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CORRES CONTROL  
OUTGOING LTR NO

# EG&G ROCKY FLATS

DOE ORDER# 4700,1

EG&G ROCKY FLATS, INC  
ROCKY FLATS PLANT P O BOX 464 GOLDEN COLORADO 80402 0464 (303) 966 7000

15 RF 02538

March 13, 1995

95-RF-02538

DIST	LTR	ENC
AMARAL M E		
BURLINGAME A H		
BUSBY W S		
BRANCH D B		
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HEALY T J		
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HUTCHINS N M		
JACKSON D T		
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MARX G E		
McDONALD M M		
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MONTROSE J K		
MORGAN R V		
POTTER G L		
PIZZUTO V M		
RISING T L		
SANDLIN N B		
SCHWARTZ J K		
SETLOCK G H		
STEWART D L		
STIGER S G		
TOBIN P M		
VOORHEIS G M		
WILSON J M		
<i>EC Mast</i>		✓
<i>RM Chapman</i>		✓
<i>O Erlich</i>		✓
<i>Paper</i>		✓
<i>Bicker</i>		✓

Kurt Muenchow  
Environmental Restoration Division  
DOE, RFFO

OPERABLE UNIT (OU) 5 WOMAN CREEK PRIORITY DRAINAGE, TREATABILITY STUDY - CAB-034-95

Action Approve recommendation and provide support for funding approval

### Purpose

This letter provides a recommendation to do a Solidification/Stabilization (S/S) treatability study of the incinerator ash located at OU5 IHSSs 133 1-4. This project is currently on the unfunded list for Environmental Management and requires approval by the Site Change Control Board (SCCB). Additionally, this letter is also intended to request your assistance in obtaining support from Jesse Roberson, Assistant Manager for Environmental Restoration, RFFO, for the funding of this treatability study.

### Background

On March 2, 1995, a Baseline Change Proposal (BCP-1013) for the OU5 Treatability Study was presented to the SCCB. The Board deferred their decision regarding this BCP until March 16, 1995. Ms. Roberson stated that she needed a more compelling reason for conducting additional treatability studies because numerous treatability studies have already been conducted at RFETS.

The presentation included a discussion of the scope of work, the justification, and the impacts to the program if the study is not funded. The scope of work is to do a S/S test of the soil/ash mix which is contaminated by radionuclides and metals. The study would examine the performance of cementation and polymer encapsulation technologies on samples that have already been collected. Each test will involve preparing a test plan, conducting the tests, completing the analytical work and preparing a report. This study is required to support the evaluation of treatment alternatives for the OU5 Incinerator ash/soil waste in the Detailed Analysis of Alternatives portion of the Feasibility Study (FS). Additionally, the EPA has requested that S/S treatability studies be completed. If the S/S is not completed, the Detailed Analysis of Alternatives for OU5 cannot completely examine the effectiveness of each alternative and would therefore affect the decision and selection process of the best alternative.

### Discussion

The following discussion provides a detailed justification for conducting the OU5 Treatability Study and the potential risks associated with not completing the study.

- 1 The current information regarding the risk assessment of the ash pits (IHSSs 133 1-4) suggests that Remedial Design/ Remedial Action (RD/RA) will be required. The phase of the FS that involves the selection of the best alternative for remedial action is the Detailed Analysis of Alternatives. This phase of the FS requires the above mentioned treatability study data to fully evaluate the effectiveness of remedial alternatives considered for closure of the ash pits. The Detailed Analysis of Alternatives for OU5 is scheduled to begin at the start of FY96.

CORRES CONTROL	X	X
ADMN RECORD/080		✓
TRAFFIC		
PATS/T130G		

CLASSIFICATION	
UCNI	✓
UNCLASSIFIED	✓
CONFIDENTIAL	
SECRET	

AUTHORIZED CLASSIFIER  
DOCUMENT CLASSIFICATION  
REVIEW WAIVER PER  
CLASSIFICATION OFFICE  
DATE

IN REPLY TO RFP CC NO  
N/A

ACTION ITEM STATUS  
 PARTIAL/OPEN N/A  
 CLOSED  
LTR APPROVALS

ORIG & TYPIST INITIALS  
CAB / CB

ADMIN RECCRD

- 2 A preliminary review of the alternatives to be selected for IHSSs 133 1-4 has been conducted and the key component, of the most likely alternatives to be selected, is S/S of the contaminated incinerator ash. Previous treatability studies at RFETS have not addressed the S/S for the conditions at OU5 IHSSs 133 1-4. Furthermore, other sources indicate that existing treatability study data do not exist for the S/S of the ash/soil mixture.
- 3 Existing S/S data for similar media are available but do not meet the requirements for the ash/soil mixture at IHSSs 133 1-4. There are cementation data available for soil and for ash, but not the mixture. It should be noted that compounds present in the material to be solidified (e.g., sulfates) may adversely impact the cementation process.
- 4 Polymer encapsulation data for ash material are not available. Existing data and information that are available could be extrapolated to the incinerator ash/soil mixture, but it would not provide the same high level of confidence in the final remedial alternative selection process.
- 5 The data that will be provided from this treatability study will reduce the risk associated with making final FS decisions that will be documented in the Record of Decision (ROD). A high level of confidence in the Detailed Analysis of Alternatives will provide the same level of confidence in determining the best alternative for remedial action.
- 6 The RD/RA phase would also be influenced by the decision to conduct this Treatability Study. For instance, if the best alternative selected involves S/S as a component for remedial action, then the treatability study must be completed before remedial action to ensure engineering feasibility. Information provided by the S/S treatability study would significantly reduce the likelihood of encountering problems such as those experienced with the solidification of the solar pond sludge (OU4).

In addition to OU5 Feasibility Study requirements, conducting this Treatability Study will satisfy the requirements of the Sitewide Treatability Study Plan. Reference the letter from EPA and CDPHE to DOE, RFFO, dated February 18, 1994, and letter from DOE, RFFO (ER SRG 02958) to EG&G RFETS, dated March 16, 1994. "every effort should be made to complete the sitewide treatability studies program including the following activities by November 12, 1994. Complete work plan for Solidification/Stabilization."

#### Summary

The data generated by the OU5 Treatability Study are critical to completing the OU5 FS and will assist the implementation of the selected remedial action. Specifically, the data are required to fully evaluate the effectiveness of remedial alternatives for the contaminated Incinerator ash, and for the selection of the most effective, the most feasible, and the least environmentally detrimental of the major alternatives. These data would reduce the uncertainty of remedial alternative selection decisions which will be made for the ROD where the appropriate option will be selected.

#### Recommendations

Conducting this Treatability Study is highly recommended because the resulting information will reduce the potential risks of the decision analysis to be completed throughout the FS process and through the signing of the ROD. It will also provide pertinent information to the RD/RA, which is likely to involve the S/S of the incinerator ash.

Kurt Muenchow  
March 14, 1995  
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Response Requirements

Provide assistance in obtaining Ms Roberson's support for funding the OU5 Treatability Study before the next scheduled SCCB scheduled for March 16, 1995. Should you have any questions or comments regarding this matter, please contact me at extension 9100



Carol A Bicher  
Operable Unit No 5 Closure  
Environmental Restoration Program Division

CAB cb

Orig and 1 cc - K Muenchow

cc  
N I Castaneda - DOE, RFFO