

Environmental Management

A Periodic Update on Environmental Management at the Rocky Flats Plant



June/July 1993

EG&G ROCKY FLATS

SOLAR PONDS CLEANUP MAKES PROGRESS

Operable Unit 4 the Solar Ponds has escalated to one of the more important environmental restoration projects at the Rocky Flats Plant in the last year. An important part of the Operable Unit 4 restoration activity has focused on the removal of water and sludges from the five solar evaporation ponds. The pond water is currently being treated in Building 374 evaporator on a demand basis.

In 1991, a new evaporative system was purchased and placed in Building 910, an existing building south of the ponds. The evaporator system was originally planned to treat the water from the ponds and the Interceptor Trench System, but the Department of Energy will evaluate the need to treat pond water if the pond sludge is removed and stored in tanks on the 750 pad. If it is determined that there is no further need for pond water treatment, Building 910 will be used solely to treat Interceptor Trench System water.

In July, results confirmed successful testing was completed on the three evaporator units that will be

used to treat interceptor trench water collected from under and around the solar evaporation ponds.

Analysis provided by an off-site laboratory confirms the evaporation system is working properly and the treated water meets state quality standards, said Frazier Lockhart, the Department of Energy acting manager for the solar evaporation ponds project.

Water was analyzed for contaminants including nitrates, organics, and metals.

The water from the Interceptor Trench System is currently being stored in 500,000-gallon modular

tanks located on a hillside north of the ponds. After storage in these tanks, the water will be pumped to the evaporators in Building 910 where it will be evaporated to steam, collected and recondensed in a two-phase process.

In the first phase, water flows to a vapor compression unit where the vapor is picked up by a compressor and converted to a liquid product. Seventy-five percent of the evaporation process takes place in this phase. In the second phase, the water flows to a

multiple effect, multiple stage evaporator where a further concentration of the liquid takes place.

A natural gas fuel generator makes this evaporation process energy efficient because it uses not only the electrical power from the generator, but also the waste heat from the engine, Lockhart said.

The evaporators make it possible



to recycle and reuse the water on the plantsite. Once it is treated and determined to meet Colorado Department of Health commercial water standards, the water will be used in the plant heating and cooling towers.

When running at full capacity, the three evaporators can treat up to 54,000 gallons of water per day. Currently, there is only one other processing evaporator, the Building 374 evaporator, which until now has been used as needed to treat pond water from the solar ponds project.

1	2	3	4	5	6	7	8	10
Operable Unit 4	Technical	Approval Board	Agreement	Agreement	Agreement	707 Environmental	Cleanup	Plant Achievements

At an Operable Unit 4 Solar Ponds dispute resolution meeting the regulatory agencies made a significant new proposal. The meeting was to discuss the extension of the Phase I RCRA Facility Investigation/CERCLA Remedial Investigation (RFI/RI) Report



for which the Department of Energy had asked an 11 month extension. The Colorado Department of Health as the lead agency granted a four and a half month extension which the Department of Energy disputed, stating that several setbacks in the operable unit restoration effort necessitated the 11 month extension.

In an effort to resolve the dispute the Colorado Department of Health proposed that if the Department of Energy could significantly accelerate the Interim Measures/Interim Remedial Action (IM/IRA) pond closure schedule as currently described in the Interagency Agreement they would no longer require submittal of the Phase I RFI/RI

report. Data from the report would instead be incorporated into the Phase I IM/IRA.

Acceleration of the IM/IRA requires concurrent acceleration of the removal of the sludge from the ponds. The Department of Energy has agreed in principle to this new proposal and is now required to submit a schedule for accelerated pond closure and Phase I Interim Measures/Interim Remedial Action implementation. The Colorado Department of Health sent a letter to the Department of Energy on August 2, 1993 that established the process for dispute resolution. A deadline for resolving the dispute was set for September 21, 1993.



Since Rocky Flats Plant is located a few miles northwest of a heavily populated area there is considerable community interest in the property that surrounds the plant. Property owners as well as those who recreate in Arvada, Westminster, Broomfield and the newly developed Rock Creek area understandably have questions about the health risks posed by the Rocky Flats Plant.

The Environmental Protection Agency asked the Department of Energy to identify areas affected by the plant that might present concerns from a health perspective. An Area of Concern is an area where plutonium and americium surface soil concentrations might exceed levels that would be regarded as safe based on judgement of acceptable risk.

The area that was identified is partially within the Rocky Flats buffer zone but its eastern boundaries cross Indiana Street to follow the natural

land contour couched between Great Western Reservoir and Mower Reservoir.

A preliminary report (Identification of Operable Unit No. 3 Area of Concern Draft Report) was written to preliminarily define offsite lands that could pose a problem for people living or recreating there. Area of Concern boundaries are based on the Environmental Protection Agency's risk range of 1 in 1 million increase in lifetime cancer risk which is the most conservative guidance of acceptable risk from the Environmental Protection Agency.

For the purposes of this research and the subsequent report existing data on surface soils were studied for risk from plutonium and americium. A detailed study of other potential contaminants is also being conducted at Operable Unit 3 under direction of the Interagency Agreement. This study, the RCRA Facility

Investigation/Remedial Investigation involves collecting new data on surface soils, sediment, surface water, ground water and air.

One of the most important variables that researchers must consider when conducting such a study is the combination of pathways by which the contaminant reaches its subjects. Residential Exposure Scenarios are based on a family living in the area between 9 and 30 years, 365 days out of those years, eating leafy vegetables occasionally, ingesting a little soil once in awhile and breathing the air around their residence.

This conservative approach to the study accomplishes two objectives: it provides strict interim guidance until completion of the Operable Unit 3 RCRA Facility Investigation/Remedial Investigation Report due in early 1994 and also allows the risk

Continued on page 7

MIXED WASTE TECHNOLOGY DEVELOPED BY NATIONAL TEAM

Researchers from Rocky Flats are working with experts from industry, universities, federal agencies and national laboratories to develop a fluidized bed incineration process for the treatment of combustible mixed waste.

Coordinated by the EG&G Technology Development group at Rocky Flats, the collaboration includes the Colorado School of Mines in Golden, the National Institute of Standards and Technology in Boulder and Gaithersburg, MD, Department of Energy, Los Alamos and Lawrence Livermore national laboratories, the U.S. Environmental Protection Agency, West Virginia University in Morgantown, WV, the Energy and Environmental Research Corporation in Irvine, CA, Pall Inc. of Denver and the EPA Risk Reduction Engineering Laboratory in Cincinnati, Ohio.

A recent Department of Energy study showed that mixed waste is generated or stored at 50 sites in 22 states. More than 247,000 cubic feet of low-level mixed waste is being stored at Department of Energy facilities throughout the country, with Rocky Flats housing about 10 percent of all Department of Energy generated mixed waste. Significant amounts of low-level waste are expected to be generated in coming years from environmental restoration activities at such sites as Rocky Flats, the Nevada Test site and the Fernald Environmental Restoration project in Ohio.

The fluidized bed unit could treat low-level mixed wastes such as clothing, trash and plastics containing hazardous components and small amounts of radioactivity. Because the fluidized bed unit would operate at a low temperature (525 to 600 C), many

of the disadvantages associated with high temperature thermal treatment processes are eliminated. Complete destruction at these low temperatures is possible, which alleviates the need for a refractory. A refractory is a lining (usually ceramic) that insulates the metal walls of an incinerator. Because refractories are fragile and absorb radionuclides, they increase the potential for radiation exposure to maintenance personnel. Since the fluidized bed unit operates at low temperatures, refractories are not needed. Another advantage to the fluidized bed unit is that it operates at negative pressure, which assures no leaking would occur from the outside into the unit, and thus all wastes and exhaust gases are safely contained.

The fluidized bed is a two-stage process that treats wastes. In the fluidized bed, air flows upward from the bottom of the unit, suspending the solids in a continuous air stream. This constant suspension of the material ensures good mixing of the air, sorbent solids, liquids, and catalysts.

Hotspots, or regions of superheated material, are eliminated because of constant air movement.

In the first stage, the combustibles start to burn. Sodium carbonate absorbs and neutralizes acids that can form, particularly when treating plastics. In the second stage, excess oxygen completes the destruction of waste materials.

Off gas would pass into a bank of filters. First, two cyclone separators remove any large solids. Next, a sintered metal filter removes particulates. The off gas then passes through a High Efficiency Particulate Air (HEPA) filter. The gas would finally pass through a building exhaust system where it faces more HEPA

filters, each one 99.97 percent efficient. A real-time off-gas monitoring system would be designed as part of the technology.

The final product from the fluidized bed unit would be primarily radioactive ash. This material would be further processed by cementation, microwave melting, polymer solidification, or another technology to ensure its stability for storage until the waste can be disposed of in an off-site repository.

Current fluidized bed development activities are focusing on off-gas monitoring and treatment, and fluidization mechanics. The team of researchers mentioned at the beginning of this article are collaborating to conduct fluidization studies, develop off-gas monitoring techniques, interface with regulators on licensing issues, identify an off-site unit to conduct thermally hot tests with non-radioactive feed materials, and continue to assess the effectiveness of acid neutralization. A Flow Visualization Model at the Colorado School of Mines serves as a research tool and is used to demonstrate operations to community groups.

Incineration is considered the best treatment by the Environmental Protection Agency for many of the wastes being considered for the fluidized bed unit. Although no construction or siting decisions have been made, research at Rocky Flats continues to develop a safe, viable technology that may ultimately be used to manage wastes throughout the Department of Energy complex.

 EG&G ROCKY FLATS

CITIZENS' ADVISORY BOARD

Soon To Be

Up and Running

Rocky Flats has ceased manufacture of nuclear (as well as non nuclear) weapons components but it is not closing. The facility has decades of work ahead to clean up environmental contamination from forty years of weapons production and to treat, store and dispose of accumulated hazardous and radioactive wastes and materials. Most of the decisions about how to clean up contaminated areas and manage wastes have yet to be made. The Colorado Department of Health and the U.S. Environmental Protection Agency both regulate the restoration and waste management activities and they along with the Department of Energy want public input into these decisions.

In response to significant public interest, the Colorado Department of Health and the Environmental Protection Agency solicited application for membership on the Rocky Flats Citizens' Advisory Board. The Citizens' Advisory Board will provide advice to the agencies on upcoming technical and policy decisions related to the cleanup and waste management activities at Rocky Flats. Membership on the Board offers an opportunity to influence agency decisions before they are made. To enable them to give informed advice, Board members will receive cleanup reports, proposals and other information at the same time as the regulatory agencies.

The Rocky Flats Citizens' Advisory Board will consist of about 15 to 20 members from the general public. Representatives from the agencies which

are responsible for oversight or implementation of the cleanup and waste management activities at Rocky Flats will serve as ex officio members. The Board should reflect the full diversity of views in the affected community and region and be composed primarily of people who are affected by site cleanup activities.

Those selected to the Board will have the ability to focus on cleanup and waste management issues and a willingness to make a significant time commitment. Technical expertise was not a prerequisite to selection to the Board.

The term of membership on the Board and term limits will be determined by the Board itself, but applicants will be expected to serve between 2 to 6 years. The rules and principles governing the Citizens' Advisory Board tasks to be undertaken by the Board and specification of Board member responsibilities will be determined by the Board itself. The Colorado Department of Health will provide the Board with all organizational proposals received from citizens and other background information in advance of the first Board meeting.

A working group of interested citizens in consultation with representatives of Governor Roy Romer, Congressman David Skaggs and the agencies have prepared a Draft Mission Statement which is to guide the Board's activities and deliberations until the Board finalizes it.

Continued on page 5

FEEDBACK

Let us know what you think about this Update.

Write or mail your comments, questions or suggestions to:

EG&G (303) 999-6153

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Golden, CO 80601

JOE TEMPEL TALKS TO QUARTERLY ENVIRONMENTAL RESTORATION PUBLIC INFORMATION ATTENDEES

Joe Tempel of the Rocky Flats Cleanup Commission spoke about environmental cleanup at the last Quarterly Environmental Restoration Public Information meeting.

Tempel was a guest presenter at the meeting, joining the panel which included Department of Energy's Rich Schassburger and Colorado Department of Health's Joe Schieffelin and Steve Tarleton. Tempel was invited to speak so that interested community members could hear a different viewpoint about Rocky Flats cleanup activities.

Among other things, Tempel recommended that Rocky Flats develop three dimensional models that would portray geological information to give the public an overall picture of site wide geology and areas of contamination, thus emphasizing visual data rather than thick compendiums of data. Tempel also addressed meteorology, air quality and groundwater and surface water monitoring.

DRAFT MISSION STATEMENT

The Rocky Flats Citizens Advisory Board is an independent advisory board to the regulators (Environmental Protection Agency and Colorado Department of Health) and Department of Energy on key policy and technical issues and decisions related to cleanup and associated activities such as environmental restoration environmental monitoring waste management and associated technology development

*It may serve as a public forum providing information and advice on cleanup priorities strategies and accomplishments
It is charged with performing technical review of documents providing input into the planning efforts and strategies monitoring and tracking of milestones and priorities*

Grant mechanism funding and fiscal procedures will be developed to provide technical support administrative expenses of the Advisory Board (such as full time staff office space document duplication mailings telephone compute costs newsletter publication expenses costs associated with public meetings etc) and reimbursement of cost incurred by Advisory Board members

FORMATION OF THE ROCKY FLATS CITIZENS ADVISORY BOARD SCHEDULE AND SELECTION PROCESS

- July 7 Working group of citizens reviewed selection process and application packet
- July 14 Distribution of application packet to all mailing lists news releases to printed and A/V Media purchased ads prepared public service announcements
- August 13 Close of application period
- August 19 20 Selection Committee selected first 5 7 Board members who will in turn serve as the Selection Committee for the next 8 10 Board members (Selection criteria diversity of viewpoints)
- August 20 25 Telephone notification to first 5 7 Board members mail names of first 5 7 Board members to working group of citizens
- August 26 Meeting (time and location to be determined) of first 5 7 Board members Colorado Department of Health and Environmental Protection Agency to transmit all applications and initiate this phase of the selection process (Selection criteria diversity of viewpoint and balanced representation additional criteria the first 5 7 Board members choose to employ)
- August 27 First 5 7 Board members select the next 8 10 Board members and confirm their continued interest and availability
- September 13 Meeting (time and location to be determined) of first 5 7 Board member and the agencies Board members will announce Board membership and describe the balance of representation and diversity of views* prepare letters to full Board membership to be signed by the agencies prepare press release announcing full membership
- Sept mb 21 First meeting (time and location to be determined) of the Rocky Flats Citizens Advisory Board**

*Th ag ll b qu tl mm tt the full Boa d g d ng v p e d d f
l t t b l d p t t d d t y f i e w*

What's Ahead for the Interagency Agreement?

The Interagency Agreement was signed in 1991 by the U S Department of Energy the U S Environmental Protection Agency and the Colorado Department of Health to set the stage for Rocky Flats cleanup. The milestone for each operable unit deliverable are enforced by the lead agency on a cleanup project and although some of the milestones have been met the vast majority are behind schedule and in jeopardy of being missed due to inefficient budgeting and difficulty in working with assumption in the IAG.

To address this problem the parties to the Interagency Agreement

have had discussion about the problem related to the Interagency Agreement as well as changes in the plant mission which are leading the plant into transition and decontamination and decommissioning activities.

The Rocky Flats Quality Action Team was tasked to review the Interagency Agreement and list its use and problems with the agreement that Rocky Flats is facing.

The Department of Energy in a July 26 letter to the Environmental Protection Agency and the Colorado Department of Health stated: "Regardless of the approach the

Department of Energy intends to work closely with the regulators to find mutually satisfactory solution to existing Interagency Agreement issues to expedite the cleanup effort at Rocky Flats.

In the letter the Department of Energy asked that the regulators consider renegotiating the Interagency Agreement addressing issues identified by the Quality Action Team. If the regulators agree the Department of Energy is asking for significant agreement among the parties on a new Interagency Agreement by September 30 1993.

BUDGETS and PRIORITIES

The federal budget process that drives funding at sites like Rocky Flats is a complex animal a multi year program that uses assumptions to plan the future. These assumptions are based on evolving conditions at Rocky Flats from transition to regulatory requirements as well as work scope. Under the new administration a strong emphasis is placed on reducing the federal deficit and shifting priorities to support the transition from defense programs to environmental cleanup. This new emphasis means that several activities within the Department of Energy must be integrated and that the public and the regulators must be involved often and early in the process. With closer and earlier public and regulator involvement resolution of problems and finalization of projects should be accelerated. The federal budget cycle is reorganized and planned into four phases. The

Execution Phase is what is happening in the current year. During this phase modifications to the budget are made based on legislative actions. Revisions are made through Congress. Project scope changes are made and then the program is implemented.

The second and third phases are called the Legislative Phase and the Planning Phases. These stages include the current year plus the next two years in this case Fiscal Year 1993, 1994, and 1995. The planning for these phases actually began in February 1992 which might give you an idea of how far in advance the budget planning takes place. In 1992 budgeters began working on program scope, schedule and established a cost baseline. This was submitted to the Department of Energy Headquarters in May of 1992 for their comment. The Department of Energy's initial comments are incorporated and budget fine tuning continues until November 1993 when the budget is submitted to the Office of Management and Budget for development of the President's Fiscal Year 1995 budget. All of this is used as a basis for the Five Year Plan which is the fourth phase of the federal budget cycle.

The basis used for planning the budget for the next five years is driven by many objectives. Some of these objectives include:

- Projected Department of Energy funding of an approximate 3 percent increase per year
- Current conditions
- Requirement level funding to prevent further degradation of Interagency Agreement schedules
- Schedules based on original Interagency Agreement assumptions
- Added internal Department of Energy requirements

- Updated cost/schedule for Remedial Investigation/ Feasibility Study activities
- Since the revised Rocky Flats mission is from production to environmental restoration, waste management and economic development, it became obvious both from a technical and economic sense that some prioritization of activities must take place. These priorities included:
 - Protecting the public and the environment
 - Eliminating potential for recontamination after cleanup
 - Coordinating activities in certain operable units (OUs 8, 9, 10, 12, 13, 14) for maximum efficiency
 - Fully funding operable units 1 through 7, 11, and 15
 - Additionally, Environmental Restoration efforts need strategic redirection to support:
 - Early and continuous cleanup
 - Integration of operable unit cleanup with transition and decontamination and decommission
 - Level or smooth funding
 - Level use of the labor force

Although this has been a simplistic approach to a complex budget process, it is hoped that you might have a better idea of what goes into preparing a budget for a federal facility. Several tables outlining the budget and prioritization process are available. For more information, please contact Melanie Zgabay at (303) 966-4001.

Building 707

ENVIRONMENTAL

ASSESSMENT

PERFORMED

Plutonium has been stored safely at Rocky Flats for the last twenty years largely in part to a process called thermal stabilization (discussed in detail in the December 1992 issue of the Update) The thermal stabilization took place in Building 707 until 1989 when all plutonium handling was halted Since that time the material has been stored in an inert dry atmosphere engineered with safety features such as heat detectors

To optimize the safe storage of plutonium at Rocky Flats the Department of Energy is proposing to resume thermal stabilization activities in Building 707

Significant public interest in the thermal stabilization process has been expressed through previous public information and involvement efforts Those efforts included public and media tours of Building 707 public information meetings and a public hearing on the Operation Readiness Review

In further response to the interest shown by the public the Department of Energy is preparing an Environmental Assessment for the proposed resumption of thermal stabilization activities The Environmental Assessment will analyze the proposed action reasonable alternatives and ensure compliance with the National Environmental Policy Act

Upon completion of the draft Environmental Assessment a display advertisement will announce its availability and establish the start of a comment period Copies of the draft and the final Environmental Assessment will be made available at the public reading rooms listed in this Update



Building 707 photo taken during the site visit

Operable Unit 3 Area of Concern Continued from page 2

manager flexibility in making land use decisions

However the draft Area of Concern Report does not only assess the most conservative scenarios but includes a range of scenarios The Environmental Protection Agency recognizes the need for professional judgement and offers guidance that the assessment should estimate a conservative exposure scenario that is within the range of possible exposures Thus the current practice in risk assessment is to develop and present several relevant alternative scenarios

for scrutiny

Preliminary results (using the most conservative methods of assessment) from the draft Area of Concern report for Operable Unit 3 indicate there may be no risk for the recreational user of land within Operable Unit 3 Further the residential scenario indicates that the risk may be confined to a small uninhabited area immediately adjacent to the Rocky Flats eastern boundary It is important to note that the Environmental Protection Agency still must review and approve the draft report for the Area of Concern

For more information about the Area of Concern Draft Report or Operable Unit 3 please call Melanie Zgabay at (303) 966-4001

Environmental Management

Published by EG&G Rocky Flats Inc
Community Relations
P O Box 464 Golden CO 80402-0464
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Rocky Flats Records...

Landmark Achievement in 881 Hillside Cleanup

Workers at Rocky Flats have successfully recorded a landmark achievement in a high priority environmental project treating the one millionth gallon of groundwater for removal of volatile organic compounds, radionuclides and metals at 881 Hillside.

The action is part of the ongoing interim remedial activities for Operable Unit 1 designated in the Interagency Agreement.

Once considered the highest priority cleanup site in the entire complex, the 881 Hillside became contaminated in the 1950s, 1960s and 1970s with solvent and radionuclides as a result of past waste management practices.

The nine ample final cleanup takes place at one of the highest priority sites at the Rocky Flats Plant. And the public can expect this process to continue in close coordination with state and federal regulators until it is determined that it is no longer needed. said Jim Hartman, the Department of Energy's assistant manager for transition and environmental restoration.

Cleanup activities at the Hillside began in 1991 when an underground drainage system was built to intercept and contain contaminated

groundwater. The water is cleaned during a two phase treatment which went on line in the spring of 1992.

In the first phase, organic compounds are removed from the water using ultraviolet light treatment. In this process, hydrogen peroxide is injected into the water to speed and facilitate decomposition of the organic material.

In the second phase, radionuclides and metals are removed by an ion exchange system. The system passes water through a series of resin beads. Each resin bead grabs and removes select ions.

Once treated, the water is pumped to one of three 150,000 gallon storage tanks where it is held until it is analyzed to determine water quality. If analysis shows that water quality

standards are met, the water is released. Since the treatment and testing process was initiated, water quality has always met state and federal standards prior to being released.

Once considered the highest priority cleanup site in the entire complex, the 881 Hillside was contaminated with solvents and radionuclides as a result of past waste management practices.





○ READER OPINION STUDY

Our goal is to bring you environmental restoration and waste management news in the most effective way possible. Your input helps us meet those goals. Please take a few minutes and fill out the following study and mail it to Melanie Zgabay EG&G Community Relations P O Box 0464 Golden CO 80402 0464

- 1 How often do you read the Environmental Restoration Update?
 - Always
 - Occasionally
 - Seldom
 - Never
- 2 What is your overall opinion of the newsletter?
 - Very useful
 - Useful
 - Not useful
- 3 How would you rate the information provided in the newsletter?
 - Very helpful
 - Helpful
 - Not helpful
- 4 How would you rate the readability of the newsletter?
 - Easily understandable
 - Somewhat easy to understand
 - Difficult to understand
 - Too technical
- 5 What is a good length for the newsletter?
 - 4 pages
 - 8 pages
 - 12 pages
 - 16 pages
 - More than 16 pages
- 6 Public Involvement with Department of Energy Programs
- 6 Technology Development
- 6 Other (please specify)
- 7 Which of the following subjects would you like to see discussed in the newsletter?
 - Decontamination & decommissioning
 - Role of the Agencies
 - Superfund Cleanup Process
 - Waste Area Groups and Operable Units
 - Remedial Design/Remedial Action Activities
 - Waste Types
 - Waste Sources
 - Waste Storage and Characterization
 - Waste Disposal
 - Waste Minimization/Pollution Prevention
 - Site Wide Information
- 8 Would you like to continue receiving the Environmental Restoration Newsletter?
 - Yes
 - No (please indicate name and address to be deleted)

- 9 What ideas do you have that would improve the effectiveness of the newsletter?

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 Plant 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

Colorado Council on Rocky Flats
1536 Cole Boulevard Suite 325
Denver West Office Park Building 4
Golden Colorado 80401
(303) 232 1966

Hour

Monday Friday 8 30 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

**Colorado Department of Health
Hazardous Materials and Waste
Management Division**
4300 Cherry Creek Drive South
Bldg B 2nd Floor
Denver Colorado 80222 1530
(303) 692 3312
Hours
Monday Friday 8 00 am 5 00 pm

Standlee Lake Library
8485 Kipling Street
Arvada Colorado 80005
(303) 423 4600
Hours
Monday Friday 10 00 am 9 00 pm
Friday Saturday 10 00 am 5 00 pm
Sunday 12 00 pm 5 00 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

SIGNIFICANT ENVIRONMENTAL RESTORATION Activities and Achievements

The Department of Energy has requested monthly update meetings with the regulator to keep lines of communication open on all issues linked to primary operable units progress

The regulators were asked to examine the newly constructed wetlands on the 881 Hillside and they were pleased with the work accomplished. The wetland area was completed at the end of May 1993. Only ongoing monitoring activities remain.

Work on the Feasibility Study in Operable Unit 1 881 Hillside was started with a re-evaluation of the list of remediation alternatives. The majority of the Feasibility Study work cannot be resumed until the revision of the

risk assessment has progressed enough to determine the final contaminants of concern. The Operable Unit 2 Draft Soil Vapor Extraction Pilot Test Plan for Site #2 was received by the regulatory agencies and the Department of Energy on June 24 1993. This was an Interagency Agreement milestone. In Operable Unit 2 903 Pad Mound and East Trenches Area the first phase of the bedrock program field work is complete. The Department of Energy reviewed the Operable Unit 2 Surface Water IM/IRA Phase II Draft Treatability Report during June 1993. The July 13 delivery date to the regulatory agencies was met.

Testing of the Operable Unit 4 Solar Ponds Building 910 evaporators identified many leaks especially during thermal cycling and in metal to plastic fittings. The leaks were repaired and the acceptance phase qualification test was completed June 24 1993 thus meeting the milestone date of June 28 1993. At the request of Congressman D Skaggs the Department of Energy and EG&G presented a review of the Environmental Restoration Program. A long term strategy including acceleration of Rocky Flats cleanup was discussed.

NEAR-TERM INTERAGENCY AGREEMENT MILESTONES

<u>OU</u>	<u>Milestone Description</u>	<u>Due to EPA/CDH</u>	<u>Status</u>
2	Draft Phase II RFI/RI Report	March 12 1993	Delinquent
2	Draft Treatability Test Report	Ext to July 13 1993	Complete
4	Draft Phase I RFI/RI Report	May 21 1993	Ext to Sept 14 1993
2	Subsurface Test Plan Site #2	June 24 1993	Complete
2	Final Treatability Test Report	July 13 1993	Ext to Sept 8 1993
3	Draft Phase I RFI/RI Report	July 16 1993	Ext Request submitted
6	Draft Phase I RFI/RI Report	August 4 1993	*
2	Final Phase I RFI/RI Report	August 9 1993	*
7	Draft Phase I RFI/RI Report	Oct 12 1993	*
4	Final Phase I RFI/RI Report	Oct 18 1993	Ext to Feb 14 1994
2	Draft CMS/FS Report	Nov 4 1993	*
1	Final Phase III RFI/RI Report	Jan 4 1993	Ext to Nov 15 1993
5	Draft Phase I RFI/RI Report	Nov 30 1993	*
3	Final Phase I RFI/RI Report	Dec 13 1993	Ext request submitted
1	Draft Proposed Plan	Sept 27 1993	Ext request being prepared
1	Final Proposed Plan	Jan 4 1994	*
6	Final Phase I RFI/RI Report	Jan 7 1994	*
1	Draft CMS/FS Report	Mar 3 1994	*
8	Draft Phase I RFI/RI Report	Feb 14 1994	*
7	Final Phase I RFI/RI Report	Mar 16 1994	*
9	Final Phase I RFI/RI Report	April 11 1994	*
4	Draft Phase I Proposed IM/IRA Decision Document	April 14 1994	*
12	Draft Phase I RFI/RI Report	April 20 1994	*
4	Draft Phase II Work Plan	April 22 1994	*
5	Final Phase I RFI/RI Report	May 3 1994	*
1	Draft Responsiveness Summary	May 6 1994	*
2	Final CMS/FS Report	May 10 1994	*
2	Draft Proposed Plan	May 10 1994	*
8	Final Phase I RFI/RI Report	July 12 1994	*
15	Draft Phase I RFI/RI Report	August 1 1994	On Schedule
1	Final CMS/FS Report	August 3 1994	*
1	Final Responsive Summary	August 3 1994	*
1	Draft CAD/ROD	August 3 1994	*
13	Draft Phase I RFI/RI Report	August 8 1994	*
2	Final Proposed Plan	August 9 1994	*
10	Draft Phase I RFI/RI Report	August 25 1994	*
9	Final Phase I RFI/RI Report	September 6 1994	*
4	Draft Phase I Proposed IM/IRA Decision Document	April 14 1994	*
7	Draft Phase II RFI/RI Work Plan	September 13 1994	*
12	Final Phase I RFI/RI Report	September 15 1994	*
4	Final Phase RFI/RI Report	September 19 1994	*
11	Draft Phase I RFI/RI Report	September 20 1994	*

Acronyms Defined

RFI/RI RCRA Facilities Investigation/CERCLA Remedial Investigation
 CMS/FS Corrective Measures Study/Feasibility Study
 IM/IRA Interim Measures/Interim Remedial Action
 CAD/ROD Corrective Action Decision/Record of Decision

* Behind original schedule extension required