



# ROCKY FLATS

## ENVIRONMENTAL RESTORATION UPDATE



A PERIODIC UPDATE ON ROCKY FLATS CLEANUP • SEPTEMBER 1992

### Report on Transition Submitted to Congress

#### Building-by-Building Cleanup

The transition process will involve all 436 buildings at the plant. However, because many of these buildings provided general support functions, they are not known to be contaminated and will probably require nothing further than administrative transfer and documentation of their condition.

Areas that may have been contaminated by previous activities in other buildings will be remediated as set forth in applicable environmental regulations. Transition activities include describing current conditions; cataloguing and removing equipment, materials, and wastes; consolidating plutonium and other nuclear materials; and cleanup to a point where the buildings can be put to other uses.

For each building, the process will generally range from 1 to 3 years, with the overall plant cleanup expected to last beyond the next decade. Cleanup activities must take into consideration the interdependence of RFP programs, such as the dual missions of disposing of special nuclear materials and maintaining production-contingency readiness. In addition, the plant must meet other requirements related to waste management, environmental restoration, safety, security, and the maintenance of numerous support services and facilities, such as roads, water supply, sewage treatment, and medical facilities.

#### Socio-Economic Issues

RFP currently employs about 8,300 people and generates an additional 19,000 jobs in the region through the purchase of goods and services both by the plant and its employees. RFP

#### Plans for the Workforce

In spite of DOE's efforts to retain RFP employees or place them in positions at other DOE sites, the plant's change in mission is likely to necessitate some layoffs. DOE is working with local

communities to minimize the effects of any such reductions. Possible measures to achieve this goal include the following:

- incentives for voluntary retirement;
- training for displaced and re-assigned employees;
- outplacement assistance;
- protection of health-care benefits; and
- health monitoring.

The end result of the transition will be decontamination, dismantlement of many RFP facilities, and, finally, removal from service. The next step would involve transfer for alternative uses, which may be used by private industries, other DOE operations, or other government agencies.

One issue not covered in the report to Congress is that of the potential liability on the part of future users or owners of land at Rocky Flats. This issue must be considered before any alternative uses are established.

A public information meeting on the RFP Transition Report to Congress was held on September 16 in Westminster. The report is available for public review in the Reading Rooms listed on page 6.

**O**n July 31, 1992, the Rocky Flats Plant (RFP) submitted a report to Congress that summarizes the proposed plans for the conversion of a majority of the plant from weapons production to other uses. Previously, in January 1992, President Bush had canceled production of the W88 warhead, and Admiral Watkins, Secretary of Energy, subsequently announced the transition of RFP and acceleration of the non-nuclear consolidation process.

According to the report, DOE will pursue resumption of plutonium operations in two buildings at the plant. These buildings will be used for maintaining a production contingency in the event of national defense needs until a replacement facility can be built elsewhere in the DOE complex. These buildings may also be used for decommissioning and waste processing.

The report summarizes RFP's future goals and presents a strategy for achieving them. It addresses several concerns, including the building-by-building cleanup, plans for the workforce, and socio-economic issues. The major points of these three concerns are listed in this article.

is also located in a populated area, with some two million potentially-impacted people living within 50 miles of the plant. In planning the plant's transition, the issue of job losses must be examined.

DOE's ultimate goal for the future of RFP is environmental restoration and economic development to minimize socio-economic impacts. The aim is to identify and develop opportunities for RFP staff to remain productively employed (not necessarily at RFP) and to make use of existing high-tech facilities for commercial or industrial development.

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# What's an OU? What's an IHSS? What's an RFI/RI?

## OU/IHSS

**C**leanup of the Rocky Flats Plant is broken down into two levels to simplify management of the process. The more detailed level of division is the **individual hazardous substance site** (IHSS - pronounced "eye-hiss"), formerly known as a Solid Waste Management Unit, or "schmo". An IHSS is a discrete location where possible contamination needs to be investigated, such as an above-ground or underground tank or pipeline. There are 178 IHSSs at RFP identified in the IAG.

The more general level of division is the **operable unit** (OU). An OU is made up of several IHSSs based on types of contamination, regulatory requirements, locations, the media that have been contaminated (soil or water, for example), the technologies that are likely to be used to clean up the contamination, or previous uses of the contaminated area. An example is the Original Process Waste Lines (OU9), which includes a 35,000-foot network of underground pipes and tanks. This OU is an example of OUs that do not have separate, tidy boundaries. (See companion article for a description of OU9.) There are 16 OUs at RFP.

Dividing the RFP cleanup into IHSSs and OUs makes the work to be done more manageable and assures that the most serious problems get attention first. The order of cleanup of the OUs has been ranked according to estimated potential risk to human health or the environment, and public concern. OU1 has highest priority,

OU16 the lowest (see table article on page 8). Remediation of one OU may begin before work on another has been completed. Sometimes, at one OU, one or more remedial activities at another OU. Later, a remedial action may also be started at any time if a short-term solution is considered necessary to protect human health or the environment. Interim actions must be compatible with the final remedy chosen.

## RFI/RI

The **RCRA Facility Investigation/Remedial Investigation (RFI/RI)** discussed in the following articles is part of a comprehensive, phased program of site characterization, remedial investigations, feasibility studies, and remedial/corrective actions supporting the goal of environmental restoration (ER).

The ER program is designed to investigate and clean up contaminated sites at RFP. This program is organized into the major activities shown below. The first activity, the initial assessment, has already been completed at the Rocky Flats Plant. The work plans mentioned in the articles on OU5, OU6, and OU9 are part of the remedial investigations program currently in progress.

- Initial Assessment includes preliminary assessments and site inspections to assess potential environmental concerns
- Remedial Investigations (referred to as RFI/RI at Rocky Flats, but functionally the same as an RI)

include planning and implementation of sampling programs to determine the nature and extent of contamination at specific sites; evaluate potential contaminant migration pathways; and perform baseline risk assessments.

Feasibility Studies evaluate remedial alternatives and remedial action plans to mitigate environmental problems identified as needing correction in the Remedial Investigation.

Proposed Plan (or Draft Permit Modifications) includes the proposed remedial alternative.

Record of Decision (or RCRA Permit) presents the final decision or remedial alternative.

Remedial Design and Remedial Action include design and implementation of site-specific remedial actions selected on the basis of the Feasibility Studies.

Compliance and Verification implement monitoring and performance assessments of remedial actions and then verify and document the adequacy of remedial actions carried out under the Remedial Design and Remedial Action.

The Interagency Agreement (IAG), signed by EPA, CDH, and DOE, outlines the schedule for completion of major activities and states which regulatory agency has the lead for overseeing cleanup at each OU. ■

## IAG Schedule Revision Possible

**A**lmost two years have passed since the Interagency Agreement (IAG) was signed among EPA, CDH, and DOE. The IAG establishes a procedural framework and schedule through which response actions are developed, implemented, and monitored in accordance with CERCLA, RCRA, and the Colorado Hazardous Waste Act. It clarifies the roles of EPA, CDH, and DOE; coordinates oversight efforts and corrective actions; standardizes requirements; and ensures

compliance with orders and permits. The IAG specifies delivery of major reports, project management activities, and milestones, and also outlines community involvement and decision-making responsibilities.

When the IAG was signed in January 1991, some basic assumptions and projections were made on timing and expense for remediating the 16 OUs at RFP. Based on progress to date and up-to-date data, DOE

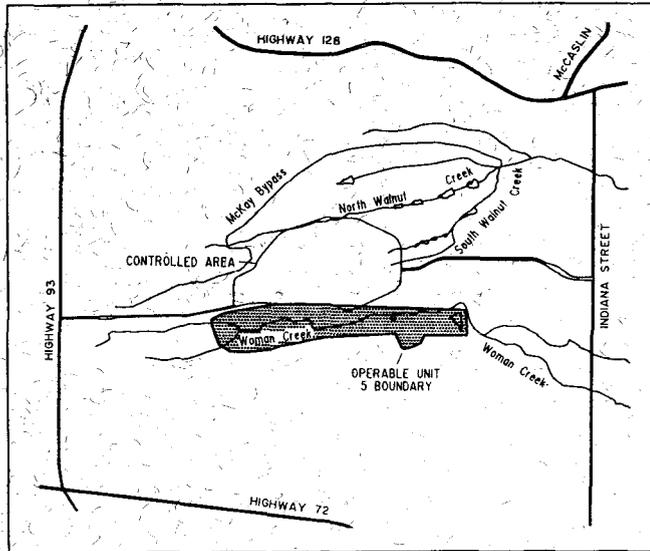
believes that a modified schedule for the IAG would reflect more current assumptions regarding the environmental restoration work yet to be undertaken at RFP. Consequently, DOE has asked EPA and CDH to consider changing the IAG schedule. After DOE has provided explanations for why it considers schedule changes necessary, EPA and CDH will evaluate the proposal. ■

# Field Sampling Activities Begun on Woman and Walnut Creek Areas

The Rocky Flats Plant recently began field surveying activities at the Woman Creek drainage area (OU5), and the Walnut Creek drainage

- the C-Series detention ponds; and
- several areas of surficial soil disturbance.

- Characterize the nature and extent of contamination at the sites, if present;
- Support a Phase I Baseline Risk Assessment and Environmental Evaluation.



area (OU6). These activities are part of the Phase I RCRA Facility Investigation and Remedial Investigation (RFI/RI) for each OU. Both OUs consist of potentially-contaminated surface water, stream and pond sediments, and soil. Radionuclides, metals, inorganic compounds, and organic compounds from adjacent IHSSs may have seeped into the Woman and/or Walnut Creek drainages.

OU5 (Woman Creek drainage) comprises ten IHSSs, including:

- the original landfill, an area previously used to dispose of general RFP waste;
- an incinerator used for RFP office and dumpster wastes;
- the ash pits that received incinerator residues;
- a former concrete wash pad where uncured concrete for RFP construction was deposited and where concrete delivery trucks were washed. (Incinerator ash may also have been deposited on the concrete wash pads);

- trenches that held excess sludge from the sewage treatment plant; and
- a soil dump used to contain excavated soil.

The majority of these OU5 and OU6 IHSSs are inactive and have not supported plant functions since approximately 1968. Only a few limited investigations have been conducted at these IHSSs.

Based on data from preliminary investigations, the following objectives for both the OU5 and OU6 Phase I RFI/RIs were identified:

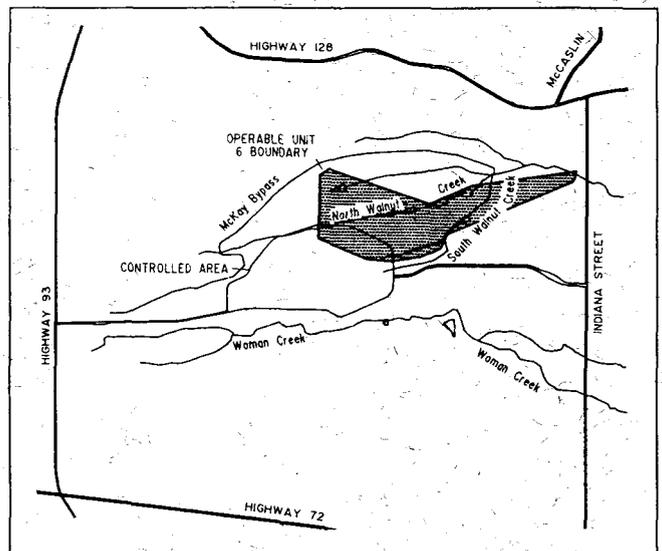
- Characterize the physical and hydrogeologic setting of the IHSSs;
- Assess the presence or absence of contamination at the sites;

OU6 (Walnut Creek drainage) comprises 21 IHSSs, including:

- the A- and B-Series detention ponds;
- spray fields, where water was sprayed to hasten its evaporation;
- an old outfall, where Building 771 laundry waste water and floor drain water was discharged into open surface drainage;

Within these broad objectives, site-specific data needs have been identified based on specific contaminants potentially present at each IHSS and the data needs for the Phase I Baseline Risk Assessment and Environmental Evaluation. The field sampling activities outlined in the RFI/RI Work Plans include surface water and sediment sampling, surface and subsurface soil sampling, alluvial ground water sampling, soil gas surveys, geophysical surveys, air monitoring, and radiation surveys.

The Draft Phase I RFI/RI Report for OU5 is scheduled for completion in November 1993 and the Draft Report for OU6 is scheduled for completion in August 1993. Both documents will be submitted to EPA and CDH. Details of field sampling activities are contained in the OU5 and OU6 Phase I RFI/RI Work Plans, which are available in the Reading Rooms listed on page 6. ■



## IG Milestones Met

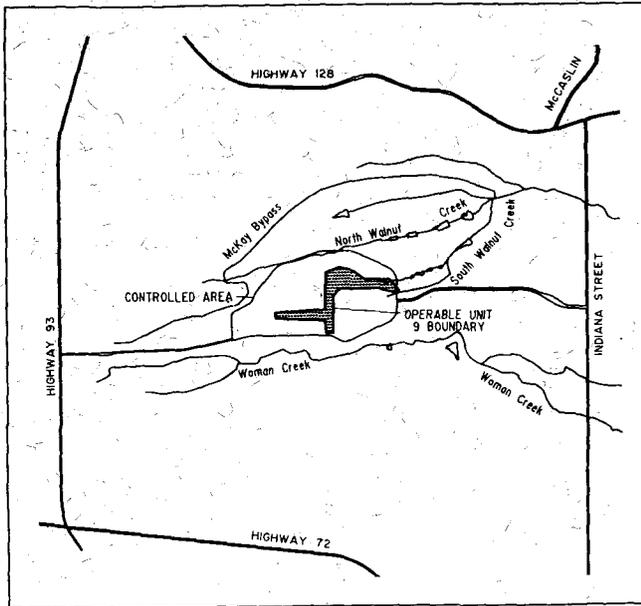
OU6 - The Final No Further Action Justification Document was delivered to EPA and CDH on July 30, 1992, meeting the IAG milestone. ■

## OU9 Original Process Waste Lines

**O**perable Unit 9 (OU9) consists of a 35,000-foot network of underground pipes and tanks extending throughout much of the RFP main production complex. This pipeline network, called the Original Process Waste Lines

(OPWL), was used to transfer wastes generated during operational processes from their origination point to the RFP process waste facility.

Only one IHSS was originally part of OU9, but further investigative studies at RFP prompted DOE, EPA, and CDH to agree in April 1992 to transfer 20 additional IHSSs that are part of the process waste line system from other OUs into OU9. This OU is being studied because it is believed that soils may have been affected by leaking waste transport pipes or tanks. Possible contaminants include nitrates, acids, caustics, and radionuclides.



A RCRA Facility Investigation/Remedial Investigation (RFI/RI) Phase I Work Plan, designed to investigate areas close to existing and already-removed OPWL pipelines and tanks, was also approved by CDH and EPA in April 1992. Field work will begin in late 1992 and will include soil borings and test pits to further identify sources and extent of soil contamination.

A subsequent Phase II RFI/RI will investigate the nature and extent of surface water, ground water, and air contamination, and evaluate potential contaminant migration.

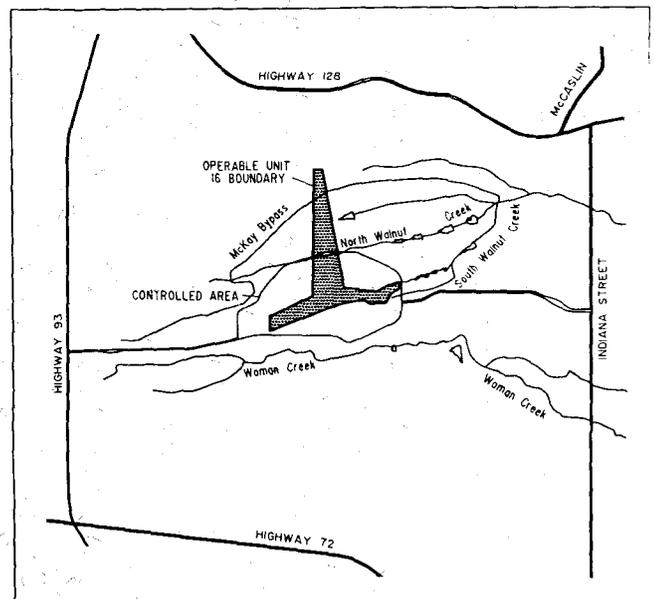
The original OPWL system began operating in 1952, and additions were made to the system through 1975. It was replaced over the 1975 - 1983 period by a process waste system that can be easily inspected. Some tanks and pipelines from the original system were incorporated into the new process waste system. ■

## OU16 Low-Priority Sites

**O**perable Unit 16 (OU16) covers miscellaneous leak and waste treatment areas located around RFP that are considered the least likely to cause health or environmental problems. OU16 contains seven IHSSs that were grouped together in the IAG because of the likelihood that previous response actions or natural environmental processes at these areas had already eliminated the need for further action. In accordance with EPA guidance, No Further Action is appropriate at sites where such processes have mitigated risk to human health and the environment. Because such actions have occurred at six of the OU16 IHSSs, DOE has proposed to take no further action at these sites. DOE submitted a "No Further Action Justification" document to EPA and CDH on July 30, 1992, as required by the IAG. However, because neither EPA nor CDH has approved the document, it is being revised and will be resubmitted on October 16, 1992. DOE concluded that five of the seven IHSSs in OU16 will not require further remediation. The remaining two IHSSs will require further action but will be investigated as parts of other OUs.

The No Further Action Justification document for OU16 describes the site history, geology, hydrogeology, climatology, and current and possible future land use to characterize OU16. Each IHSS, its spill history, potential contamination, and remedial action, if one was performed, is described. Also described is a site conceptual model for OU16 that includes contaminant sources, release mechanisms, transport pathways, exposure routes, and receptors. This type of model is used to evaluate the amount, if any, of risk to human health or the environment.

Once EPA and CDH have approved the No Further Action Justification document, DOE will encourage public



The document also includes a proposal for what IHSSs should be further investigated. (See above article, "What's an RFI/RI?")

input through the usual process including a public information meeting, public comment meeting, and public comment period. 1

## New Documents

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- OU9 Original Process Waste Lines Final Phase I RFI/RI Work Plan
- RCRA Permit Modification Request No. 9
- Phase I RFI/RI Work Plan for Operable Unit 9, Original Process Waste Lines
- Health and Safety Plan for RFI/RI at Operable Unit 3
- Environmental Restoration Program Monthly Report for June 1992
- Environmental Restoration Program Monthly Report for July 1992
- Rocky Flats Transition Plan Report to Congress
- State RCRA Permit Modification for Waste System Evaporator Project Phase I
- Supporting Information for the State RCRA Permit Modification for Waste System Evaporator Project Phase I
- EMD Administrative Procedure Manual
- Health and Safety OU1
- Work Plan OU1/Startup O&M of the IM/IRAP for the 881 Hillside
- Work Plan OU4, Volume I
- Final Subsurface Interim Measures/Interim Remedial Action Plan/Environmental Assessment and Decision Document for Operable Unit No. 2, Volume I and II
- Responsiveness Summary for the Final Subsurface Interim Measures/Interim Remedial Action Plan and Decision Document for the 903 Pad, Mound, and East Trenches Areas for Operable Unit No. 2

## Calendar of Events

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### Quarterly Environmental Restoration Public Information Meeting and Plant Tour:

October 8, 1992, 5:00 p.m. to 8:00 p.m. at the Rocky Flats Plant, Building 60.

### General Rocky Flats Plant Tours:

October 12 and November 9, 1992. Please call 303-966-4261 one week in advance for reservations.

### Colorado Council on Rocky Flats Meeting (Tentative):

October 27 and November 24, 1992, 7:00 p.m. Please call the Council to verify meeting date and location at 303-232-1966.

## DOE Requests Permit Modification No. 9

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

This permit modification would upgrade a portion of the existing liquid process waste treatment facility at the Rocky Flats Plant, Building 374. The proposed upgrade would consist of the addition of a thin-film evaporator and a salt immobilization system, including associated feed storage tanks. This equipment would concentrate and immobilize the low-level mixed waste. The new equipment would provide increased capacity and improved

capability for waste evaporation and immobilization.

A 60-day comment period for the permit modification request began August 25, 1992, and ends October 23, 1992. A public information meeting to discuss this Class 3 permit modification was held on October 1, 1992. Written comments will be accepted throughout the comment period.

Please address written comments to Gary Baughman, CDH, 4210 East 11th Avenue, Denver, Colorado 80220 or call 303-331-4847. Mr. Baughman 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 6. ■

## Rocky Flats Forms Citizen Review Group

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**D**OE and EG&G Rocky Flats have formed a Citizen Review Group (CRG) to initiate public involvement activities on the Comprehensive Treatment and Management Plan (CTMP). The CTMP is being developed to manage land disposal restricted (LDR) wastes generated over the past 40 years of operation and will help bring those wastes into compliance with today's regulations. The

CTMP identifies specific LDR wastes at the plant that are covered in the Federal Facilities Compliance Agreement II, states how these wastes will be brought into compliance, and develops the milestones for those wastes that require treatment.

Comprising of participants from academia, business, government, and surrounding communities, the CRG

meets regularly to review the CTMP and related technology development materials and will provide comments to DOE and EPA, who will then consider how to incorporate their suggestions. A 60-day public comment period will then be initiated, during which a public information meeting/workshop will be conducted to fully explain LDR wastes and the CTMP. ■

## 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 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 a.m. – 5:00 p.m.

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

**Hours:**  
Monday – Friday 8:00 a.m. – 4:30 p.m.

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 a.m. – 5:00 p.m.

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 p.m. – 8:00 p.m.  
Wednesday 11:00 a.m. – 4:00 p.m.  
Thursday – Friday 8:00 a.m. – 4:00 p.m.

Standley Lake Library  
8485 Kipling Street  
Arvada, Colorado 80005  
303-423-4600

**Hours:**  
Monday – Friday 10:00 a.m. – 9:00 p.m.  
Friday – Saturday 10:00 a.m. – 5:00 p.m.  
Sunday 12:00 p.m. – 5:00 p.m.

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 a.m. – 4:00 p.m.  
(Eastern time zone)

\*Information Repository

Published by EG&G Rocky Flats, Inc. Community Relations, P.O. Box 464, Golden, CO 80402-0464 for the U.S. Department of Energy, Contract No. DE-AC04-90DP62349. Telephone 303-966-5754 for general information or 303-966-6159 to have your name placed on the mailing list. The toll-free meeting information number is 800-446-7640. Printed on Recycled Paper.

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