



Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

JUN 30 1995

95-DOE-08494

Mr. Martin Hestmark
U. S. Environmental Protection Agency, Region VIII
ATTN: Rocky Flats Project Manager, 8HWM-RI
999 18th Street, Suite 500, 8WM-C
Denver, Colorado 80202-2405

Mr. Joe Schieffelin, Unit Leader
Hazardous Waste Facilities
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

RE: Elevation of Operable Unit 1 Dispute

Gentlemen:

In our letter to you of June 22, 1995, Department of Energy (DOE) initiated informal dispute resolution for Operable Unit 1 (OU 1). In our joint telephone conferences during this last week we have attempted to reach some resolution, without success. The DOE sees no reason to delay elevation of this dispute. This letter and enclosures, therefore, serve as DOE's portion of the joint statement by the Project Coordinators to the Dispute Resolution Committee pursuant to paragraph 93 of the Interagency Agreement (IAG).

It has always been DOE's position that the low risk levels and limited source of contamination at this site warrant No Action. Due to our conservative Regulatory atmosphere, DOE in our final Proposed Plan (PP), included monitoring to ease concerns about the future potential for the plume to mobilize. We have since offered compromises to include continued monitoring at the French drain with ARARs as the trigger level for further action. These compromises were not acceptable to the Colorado Department of Public Health and Environment (CDPHE). These compromises were offered in the spirit of conciliation, but are still not considered necessary to be protective, and are no longer offered by the DOE.

The EPA and CDPHE have consistently asserted that any No Action PP is unacceptable. DOE has submitted as Enclosure 1, the sequence of events leading up to the elevation of this dispute. Enclosure 2 is the correspondence between the agencies since submittal of the PP. DOE believes that the record shows that DOE has consistently supported No Action as the preferred alternative at OU 1.

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ADMIN RECORD
A-OU01-001363

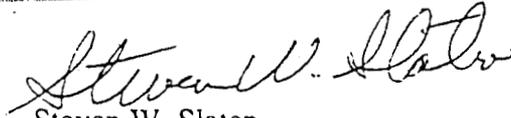
M. Hestmark & J. Schieffelin
95-DOE-08494

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JUN 20 1995

As the enclosures show, the OU-1 consultations have been ongoing for a long period without resolution. It is DOE's hope that by this elevated dispute resolution process, a reasonable outcome for this OU can be realized. If you have any questions you may call me at 966-4839.

Sincerely,



Steven W. Slaten
IAG Project Coordinator
Environmental Restoration

Enclosures

cc w/Enclosures:

J. Ahlquist, EM-452, HQ
C. Gesalman, EM-453, HQ
K. Klein, OOM, RFFO
S. Grace, ER, RFFO
C. Spreng, CDPHE
B. Fraser, EPA
E. Dillé, SAIC
W. Busby, EG&G
P. Laurin, EG&G
R. Roberts, EG&G

Previous OU 1 Meetings and Discussions

OU 1 - Phase III RFI/RI Report

Submitted Draft RFI/RI Report	10/28/92
EPA/CDH (CDPHE) Comments received	1/12/93 and 1/29/93
Meetings to discuss/resolve comments	2/8/93, 2/10/93, 2/17/93, 2/26/93 3/4/93, 3/10/93, 3/15/93, 3/18/93 3/26/93, 4/2/93, 4/8/93 7/13/93, 7/21/93, 10/22/93
Submitted Final RFI/RI Report	11/5/93
Walk-thru of Sections 1, 2 & 3	11/26/93
Walk-thru of Sections 4 & 5	12/3/93
Walk-thru of risk assessment	12/13/93 and 12/17/93
EPA/CDH (CDPHE) comments on "Final" received	1/20/94
Meeting to discuss comments	1/24/94
Additional EPA comments received	2/17/94
*At this point we believed we had consensus resolution.	
Revised Final RFI/RI Report submitted	6/15/94
EPA/CDPHE comments on Revised Final	10/28/94 and 9/21/94
Revised Final conditionally approved per comment resolution	

OU 1 Corrective Measures Study/Feasibility Study (CMS/FS) Report

Scoping meeting with EPA and CDPHE	1/6/94
Preliminary Remediation Goals (PRG) scoping	1/28/94
Groundwater issues and modeling discussion	2/1/94
PRG technical memo comment resolution	5/13/94
Groundwater model discussion	5/23/94
CDPHE "guidance" on modeling received	6/22/94
IHSS by IHSS modeling discussion	7/11/94, 7/22/94
Submitted Draft CMS/FS Report	8/25/94
EPA/CDPHE comments on CMS/FS received	10/7/94 and 11/1/94

Chronological List of Events since November, 1994. Operable Unit 1

November 3, 1994 - DOE requests extension due to late response and comments by CDPHE on Draft CMS/FS.

November 10, 1994 - DOE letter to CDPHE and EPA- Proposed Stop Work based on RI and FS issues. Go to 5 week dispute Resolution Committee.

November 22, 1994 - No extension letter in hand so DOE transmits Initial Draft Proposed Plan recommending Institutional Controls and No French Drain.

November 22, 1994 - CDPHE to DOE - 30 Day extension letter to resolve comments and improve the Consultative Process.

December 16, 1994 - CDPHE to DOE - Schedule extension based on DOE's willingness to address the Agencies' comments on CMS/FS and other issues.

January 20, 1995 - EPA to DOE - 15 day schedule extension to resolve Point of Compliance issues. EPA and CDPHE agree, depending on the selected remedy, that POC should be down gradient of the French Drain.

February 13, 1995 - Revised Final CMS/FS and Draft Proposed Plan transmitted to regulators. Proposed Plan modified to recommend Institutional Controls with French Drain.

April 11, 1995 - CDPHE to DOE - Comments on Final CMS/FS, and CDPHE's response to DOE's response to the original set of comments. No comments received on Proposed Plan.

April 11, 1995 - OU 1 Working Group Meeting - DNAPL presentation, discussion on POC, accelerated schedule, ARAR compliance. Data presented showed that contamination had not reached the French Drain. Based on this it was decided to no longer treat this water. It was decided that using the French Drain exclusively would not achieve ARARs. The recommendation in the Proposed Plan was eliminated given this data. A Technical Impracticability waiver would have to be invoked by EPA to make this action viable. Waivers could not be made by just using the French Drain. New Proposed Plan alternative was discussed with possibility of achieving TI waiver.

April 27, 1995 - OU-1 Working Group Meeting - Technical Impracticability Briefing, Legal Compliance Briefing to include POC issues. DOE must demonstrate Technically Impracticability to get ARARs waiver.

May 2, 1995 - EPA to DOE - Transmittal of Final CMS/FS and Proposed Plan comments.

May 3, 1995 - DOE/EPA/CDPHE coordinator meeting. Excavation options discussed. DOE pushed No Further Action. EPA says that DOE must do something to achieve cleanup since they are in violation of ARARs. Recommend SVE. Could get TI Waiver if DOE tries SVE.

May 4, 1995 - DOE/ERMSA Meeting - DOE looks at alternatives. Selects SVE as best alternative if they have to do something, based on having to meet ARARs.

May 8, 1995 - DOE proposes to CDPHE and EPA to potentially have Rocky Flats Environmental Institute perform a Treatability Study using the OU 2 SVE unit. Data from study would be used for either a TI waiver or achieve cleanup. Project originally scoped for 2 years and \$2M. Scope was later changed to 1 year at \$800K. DOE directed EG&G to prepare a Proposed Plan recommending this option.

May 12, 1995 - DOE faxes EPA and CDPHE Draft Copies of Revised Final Proposed Plan. Proposed Plan recommends "Groundwater Pumping and Soil Vapor Extraction".

May 15, 1995 - OU1 Working Group meets and marks up the revised Proposed Plan. EPA requested revised cost analysis. DOE requests an extension from May 18, 1995 to May 25, 1995, to revise the plan for final transmittal. All regulatory comments are addressed on the markup.

May 18, 1995 - DOE/EG&G/Dames and Moore/K-H meeting - The combined Staff discuss and study actual need to do something. Consensus was that no action was required due to the low risk levels involved. ARARs are not applicable for No Action alternatives based on OSWER directives. A decision to rewrite the Proposed Plan was made.

May 18, 1995 - DOE had not received the one week extension letter. D. George calls both EPA and CDPHE to inquire about the status of the extension letter. During the conversations with the regulatory agencies, he indicates that the revised Proposed Plan would be "No Action".

May 19, 1995 - DOE receives a Fax of the one week extension letter from EPA. The letter also provides for not treating the French Drain water and reduced well monitoring.

May 22, 1995 - DOE receives copies of the Final "No Action" Proposed Plan from Dames and Moore. Copies are Faxed to CDPHE and EPA.

May 25, 1995 - DOE transmits the Final "No Action" Proposed Plan to CDPHE and EPA. A response to comments is attached. Public comment period is proposed to begin on June 1, 1995, and finish on July 31, 1995. The public hearing is proposed to be held on June 21, 1995.

May 31, 1995 - Meeting with all three parties following QAT. DOE offers to have briefing to relay all technical information on OU1. EPA and CDPHE decline offer.

June 1, 1995 - DOE receives a request from EPA to provide the May 15, 1995 version of the Proposed Plan on disk to them. The EPA also requests the minutes from the meeting.

June 2, 1995 - EPA letter to DOE disapproving the Proposed Plan. The basis for the disapproval is that the other alternatives were not evaluated or discussed. Public comment period is delayed.

June 2, 1995 - Dames and Moore provides requested meeting minutes, marked up Proposed Plan, and diskette to EPA.

June 6, 1995 - DOE letter to CDPHE and EPA responding to comments. DOE offers to include EPA and CDPHE versions of the Proposed Plan under a single cover and to go to the public.

June 8, 1995 - CDPHE and EPA letter to DOE disapproving the Proposed Plan. Five criteria are listed which would need to be incorporated to achieve approval.

June 16, 1995 - DOE letter to CDPHE and EPA. DOE highlights that approval of the final Proposed Plan is not required. DOE proposes resolution on the 5 criteria stated in the June 8th letter, provided that action levels occur below French Drain..

June 20, 1995 - CDPHE letter to DOE in response to the June 16th DOE resolution letter. CDPHE rejects the DOE proposal on monitoring well locations and action levels.

June 21, 1995 - D. George faxes CDPHE and EPA conceptual monitoring plan for review. Presents 3 step plan, which ARARs as action points. Staff telephone discussions ensue.

June 22, 1995 - DOE letter to CDPHE and EPA initiating dispute. DOE to dispute the disapproval of the "No Action" Proposed Plan.

June 26, 1995 - CDPHE faxes DOE a revised monitoring plan. CDPHE still requires action at detection limits. Staff telephone conversations stall since the CDPHE maintains that action begins with detection limits. Some contaminants are already above detection limits at the French Drain, but are below ARARs. CDPHE requests cost estimates for various remedial actions. DOE agrees to provide the data.

June 30, 1995 - DOE to CDPHE and EPA providing cost estimate data. DOE proposes ARAR action levels at the French Drain sump, otherwise, will further dispute "No Action".

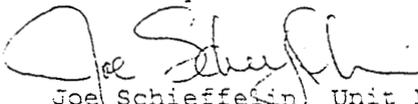
Items 3, 4, and 5 are necessary to complete a description of a remedy that is fully protective of human health and the environment.

~~DOE must either concur with these five stipulations or invoke the dispute resolution process in accordance with terms of the IAG. It is our belief that specific approval for release of a document to public comment must occur before public comment commences. If issues associated with the project and/or decision document remain at the point in the IAG process immediately preceding public comment, the parties should enter the dispute resolution process and allow this process to resolve the issues. At the conclusion of the dispute process, all parties will have a clear understanding of the path forward and a coherent credible product for public review. At this point it is worth noting that, though OU 1 is a joint-lead operable unit, DOE disputes will go through the CDPHE Dispute Resolution Process.~~

It is our belief that releasing the May 25, 1995 version of the proposed plan to public comment at this time by DOE would be a mistake, particularly because the document is specifically disapproved. Should DOE release the OU 1 PP now, the public trust will have been compromised, Paragraph 155 of the IAG will have been violated, and DOE will have publicly repudiated their commitment to the "consultative process."

If you have any questions regarding these matters, please call us.

Sincerely,



Joe Schieffelin, Unit Leader
Rocky Flats IAG Unit
Hazardous Waste Control Program



Martin Hestmark, Manager
Rocky Flats Project
Region VIII, EPA

cc: Martin Hestmark, EPA
Dan Miller, AGO
Tom Looby, CDPHE-OE
Jackie Berardini, CDPHE-OE
Steve Tarlton, CDPHE-OE
Joan Sowinski, CDPHE-HMWMD

STATE OF COLORADO

Roy Romer, Governor
Patti Shwayder, Acting Executive Director

R.F.C. - MAILROOM

Dedicated to protecting and improving the health and environment of the people of Colorado

'95 JUN 23 AM 11



HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION

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Denver, Colorado 80222-1530 Grand Junction, Colorado 81501-2768
Phone (303) 692-3300 Phone (303) 248-7164
Fax (303) 759-5355 Fax (303) 248-7198

Colorado Department
of Public Health
and Environment

June 20, 1995

Mr. Steven W. Slaten
U. S. Department of Energy
Rocky Flats Office, Bldg 116
P.O. Box 928
Golden, Colorado 80402-0928

RE: Proposed Plan for Operable Unit 1

Dear Mr. Slaten,

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (the Division), has received your letter of June 16, 1995, regarding the OU 1 Proposed Plan (95-DOE-08464). Your responses to our comments of June 8, 1995, are adequate with the exception of the monitoring well locations and action levels.

DOE has consistently stated it's contention that the IHSS 119.1 plume is not moving. We have stated that a protective remedy could be constructed around monitoring that demonstrates that the plume is not moving and includes some type of institutional control. To make this demonstration, however, monitoring wells and associated action levels must be placed at the plume boundary. If DOE has confidence in their determination that the plume is stationary, then the placement of monitoring wells immediately down-gradient of the plume should not be problematic. If DOE does not have confidence in a stationary plume, then perhaps a remedy built around monitoring is not the best solution. DOE cannot assume a stationary plume, but propose monitoring that allows for continued plume movement.

To determine if a remedial action is warranted under RCRA/CHWA, action levels for ground water are determined by the appropriate state ground water quality standards. There can be no doubt or argument that contamination levels in the ground water in the IHSS 119.1 vicinity exceed these action levels. Therefore, since action levels were exceeded, a Corrective Measures Study (CMS/FS in the IAG) was triggered. The CMS/FS for OU 1 evaluated many potential remedial options. Monitoring with institutional controls is one of several options evaluated that can be protective.

As you have acknowledged, a remedy that depends on monitoring a stationary plume must incorporate mitigating actions should the monitoring detect plume movement. From our perspective, contaminant levels within the monitoring wells that trigger a mitigating action should be appropriate contaminant analytical detection limits. This ensures protection of public health and the environment, avoids continuing degradation of ground water, and triggers mitigating actions early when there is a high likelihood of success.

The Division, as stewards of public health, the environment, and taxpayer dollars,

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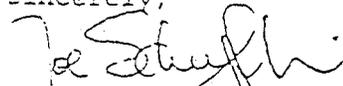
sees no negative cost impacts from locating monitoring wells at the plume boundary - the costs would be no higher at the plume boundary than at the location DOE describes in their letter. Additionally, we see many positive impacts of monitoring the plume boundary in terms of protection of human health and the environment and institutional controls could be confined to a smaller area.

At this point it is worth noting that the Division is continuing to evaluate other portions of OU 1 for remedial action. Much has been made of the IHSS 119.1 situation, but it is probably not the only IHSS within OU 1 for which some type of action will be needed. We are also continuing to evaluate remedial alternatives for OU 1, including IHSS 119.1, that achieve source removal rather than indefinite monitoring. We reserve our right, pursuant to Paragraph 156 of the IAG, to select an alternate corrective action that better protects human health and the environment.

As we stated in our June 8th letter, releasing the May 25, 1995 version of the OU 1 Proposed Plan to public comment prior to resolution of these issues compromises public trust, violates Paragraph 155 of the IAG, and publicly repudiates DOE's commitment to the "consultative process." It also potentially wastes further time and resources. In addition, normally the Division releases a consensus Proposed Plan simultaneously as a Draft Permit Modification (see Paragraph 155 of the IAG). Unless these issues are resolved, the Division will not release the document as a Draft Permit Modification. This has ramifications that DOE should consider.

In summary, we cannot support DOE's June 16, 1995 proposal for monitoring well locations down gradient of the french drain and DOE's selection of inappropriate action levels. The four remaining portions of the proposal (items 1, 2, 3, and 5 in the June 16th letter) are adequate as is the portion of the item in question that states that monitoring will be continued as long as necessary to protect human health and the environment. We strongly believe that the intent of the IAG was to release to public comment only those items that the IAG parties had reached consensus upon. If DOE releases the May 25, 1995 version of the OU 1 Proposed Plan to public comment, as is proposed in your June 16th letter, we will evaluate our options and take whatever action we believe to be necessary and appropriate. If you have any questions regarding these matters, please call me at 692-3356.

Sincerely,



Joe Schieffelin, Unit Leader
Rocky Flats IAG Unit
Hazardous Waste Control Program

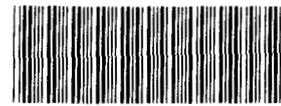
cc: Martin Hestmark, EPA
Dan Miller, AGO
Jackie Berardini, CDPHE-OE
Steve Tarlton, CDPHE-OE



Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

MAY 25 1995



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95-DOE-08426

20102

Mr. Martin Hestmark
U. S. Environmental Protection Agency, Region VIII
ATTN: Rocky Flats Project Manager, 8HWM-RI
999 18th Street, Suite 500, 8WM-C
Denver, Colorado 80202-2405

COPY

Mr. Joe Schieffelin, Unit Leader
Hazardous Waste Control Program
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Gentlemen:

Enclosed is the final version of the Operable Unit (OU) 1 Proposed Plan (Plan). You will note a change in the preferred remedy from that presented in the last draft Plan dated February 1995. Based on the events that have transpired on this project since our last joint review of the document on May 15, 1995, the focus of the Plan has changed considerably. Specifically, the Department of Energy (DOE) believes that proposing No Action in conjunction with continued monitoring points, is technically defensible, protective of human health and the environment, and represents the best use of the taxpayers money.

The change in the Plan is based on several reasons. First, we have an increased understanding of OU 1 as a result of a reexamination of the groundwater system data previously submitted and in light of additional more recent information. Second, groundwater results at the French Drain indicate the plume is not moving. This is confirmed by the monitoring of the water at the French Drain since 1992, encompassing the seasonal variations. All this information was not available for the Remedial Investigation Report. Third, DOE has determined that the only remaining valid land use scenario from the Baseline Risk Assessment is an Ecological Reserve. A deed restriction would be used if necessary at OU 1 to enforce a building limitation to ensure the designated land use scenario. No exposure pathways exist with the eco-reserve. Finally, use of Soil Vapor Extraction or attempts to dewater would be unsuccessful because of the limited mobility of the contaminants. As recently as May 18, 1995, we were completing this reevaluation. This examination of the cumulative evidence led to the conclusion that No Action is necessary to achieve protection of Human Health and the Environment. This is consistent with OSWER guidance (9355.3-02).



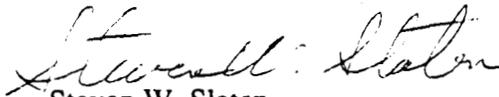
MAY 25 1995

In our personal discussion on May 23, 1995, I heard and understood your concerns about this change in direction at this stage in the process. It is unfortunate, and I apologize that these conclusions were not rendered earlier in the discussion process, however numerous discussions at the staff and other levels in an attempt to find the best solution have occurred over the past month. We now believe a proposal of No Action is appropriate based on the best available information. We believe that this is the appropriate time to reassess the direction of this project, and that to continue on the path of remediation, without reconsidering the available data would be a mistake.

I propose we delay the start of the Public Comment period until about June 1, 1995. This will allow about one week for us to discuss this matter, and to incorporate additional regulatory comments into the Plan. Applicable responses to the comments received from the EPA on May 2, 1995 have been incorporated in this document. In addition, comments received during the May 15, 1995 meeting have been incorporated where possible. It is our intention to incorporate comments when possible, to generate the best technically supportable document for public presentation.

With the level of concern by all parties and the importance of this project, I reiterate the verbal request I made to both of you on May 24, 1995, which is to meet and to discuss this issue as soon as possible. The DOE appreciates all of the effort expended by the OU 1 Working Group in an attempt to draw this project to a conclusion. Please direct any questions or comments to me at 966-4839.

Sincerely,



Steven W. Slaten
IAG Project Coordinator

Enclosure

cc: w/o Enclosure:
M. Silverman, OOM, RFFO
T. Howell, OCC, RFFO
J. Roberson, AMER, RFFO
J. Wienand, ER, RFFO
D. George, ER, RFFO
A. Primrose, EG&G
R. Rupert, EG&G
B. Card, K-H

cc: w/Enclosure
Admin. Record

**RESPONSE TO COMMENTS - PROPOSED PLAN
OPERABLE UNIT 1 - 881 HILLSIDE
ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE**

The following represents the response to the written comments on the Operable Unit 1 Proposed Plan, transmitted to the Department of Energy from the U.S. Environmental Protection Agency. Comments are based on the Proposed Plan submitted to the Agencies for review and comment on February 13, 1995. No written comments were received from the Colorado Department of Public Health and the Environment. Neither Regulatory Agency provided written comments on the version submitted on November 22, 1994. Additional applicable verbal comments are included in the document based on discussions held by the OU1 Working Group.

Responses to written comments are as follows:

EPA comment 1 - These comments have been incorporated into the revised document.

EPA comment 2 - This comment has been incorporated into the revised text of the document.

EPA comment 3 - This comment is not applicable to the revised proposed alternative, which is "No Action".

EPA comment 4 - This comment is not applicable to the revised proposed plan since other alternatives were not evaluated due to the "No Action " alternative. Since no other alternatives were required to be evaluated, the comparison chart was deleted.

In summary, there is no need to refer to the Corrective Measures Study/Feasibility Study nor revise the Proposed Plan based on the document since risk levels indicate that no action is required at Operable Unit 1.

PROPOSED PLAN

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

OPERABLE UNIT 1 - 881 HILLSIDE AREA

United States Department of Energy
(U.S. DOE)

May 1995
Golden, Colorado

DOE Announces No Action Decision For OU-1

The U.S. Department of Energy (DOE) has announced its preferred option to address OU-1 subsurface soil and groundwater at the Rocky Flats Environmental Technology Site (RFETS) Operable Unit 1 (OU-1) 881 Hillside Area. The RFETS is located in Jefferson County, Golden, Colorado, and is owned by DOE, the lead agency for the site. Note that OU-1 addresses only subsurface soil and groundwater contamination. Surface soil contamination is addressed under Operable Unit 2 (OU-2), while surface water and sediment contamination is addressed under Operable Unit 5 (OU-5).

No Action is proposed for OU-1 subsurface soil and groundwater based on the lack of a significant risk to human health or the environment. Guidelines under both the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) define a protective risk level as an excess latent cancer risk of one in a million (1×10^{-6}).

Because contamination in OU-1 subsurface soil and groundwater is not mobile, and because groundwater in the area will not be used for residential purposes based on the expected future land use of the RFETS site, there is no human health or environmental risk associated with OU-1. In addition, early installation of a *French Drain*¹, part of the OU-1 *Interim Measure/Interim Remedial Action* (IM/IRA) constructed in 1992 to capture contaminated groundwater, has substantially depressed the groundwater table beneath the hillside, thereby reducing the mobility of any residual contamination within OU-1. Similarly, the early removal action conducted for removal of plutonium contaminated surface soils in the area has substantially reduced the risk originally published in the OU-1 *Baseline Risk Assessment* (BRA).

All interested parties are encouraged to read and comment on this *Proposed Plan* (PP), and to submit their comments to the persons identified below.

Mark Your Calendar: Opportunities for Public Involvement

Public Comment Period:

June 1, 1995 to July 31, 1995

Public Meeting Location:

Denver Marriot West
1717 Denver West Boulevard
Golden, Colorado

Public Meeting Time and Date:

6:30pm - 9:00pm
June 21, 1995

Send Comments to:

DOE's External Affairs Office
P.O. Box 928
Golden, CO 80402-0928

Information Repositories:

Rocky Flats Public Reading Room
Front Range Community College
Level B
3645 West 112th Avenue
Westminster, CO 80030

Colorado Department of Public Health
and the Environment

Hazardous Materials and Waste
Management Division
4300 Cherry Creek Drive South
Denver, CO 80222

Colorado Council on Rocky Flats
1536 Cole Boulevard, Suite 150
Denver West Office Park, Bldg. 4
Golden, CO 80401

Standley Lake Library
8485 Kipling
Arvada, CO 80005

EPA Superfund Records Center
999 18th Street, Suite 500
Denver, CO 80202

¹Words shown in *bold italics* on the first mention are defined in the glossary at the end of this document.

This PP has been prepared by DOE in cooperation with the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and the Environment (CDPHE), pursuant to both RCRA through the Colorado Hazardous Waste Act (CHWA), and CERCLA. This PP meets the requirements of CERCLA section 117(a), and of the Rocky Flats Interagency Agreement (IAG), between DOE, EPA and CDPHE, dated January 1991.

No Action is DOE's recommended option for OU-1. However, DOE, EPA and CDPHE will make a final remedy selection decision after considering comments from the public. A summary of responses to all comments will be prepared and included in the *Responsiveness Summary* section of the *Corrective Action Decision/Record of Decision* (CAD/ROD). The CAD/ROD will be prepared and published by DOE following the public comment period.

PUBLIC INVOLVEMENT PROCESS

Community acceptance is one of the criteria that DOE and the regulatory agencies must evaluate during the process of selecting a final remedy. Evaluation of community acceptance can be accomplished through a formal public involvement program. DOE's program consists of 1) continuing dialogue with citizens on issues of concern such as the *RCRA Facility Investigation/Remedial Investigation* (RFI/RI), and 2) seeking citizen participation in the selection of a final remedy at the site. This latter component is why the PP is being issued for public review and comment. All supporting documentation is available in the *Administrative Record* which is maintained at the information repositories shown on Page 1. Public review of all documents is encouraged.

The public comment period for this plan will be from June 1 through July 31, 1995. A public hearing will be held on June 21. Comments on the PP may be submitted orally or in writing at the public hearing, or mailed directly to the addresses shown on Page 1. Mailed comments must be postmarked no later than July 31, 1995.

Upon timely request, the comment period may be extended. Such a request should be submitted in writing to DOE postmarked no later than July 7, 1995. FAILURE TO RAISE AN ISSUE OR PROVIDE INFORMATION DURING THE PUBLIC COMMENT PERIOD MAY PREVENT YOU FROM RAISING THAT ISSUE OR SUBMITTING SUCH INFORMATION IN AN APPEAL OF THE AGENCIES' FINAL DECISION.

SITE BACKGROUND

Originally the RFETS was named the Rocky Flats Plant (RFP), but in July 1994 the plant was renamed to better reflect its new mission of environmental restoration and the advancement of new and innovative technologies for waste management, characterization, and remediation.

The RFETS is a DOE-owned facility, located approximately 16 miles northwest of downtown Denver, Colorado. The RFETS occupies approximately 6,550 acres of federally-owned land in northern Jefferson County, Colorado (see Figure 1).

The majority of the RFETS plant buildings are located within a 400-acre area referred to as the RFETS industrial area. The 6,150 acres surrounding the plant buildings provide a buffer zone around the secure industrial area.

Until 1992, the RFETS fabricated nuclear weapon components from plutonium, uranium, beryllium, and stainless steel. Parts made at the plant were shipped elsewhere for assembly. Support activities included chemical recovery and purification of recyclable transuranic radionuclides and research and development in metallurgy, machining, nondestructive testing, coatings, remote engineering, chemistry, and physics.

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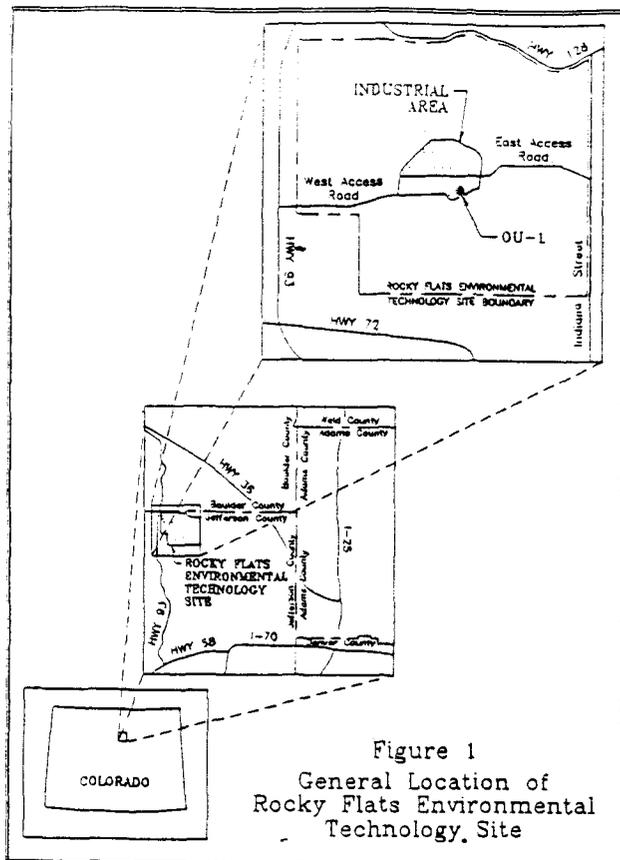


Figure 1
General Location of
Rocky Flats Environmental
Technology Site

The production process at the RFETS resulted in the generation of radioactive and non-radioactive wastes. On-site storage and disposal of these wastes has contributed to hazardous and radioactive contamination in soil, surface water, and groundwater. Due to the complex nature of the RFETS site, it has been divided into sixteen Operable Units (OUs). OU-1, the 881 Hillside Area, is the subject of this plan (see Figure 2).

The 881 Hillside Area is located just south and east of Building 881, where most of the contamination is thought to have originated. Building 881 was previously used for enriched uranium operations and stainless steel manufacturing. The laboratories in Building 881 were also used to perform analyses of materials generated during production of various components.

OU-1 includes 11 areas previously identified as *Individual Hazardous Substance Sites* (IHSSs), where past operational practices may have resulted in environmental contamination. Brief descriptions of the OU-1 IHSSs are presented below.

- **IHSS 102, Oil Sludge Pit Site.** Area located approximately 180 feet south of Building 881, where 30 to 50 drums of non-radioactive oily sludge were emptied in the late 1950s. The sludge was generated during the cleaning of two No. 6 fuel oil tanks, designated as IHSSs 105.1 and 105.2 (listed jointly

as IHSS 105 below). The area was backfilled when disposal operations ceased.

- **IHSS 103, Chemical Burial Site.** A circular pit located approximately 150 feet southeast of Building 881 was identified on 1963 aerial photographs. The area was reportedly used to bury unknown chemicals.
- **IHSS 104, Liquid Dumping Site.** A former (pre-1969) liquid waste disposal pond in the area east of Building 881. The exact location is uncertain due to the poor quality of 1965 aerial photographs.
- **IHSSs 105, Out-of-Service Fuel Oil Tank Sites (105.1 and 105.2).** Located immediately south of Building 881, these storage tanks were for No. 6 fuel oil. Suspected leaks occurred in 1972. The tanks were closed in place through filling with asbestos-containing material and cement.
- **IHSS 106, Outfall Site.** An overflow line from the sanitary sewer sump in Building 887 was used for discharge of untreated sanitary wastes in the 1950s and 1960s. Due to concerns about discharges from the outfall entering Woman Creek, several small retention ponds and an interceptor ditch were built in 1955 and 1979, respectively.
- **IHSS 107, Hillside Oil Leak Site.** Site of a 1972 fuel oil spill from the Building 881 foundation drain outfall. A concrete skimming pond was built below the foundation drain outfall to contain the oil flowing from the foundation drain, and an interceptor ditch was constructed to prevent oil-contaminated water from reaching Woman Creek.
- **IHSSs 119.1, 119.2, Multiple Solvent Spill Sites.** Former drum and scrap metal storage areas east of Building 881 along the southern perimeter road. The drums contained unknown quantities and types of solvents and wastes. The scrap metal may have been coated with residual oils and/or coolants.
- **IHSS 130, Radioactive Site - 800 Area #1.** Area east of Building 881 used between 1969 and 1972 to dispose of soil and asphalt contaminated with low levels of plutonium and uranium. IHSS 130 contains plutonium-contaminated soil and asphalt which came from contamination caused by a leaking drum in transit and soil removed from around the Building 774 process waste tanks in 1972.
- **IHSS 145, Sanitary Waste Line Leak.** A six-inch cast-iron sanitary sewer line that originated at the Building 887 lift station and that leaked on the hillside south of Building 881. The line had

conveyed sanitary wastes and low-level radioactive laundry effluent to the sanitary treatment plant from about 1969 to 1973.

Each of these IHSSs was originally identified as a potential source of groundwater contamination at OU-1. The Phase III RFI/RI, however, concluded that only IHSS 119.1 contains a significant source of contamination in the form of residual *dense non-aqueous phase liquids* (DNAPLs) assumed to be present in subsurface soil. Additional analysis has found that the contaminated area is self-contained and relatively small and immobile. Other IHSSs in OU-1 were not found to be source areas and do not contribute significantly to groundwater contamination.

Before OU-1 was fully characterized, a French Drain was constructed across a portion of the operable unit to protect Woman Creek while containing potentially contaminated groundwater suspected to be present in OU-1. The drain, along with an extraction well installed upon completion of the drain, collects groundwater flowing down the hillside and directly from IHSS 119.1. Collected groundwater is pumped to a UV/H₂O₂ and ion-exchange water treatment system located in Building 891.

Because current data indicates that no contaminated groundwater is currently reaching the French Drain, the existing collection system consisting of the drain and extraction well will not be operated upon implementation of *No Action*, although groundwater monitoring will be continued.

Note that one of the findings of the geotechnical investigation conducted in support of the French Drain installation, was that the hillside area was geotechnically unstable and that bedrock slumping was occurring at several points across the operable unit. This fact played a role in examining risks associated with land use at OU-1

SUMMARY OF SITE RISKS

As part of the Phase III RFI/RI conducted for OU-1, a BRA was prepared to identify any current or potential future risks to human health and the environment. The BRA evaluated health risks from surface water and sediments in Woman Creek, and surface soil, subsurface soil, and groundwater within the OU-1 boundaries.

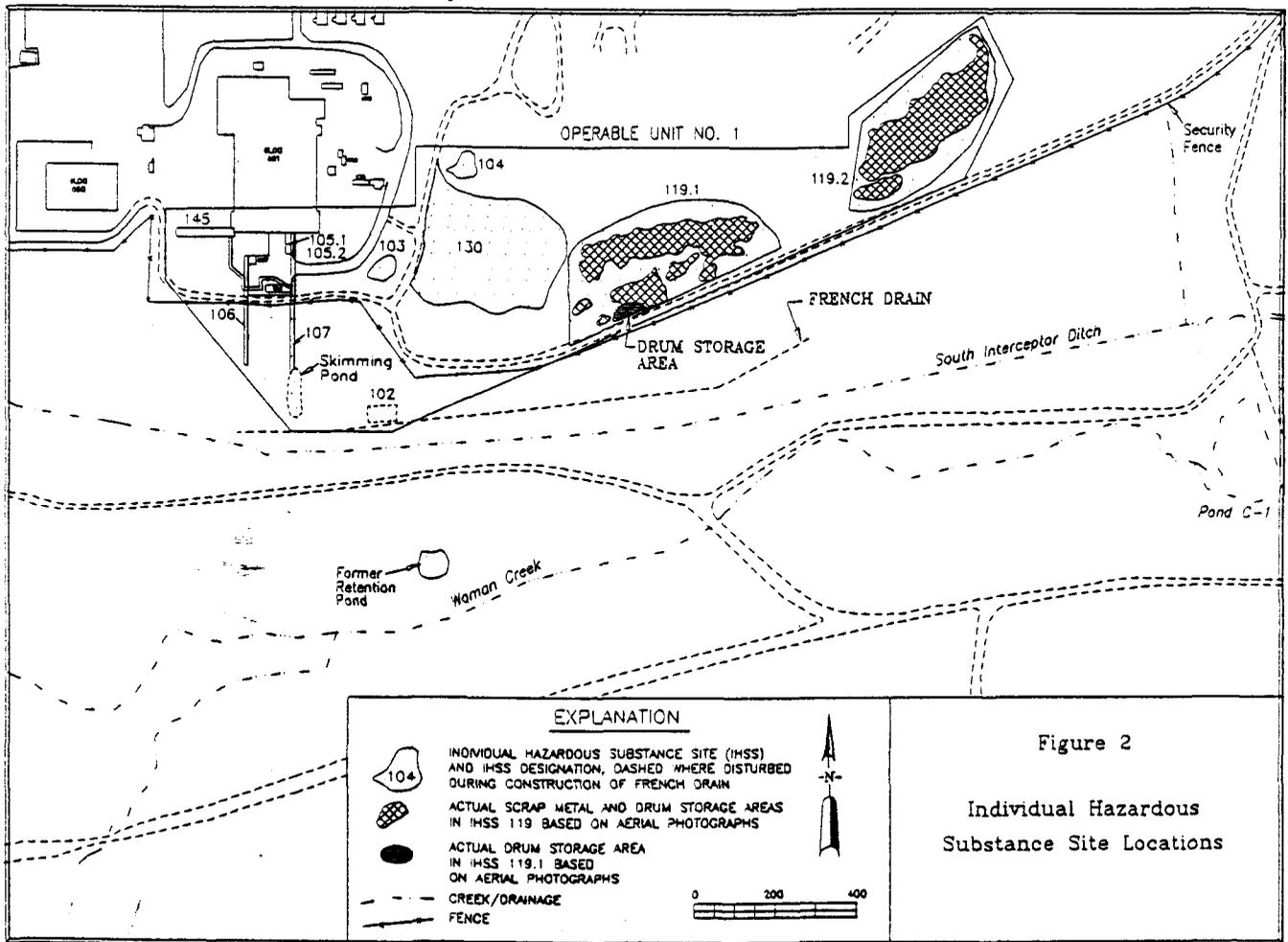


Figure 2
Individual Hazardous
Substance Site Locations

Surface water and sediments, however, are being addressed under OU-5, while surface soil contamination is being addressed jointly with surface soil contamination in OU-2. Therefore, only subsurface soil and groundwater are now considered in OU-1.

It is important to note, however, that the surface soil hotspot removal action conducted at OU-1 for plutonium contamination reduced the risk from this contaminant group and medium by approximately two orders of magnitude. This contaminant group contributed the highest risk to a human receptor in the OU-1 BRA, prior to its administrative transfer to OU-2. Outside of surface soils, the primary contaminants identified in the Phase III RFI/RI in subsurface soil and/or groundwater were:

- *carbon tetrachloride (CCl₄)*
- *1,1-dichloroethene (1,1-DCE)*
- *tetrachloroethene (PCE)*
- *1,1,1-trichloroethane (1,1,1-TCA)*
- *trichloroethene (TCE)*
- *selenium*

The BRA identified potential health risks from these contaminants associated with current and possible future exposure scenarios at OU-1. The scenarios originally examined in the OU-1 BRA are listed below. As previously discussed, not all of these scenarios are considered valid or currently possible.

- current on-site commercial/industrial
- current off-site residential
- future on-site commercial/industrial
- future on-site ecological reserve
- future on-site residential

Preliminary information provided by the Rocky Flats Future Site Use Work Group, consisting of participants from DOE, EPA, CDPHE, and major stakeholders, suggests that the future on-site residential land use scenario should not be considered, and that the commercial/industrial scenario is unlikely to occur in the area of OU-1. The commercial/industrial scenario is additionally unlikely at OU-1 due to the instability of the hillside as a building foundation. The added costs necessary to ensure a sound building foundation on the hillside would not be warranted when other building sites are available nearby. Deed restrictions would be used if necessary to enforce a building limitation.

Health risks associated with the ecological reserve and open space park scenarios are not impacted by OU-1 subsurface soil or groundwater. There are no exposure routes available under these scenarios for either medium, therefore there are no health risks calculated for OU-1 contaminants under these scenarios.

Environmental risks were likewise insignificant as identified in the Phase III RFI/RI and therefore environmental risks do not warrant further examination. Overall, the BRA, along with the information provided by the Future Site Use Work Group, and the physical location of OU-1, indicates that there are no significant risks to human health or the environment from OU-1 subsurface soil or groundwater contaminants, assuming no future on site residential development.

PREFERRED REMEDY

DOE recommends *No Action* at OU-1. However, this option includes continued monitoring of the site to determine if any changes occur to the mobility of contaminants, and to monitor the effectiveness of natural degradation processes. It is expected that the toxicity, mobility, and volume of OU-1 subsurface and groundwater contaminants will be reduced through natural processes such as *dispersion*, *biodegradation*, and *volatilization*. The French Drain will remain in place under this option, so in the unlikely event that conditions change at OU-1, the drain could be pumped and collected water treated through the existing water treatment system.

Up to six monitoring points will be used to monitor groundwater as a component of this proposed decision. Up to four new wells will be installed upgradient of the French Drain, and possibly two additional wells below the drain and upgradient of Woman Creek. Geological and geophysical support, such as photographic lineament analysis, and/or three-dimensional seismic surveys, could be used to assist in the placement of the wells. This would enable paleochannels and faulted zones to be clearly identified prior to well placement.

In addition to well samples, samples will be collected from the french drain sump. Samples will be collected semiannually and analyzed for organic and inorganic contaminants. Analysis of individual species of inorganic contaminants will also be performed, to identify individual metal species which have the potential to bioaccumulate. This additional analysis requirement will only be performed occasionally in the sampling program.

Costs associated with the *No Action* option range from \$370,000 to \$1,800,000 depending on the length of the monitoring period (three to thirty years is presented) required. This option includes implementation of a CERCLA five-year review to determine if site conditions have altered the basis for the *No Action* decision, if monitoring is no longer required, or if deed or zoning restrictions are appropriate to limit future building construction on the hillside.

GLOSSARY

Administrative Record. The record of documents including correspondence, public comments, technical reports, etc., upon which the agencies based their remedial action selection.

1,1-Dichloroethene (1,1-DCE). 1,1-DCE is used in the manufacture of 1,1,1-TCA and as a cleaning solvent and degreaser. It is usually in the form of a colorless liquid with a chloroform-like odor. 1,1-DCE is considered a highly volatile and is classified as a Class C carcinogen.

1,1,1-Trichloroethane (1,1,1-TCA). 1,1,1-TCA is used as an industrial solvent and in consumer products. It is considered a volatile organic compound and is classified as a Class D carcinogen.

Baseline Risk Assessment (BRA). An assessment of the risks to human health and the environment at a site. BRA methodology utilizes contaminant concentrations and potential exposure routes to quantify risks associated with present and future site conditions.

Biodegradation. The breakdown of contaminants to other chemical or physical forms by bacteria, fungi, and other microorganisms. Biodegradation can be applied in situ or ex situ and can be used under aerobic or anaerobic conditions.

Carbon Tetrachloride (CCl₄). CCl₄ is used as an industrial solvent which is most often used as a cleaning fluid. It is considered a volatile organic compound and is classified as a Class D carcinogen.

Corrective Action Decision/Record of Decision (CAD/ROD). A document that explains which cleanup option(s) are selected at a RCRA/CERCLA site. The CAD/ROD is based on information obtained from the RFI/RI, the CMS/FS, and community participation.

Proposed Plan (PP). A public document that first introduces the lead agency's preferred option for addressing a contaminated site. The PP is produced through the cooperation of the lead and regulatory agencies and is reviewed by the public.

Dense Non-Aqueous Phase Liquids (DNAPLs). DNAPL contamination can be in either free-phase (immiscible liquid) or residual form in the subsurface. Residual DNAPL is typically confined to soil pore spaces both above and below the water table. DNAPLs are more dense than water and therefore have a tendency to accumulate in low points.

Dispersion. The distribution of contamination within a larger volume resulting in lower concentrations throughout as the plume disperses and expands. Similar to dilution.

French Drain. An underground drain consisting of loose stones or gravel covered by soil which serves to collect groundwater in sumps, or divert the flow of groundwater in a particular direction.

Individual Hazardous Substance Site (IHSS). An area which has been identified as being potentially contaminated as a result of previous operations.

Interim Measure/Interim Remedial Action (IM/IRA). An early action taken to control a release or threatened release of hazardous substances. IM/IRAs are typically conducted prior to full characterization of a site as they are actions intended to limit future contamination.

RCRA Facility Investigation/ Remedial Investigation (RFI/RI). An RFI/RI involves collecting and analyzing information to determine the nature and extent of contamination that may be present at a site. This may include risk assessment and modeling activities.

Responsiveness Summary. The portion of the CAD/ROD that summarizes public and agency review comments and provides responses to these comments.

Selenium. Selenium is an inorganic (metal) nutrient whose toxicity is related to its chemical form. Selenium is classified as a Class D carcinogen. Selenium is naturally occurring at varying concentrations throughout the Rocky Flats Environmental Technology Site area.

Tetrachloroethene (PCE). PCE is an industrial solvent used widely in the dry cleaning and textile industries. It is also used as a degreaser and has a variety of commercial applications. PCE is considered a volatile organic compound and is classified as a Class D carcinogen.

Trichloroethene (TCE). TCE, like PCE is an industrial solvent that is considered a volatile organic compound. Toxicity data is not available for TCE, therefore it is typically not included in risk assessment calculations.

UV/H₂O₂. A treatment which combines exposure of contaminated water to ultraviolet light (UV) with the addition of hydrogen peroxide (H₂O₂). Both provide free radicals which catalyze the breakdown of contaminants to innocuous chemicals.

Volatilization. The process of changing from a liquid state to a gaseous state. This action can be accelerated through the addition of heat or through reducing ambient pressure conditions.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

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DENVER, COLORADO 80202-2466

8556

Ref: 8HWM-PF

JUN 2 1995

Mr. Steven Slaten
Department of Energy
Rocky Flats Office
P.O. Box 928
Golden, CO 80402-0928

Re: OU 1 Proposed Plan

Dear Mr. Slaten:

EPA has reviewed the Operable Unit (OU) 1 Proposed Plan (PP) that DOE submitted on May 25, 1995. As noted in your cover letter of that submittal, this version of the OU 1 PP is substantially different from the mutually agreed upon revisions that were developed in a meeting of EPA, DOE, and CDPHE on May 25, 1995. Therefore, EPA cannot approve this proposed plan and strongly recommends that it not be presented to the public as written. This document does not present any of the other five remedial action alternatives that were considered in the OU 1 Corrective Measures Study/Faasibility Study (CMS/FS), and is therefore incomplete and unacceptable. One of the purposes of a proposed plan is to provide the public with a brief description of the alternatives being considered, so that the public has a reasonable opportunity for comment and a voice in remedy selection.

Unfortunately, the meeting that had been proposed for earlier this week did not occur, but EPA agrees that it is vital that these matters be discussed face to face in hopes of reaching agreement so that this document can be revised to the satisfaction of all parties. As per our phone conversation today, EPA is planning to meet with DOE and CDEPE regarding this matter at Interlocken, Monday, June 5, at 10 AM.

If you have any comments or questions, please contact Gary Kleeman at 294-1071.

Sincerely,

Gary Kleeman
Martin Hestmark, Manager
Rocky Flats Project



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CORRES. CONTROL
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DAVIS, J.G.		
FENN, T.M.		
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FRAY, R.E.		
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GILMARTIN, J.T.		
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McCART, D.		
McDONALD, M.M.		
McGOVERN, L.J.		
McKENNA, F.G.		
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PIZZUTO, V.M.		
SATTERWHITE, D.G.		
SCHRADER, D.C.		
SCHUBERT, A.L.		
STIGER, S.G.	X	
STROBEL, G.L.		
TURNER, K.A.		
VOORHEIS, G.M.		
RUPERT M	X	

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Reviewed for Addressee
Corres. Control RFP

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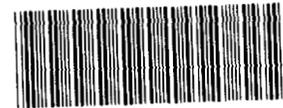
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DOE ORDER # 5400.1



Department of Energy

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GOLDEN, COLORADO 80402-0928



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JUN 22 1995

EG&G
ROCKY FLATS PLANT
CORRESPONDENCE CONTROL

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95-DOE-08473

Mr. Martin Hestmark
U. S. Environmental Protection Agency, Region VIII
ATTN: Rocky Flats Project Manager, 8HWM-RI
999 18th Street, Suite 500, 8WM-C
Denver, Colorado 80202-2405

Mr. Joe Schieffelin, Unit Leader
Hazardous Waste Control Program
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

Gentlemen:

The Department of Energy (DOE) is in receipt of your June 8, 1995 letter, jointly issued by the Colorado Department of Public and Environment (CDPHE) and the Environmental Protection Agency (EPA). In this letter, both agencies disapproved the DOE's Operable Unit 1 (OU1) Proposed Plan (PP) recommending "No Action." By letter dated June 16, 1995, we responded to comments offered by both the CDPHE and the EPA.

We are also in receipt of the June 20, 1995 letter issued by the CDPHE. The CDPHE letter approved all the comments we offered, except the locations of the monitoring wells and action levels. The parties have disagreed for several months over the location for the wells and action levels and there appears little chance of resolving this matter at the technical staff level. Moreover, it does not appear that constructive progress on closing out OU1 can be made until this impasse is resolved. Accordingly, the DOE, in accordance with Part 12 of the Interagency Agreement (IAG), is initiating dispute resolution for OU1.

The nature of this dispute is whether DOE's recommended action in the PP is appropriate. We believe the available risk data provides the basis for concluding that the contamination remaining in the ground at OU1 (e.g., IHSS 119.1) poses little current or future potential threat to human health or the environment. Additionally, DOE contends that the contaminated plume is in a protective state, since activating the French Drain would prevent contamination from migrating to Woman Creek.

The DOE, as a demonstration of our good faith and willingness to seek an amicable decision, has taken the extra step to propose groundwater monitoring and institutional controls at the Site with full acknowledgment that the use of institutional controls is a limited action that may require application of Applicable or Relevant and Appropriate Requirements (e.g., Colorado (state wide) groundwater standards). The DOE believes that any action in excess of groundwater monitoring and institutional controls is an interperate use of limited resources, especially given the protective state and the low risk levels at OU1.



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M. Hestmark & J. Schieffelin
95-DOE-08473

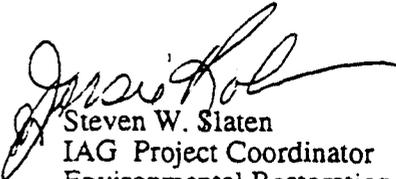
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We are invoking this dispute in good faith and are ready to discuss this issue at the Project Coordinator Level. However, since the Project Coordinators have been involved in the decision making process thus far, DOE is concerned that resolution may not be reached in a timely manner and immediate elevation of this issue is recommended.

If you have comments or have any specific questions, please call Dave George, the DOE OU1 Project Manager at 966-5669.

Sincerely,


Steven W. Slaten
IAG Project Coordinator
Environmental Restoration

cc:
M. Silverman, OOM, RFFO
K. Klein, OOM, RFFO
T. Howell, OCC, RFFO
J. Roberson, ER, RFFO
W. Fitch, ER, RFFO
J. Weinand, ER, RFFO
S. Tower, ER, RFFO
D. George, ER, RFFO
H. Belencan, EM-452, HQ
B. Card, K-H
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M. Rupert, EG&G
EG&G Admin. Record