A PERIODIC UPDATE ON ROCKY FLATS CLEANUP • AUGUST 1992

## OU8 Draft Phase 1 RFI/RI Work Plan

In compliance with the Interagency Agreement (IAG), DOE/EG&G submitted the Draft Phase I RCRA Facility Investigation/Remedial Investigation (RFI/RI) Work Plan for Operable Unit No. 8 (OU8), 700 Area, to the Environmental Protection Agency (EPA) and the Colorado Department of Health (CDH) in May 1992. At the request of CDH, supplements to the Draft Work Plan were issued in June 1992.

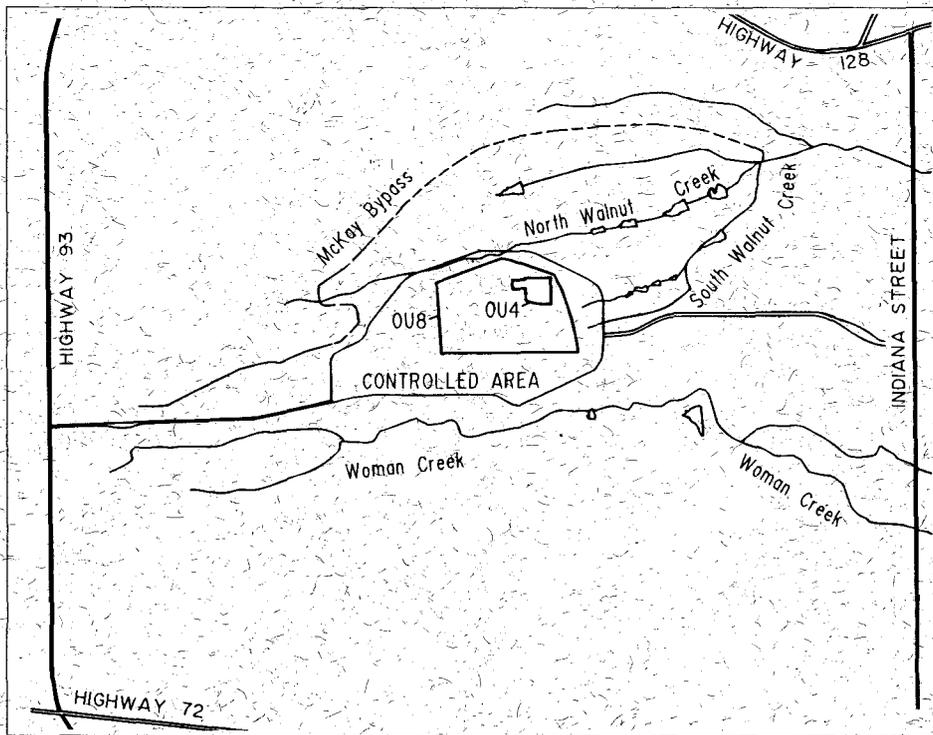
For each of the 24 individual hazardous substance sites (IHSSs) within OU8, the Phase I RFI/RI will confirm the presence or absence of contamination at the source; and the nature and extent of contamination in soil, sediments, surface water, ground water, and air. The Work Plan will also identify any additional investigative work that might be needed and will provide information for a Human Health Risk Assessment and an Environmental Evaluation.

OU8 is located on approximately 150 acres in the north-central industrialized area of the Rocky Flats Plant (RFP) (see map). All of OU8 is located within the high-security area of RFP.

Potential contamination sources within the various IHSSs include above-ground and underground tanks, underground pipelines, equipment decontamination areas, and releases that may have affected surface and subsurface soils and ground water around the buildings.

Sources of potential contaminants may have been introduced into the environment through spills on the ground surface, underground leakage and infiltration, explosion, and/or fire (smoke emission and water runoff).

The chemical composition of the contaminants varies widely among the IHSSs, ranging from low-level mixed wastes to nonradioactive organic and inorganic compounds.



Most IHSSs in OU8 overlie or are immediately adjacent to numerous other IHSSs and potential areas of concern, including OU4. The precise extent of contamination from a given OU8 IHSS may be difficult or impossible to determine until analysis and coordination with other studies conducted adjacent to OU8 are completed.

The Final Phase I RFI/RI Work Plan is scheduled for submittal to EPA and CDH in late September 1992.

## OU4 IM/IRA Document

With completion of the Operable Unit No. 4 (OU4), Solar Evaporation Ponds, Final Interim Measure/Interim Remedial Action (IM/IRA) Decision Document in April 1992, field remedial and corrective activities can begin.

The objectives of the OU4 IM/IRA and the field activities are to stop liquids (intercepted trench water) from entering Pond 207-B North, and to remove excess liquids from the other solar ponds (207-A and 207-B North, 207-B Center, and 207-B South) as quickly as possible. Approximately 4 million gallons of excess liquid need to be removed from the solar ponds before the remaining sludges can be removed, treated, and stored.

To accomplish these objectives, the IM/IRA will involve the use of three temporary surge tanks and associated piping to contain and transfer water collected by an interceptor trench system. Three portable flash evaporators and associated tanks will first treat excess liquids contained in the 207-A and 207-B solar ponds so that the Phase I RFI/RI for the solar ponds can proceed. After 207-A and 207-B are empty, the flash evaporators will treat the water collected in the surge tanks.

This IM/IRA is expected to occur through 1995. For more information on the OU4 IM/IRA, please see the September 1991 Environmental Restoration Update.

ADMIN RECORD

DOCUMENT CLASSIFICATION  
REVIEW WAIVER PER  
CLASSIFICATION OFFICE

## Land Disposal Restricted Wastes

**D**uring 40 years of manufacturing nuclear weapons components, RFP has generated radioactive and mixed waste that must be treated to reduce its toxic concentration before it can be placed in a landfill. Wastes such as these are categorized as land disposal restricted (LDR) under the Resource Conservation and Recovery Act (RCRA).

Because of the difficulties encountered when attempting to apply existing hazardous waste regulations to mixed wastes, which include both radioactive and hazardous constituents generated at DOE sites, two compliance agreements have been established between the regulatory agencies and DOE at RFP. They are described below.

### Federal Facility Compliance Agreement Land Disposal Restriction

The original Federal Facility Compliance Agreement (FFCA) requires DOE to comply with regulations for land disposal restricted (LDR) waste under the Colorado Hazardous and Solid Waste Amendment (HSWA) and other applicable state laws. Under the FFCA, DOE must develop and implement treatment for LDR waste. At its inception in 1989, the FFCA was a one-year agreement. On May 10, 1991, EPA and CDH signed a two-year agreement superseding the FFCA. Included in this agreement (FFCA II) was the requirement for a Comprehensive Treatment and Management Plan (CTMP) for LDR wastes generated by and stored at RFP.

### Comprehensive Treatment and Management Plan

The CTMP identifies goals for bringing waste into compliance with the FFCA II and includes waste characterization, treatment technology development, waste treatment, and final disposal. The CTMP includes the following tasks:

- Identify specific LDR wastes at RFP that are covered in FFCA II but were not identified in the FFCA
- State how management of those wastes will be brought into compliance
- Develop goals for complying with requirements for wastes that must be treated

Regulations require that restricted wastes be treated with the "best demonstrated available technology" or meet specific standards before they can be considered for disposal at a licensed hazardous waste landfill. Treating mixed waste to meet LDR regulations poses problems because most commercial hazardous waste treatment facilities are not equipped to handle radioactive waste. DOE is working with EPA to help resolve the land disposal issues related to mixed waste. DOE is also developing treatment standards, technologies, and facilities to satisfy the LDR requirements.

In addition to working on technical issues, DOE is implementing a public involvement plan with the following objectives:

- Meet federal and DOE requirements
- Inform the public about the CTMP
- Invite public participation in the decision-making process

Several vehicles will be used to provide continuing up-to-date information to the public: citizen review group, press releases, public comment period on the CTMP, information repositories, briefings, presentations, discussions, speakers' bureau, tours, and fact sheets.

For more information about waste management activities at RFP, please contact Carla Sanda, EG&G Community Relations, P.O. Box 464, T130F, Golden, CO 80402-0464, 303-966-2011. ■

## Modification No. 8

**D**OE is requesting a Class 3 modification to its current RCRA Part B permit for hazardous waste storage. Class 3 modifications are changes that substantially alter the facility or its operations. The modification must be approved by the Colorado Department of Health (CDH).

This permit modification, the eighth requested to date, would incorporate mixed residue units into the RCRA permit at RFP. A mixed residue contains both radioactive material and hazardous waste. The radioactive materials contain concentrations of plutonium or other radionuclides that are above DOE's Discard Limit or are otherwise candidates for recovery.

The proposed changes are needed to comply with the U.S. District Court Order in Sierra Club v. Department of Energy (No. 89-B-181, August 13, 1991) requiring that a RCRA permit be obtained for all mixed residue units at RFP by August 13, 1993.

The comment period for the request began July 6, 1992, and ends September 3, 1992. A public information meeting to discuss this permit modification request will be held on August 18, 1992 at the Ramada Inn, 8773 Yates Drive, Westminster, Colorado, from 6:00 p.m. to 10:00 p.m. Written comments will be accepted throughout the comment period.

Please address written comments to Noreen Matsuura, CDH, 4210 East 11th Avenue, Denver, Colorado 80220 or call 303-331-4920. Ms. Matsuura can also provide RFP's compliance history during the life of the permit. The RCRA permit modification request and supporting documents are available for review at the reading rooms listed on page 4. ■

## Reading Room Bibliography Available on Computer Bulletin Board

**P**eople who wish to browse through the bibliography of the Rocky Flats Public Reading Room collection can now do so if they have access to a personal computer with a modem. To access this database free of charge, call 303-232-8541 and type "anonymous" when the computer asks for a user name. From this point on, the computer will guide the inquirer through searches of the RFP Reading Room bibliography.

Access by modem has been provided by the Colorado Center for Environmental Management

(CCEM) and RFP. CCEM is a nonprofit consortium of industry, government, education, and citizens' groups whose objective is to improve Colorado's environment and stimulate economic opportunities. The computer bulletin board is part of a five-year, \$7 million project, the Technology/Regulatory Integration Project, funded by DOE.

People who do not have access to a computer with a modem can still search the RFP Reading Room bibliography in person at that facility, where a computer is set up for use by the public.

They can also call the staff at the RFP Reading Room (303-469-4435) to inquire about specific documents. Paper copies of the list of major technical documents are available at no charge.

For more information about CCEM, please call Brian Hardy or Pat Kluck, CCEM, at 303-237-7013; for information about the reading rooms, call Patty Lee, EG&G Community Relations, at 303-966-6159. The RFP Reading Room address and hours are shown on page 4. ■

# Update on OU2 – 903 Pad, Mound, and East Trenches

## History

The Phase I Remedial Investigation (RI) for Operable Unit No. 2 (OU2) began in March 1987. This investigation process includes soil, ground water, and surface water sampling and analysis; various types of subsurface soil surveys; and map preparation. The RI has revealed the presence of volatile organic compounds (VOCs), radionuclides, and metals contamination in OU2 soils, ground water, and surface water.

Contamination at OU2 is largely attributed to the storage in the 1950s and 1960s of waste drums that corroded over time, allowing hazardous and radioactive materials to leak into the surrounding soil. Additional contamination has resulted from wind dispersion of contaminated soil during the intervening years.

Early studies revealed sufficient amounts of surface water contamination in OU2 to warrant an interim remedial action so that contamination threats could be minimized while more comprehensive, long-term studies were conducted. Originally, contamination of surface waters from both South Walnut Creek and Woman Creek basins were to be addressed under the same interim measures/interim remedial action (IM/IRA) plan. These two areas were split into separate projects, in response to public comment. The IM/IRA plan for South Walnut Creek was finalized in May, but studies determined that surface water contamination in the Woman Creek basin posed an extremely low threat to public health and the environment, and did not warrant immediate initiation of an interim remedial action. Instead, DOE proposed an IM/IRA plan for subsurface contamination in OU2 to determine the feasibility of various treatment systems. This draft IM/IRA plan, released in March 1992, addresses contamination below the surface water, down to and including ground water.

The overall OU2 remedial investigation involves many activities, and several new documents have been finalized for OU2 in the last few months. These documents are listed in this article and are available at the reading rooms listed on page 4.

## Administrative Record

DOE has made available for public review the Administrative Record for OU2. The Administrative Record supports the decisions regarding remedial actions at OU2. Documents will be added to the record files as site work progresses.

## Phase II RFI/RI Alluvial Field Work Plan

The objectives of the Phase II RFI/RI Alluvial Field Work Plan are to identify and describe contamination sources, and to identify the quantities, types, and location of contamination in the ground water and surface water.

Preliminary results of the RFI/RI will be used to prepare an OU2 baseline risk assessment, plus a corrective measures study and feasibility study (CMS/FS). The baseline risk assessment will evaluate the potential threat to the public health and the environment in the absence of remedial action. It will provide the basis for determining whether remedial action is necessary in the area. The CMS/FS will screen and evaluate corrective actions that could be taken and how they might be implemented.

## Draft Subsurface IM/IRAP/EA Responsiveness Summary

DOE has released a Draft Responsiveness Summary for the OU2 Subsurface IM/IRA for Woman Creek basin. The proposed IM/IRA calls for removal of subsurface volatile organic compounds using vapor extraction followed by granular activated carbon filtration.

The Responsiveness Summary presents DOE's response to comments received at the public meeting, as well as those mailed to DOE during the original public comment period. The public comment period was originally scheduled to conclude on May 29, 1992. However, the end of the comment period was extended to July 9, 1992, and additional comments will be included in the Final Responsiveness Summary.

## Field Treatability Study on South Walnut Creek

The OU2 Phase I Field Treatability Study at South Walnut Creek basin presents an analysis of alternatives for collection and treatment of contaminated South Walnut Creek basin surface water. This analysis resulted in the selection of the following preferred IM/IRA alternatives:

- Collect contaminated surface water by diversion at three surface water monitoring stations located within the South Walnut Creek basin;
- Remove suspended solids, radionuclides, and metals from the collected surface water by chemical and physical treatment (precipitation, coagulation, and membrane filtration); and
- Remove volatile organic compounds from the surface water by treatment with granular activated carbon.

As more analytical data become available, the preliminary results and conclusions of the Phase I Program will be presented in the Phase II report.

Phase II field implementation was completed in April 1992 and will involve changes in operating conditions of the granular activated carbon treatment system. ■

## IAG Milestones Met or Revised

- **OU1** – EPA and CDH approved DOE's request to change the IAG milestone for submittal of the **Draft Phase III RFI/RI Report** from July 30 to October 28, 1992.
- **OU2** – The **South Walnut Creek IM/IRA Treatability Study Report** was delivered on June 2, 1992, meeting the IAG milestone.
- **OU2** – **Subsurface IM/IRA:** EPA and CDH approved extension of the milestone for the **Draft Responsiveness Summary** from June 16 to June 25, 1992. The document was delivered on the new date.
- **OU10** – The **Work Plan** delivery milestone was changed from July 1 to July 17, 1992, as approved by EPA and CDH.
- **OU13** – The **Draft Final Phase I RFI/RI Work Plan** was delivered to EPA and CDH on May 15, 1992, meeting the IAG milestone.
- **OU14** – The **Draft Phase I RFI/RI Work Plan** was delivered to EPA and CDH on June 26, 1992, meeting the IAG milestone.
- **OU15** – The **Work Plan** was submitted to the agencies on May 27, 1992, slightly ahead of the IAG deadline of June 1.

## Public Invited to Use Reading Rooms

The following reading rooms contain current information, technical reports, and reference documents on environmental restoration at the Rocky Flats Plant:

Rocky Flats Public Reading Room\*  
Front Range Community College Library  
3645 West 112th Avenue  
Level B, Center of Building  
Westminster, Colorado 80030  
303-469-4435

**Hours:** Monday – Tuesday 12:00 pm – 8:00 pm  
Wednesday 11:00 am – 4:00 pm  
Thursday – Friday 8:00 am – 4:00 pm

Rocky Flats Environmental Monitoring Council\*  
1536 Cole Boulevard, Suite 325  
Denver West Office Park, Building 4  
Golden, Colorado 80401  
303-232-1966

**Hours:** Monday – Friday 8:30 am – 5:00 pm

Colorado Department of Health\*  
Rocky Flats Program Unit  
4210 East 11th Avenue, Room 420  
Denver, Colorado 80220  
303-331-4855

**Hours:** Monday – Friday 8:00 am – 5:00 pm

EPA Superfund Records Center\*  
999 18th Street, Suite 500  
Denver, Colorado 80202-2405  
303-293-1807

**Hours:** Monday – Friday 8:00 am – 4:30 pm

United States Department of Energy  
Freedom of Information and Privacy Branch Office  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585  
202-586-6025

**Hours:** Monday – Friday 9:00 am – 4:00 pm  
(Eastern time zone)

\*Information Repository

## Calendar of Events

- **Rocky Flats Environmental Monitoring Council Meeting (Tentative):** 7:00 p.m., August 25 and September 29, 1992. Please call the Environmental Monitoring Council to verify meeting date and location at 303-232-1966.
- **General Rocky Flats Plant Tours:** August 10 and September 14, 1992. Please call 303-966-4261 one week in advance for reservations.
- **Public Information Meeting on RCRA Permit Modification Request No. 8:** August 18, 1992 (note date change) from 6:00 p.m. to 10:00 p.m. at the Westminster Ramada Inn (address on page 2).
- **Public Comment Period on RCRA Permit Modification Request No. 8:** July 6, 1992, through September 3, 1992 (see address for comments on page 2).

EG&G Rocky Flats, Inc.  
P.O. Box 464  
Golden, CO 80402-0464

## New Documents

- RCRA Permit Modification Request No. 8
- OU2 Administrative Record
- OU2 Phase II RFI/RI Alluvial Field Work Plan
- OU2 Draft Subsurface IM/IRAP/EA Responsiveness Summary
- Historical Release Report
- Field Treatability Study for Granular Activated Carbon Treatment System Phase I, South Walnut Creek Basin Surface Water IM/IRA for OU2
- Final IM/IRA Decision Document for the OU4 Solar Evaporation Ponds
- Environmental Restoration Program Monthly Report for May 1992
- Phase I RFI/RI Work Plan for OU3
- Rocky Flats Plant Environmental Monitoring Plan – 1991

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