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**EG&G ROCKY FLATS**

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23 RF 9741

August 9, 1993

93-RF-9741

Richard J. Schassburger  
Acting Director  
Environmental Restoration Division  
DOE, RFO

Attn: J. Pepe

OPERABLE UNIT NO. 5 (OU 5) POTENTIAL PHASE II ACTIVITIES - WSB-324-93

**EXECUTIVE SUMMARY**

At this time, it appears that there will be data gaps in the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) investigation at Operable Unit No. 5 (OU 5). These data gaps (Attachment #1) have, in part, been identified during the course of the Phase I remedial investigation activities.

The Interagency Agreement (IAG) reads that work in the OUs "shall proceed through serial phases of investigation dependent on the information gathered to characterize each OU" and that "the draft Phase I RFI/RI Reports for OUs 3-16 shall also recommend work to be performed for each Phase II investigation." "DOE shall not commence the next investigatory phase prior to receiving approval of the Final Phase I Reports for OUs 3-16 and approval of Phase II Workplans."

At a minimum, additional investigatory activities will probably be needed at individual hazardous substance site (IHSS) 115, the Original Landfill, and IHSSs 133.1 through 133.4 (Ash Pits 1-4) and the High Purity Germanium (HPGe) survey anomaly located between IHSS 133.3 and IHSS 133.4

EG&G Rocky Flats, Inc. recommends the Department of Energy (DOE) inform the regulatory agencies that:

- Additional field work, Phase II, will be required to complete the characterization of the nature and extent of contamination at OU 5;
- This process (completing the characterization) can be expedited by including these Phase II activities in the Phase I Remedial Investigation;
- A Technical Memorandum (TM) will be produced (in the fourth quarter Fiscal Year [FY] 93) outlining some of the modifications to the Field Sampling Plan (FSP) to address the data gaps;

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<i>Bushy WS X</i>		
<i>OU 5 File X</i>		
CORRES CONTROL	X	X
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<i>Record (2) X</i>		

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ACTION ITEM STATUS

OPEN  CLOSED

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LTR APPROVALS:

WSB: (WS) ECM:

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By *[Signature]*

Date *5-25-93*

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- The field work required is approximately four to six months in duration and includes activities (trenching in the Ash Pits) that will require a few months of lead time to get permitted and implemented (the activity could occur in the third and/or fourth quarter FY94); and,
- This proposed "Phase II" work would impact the IAG milestone delivery schedule.

A meeting will be scheduled for the week of August 23, 1993, with the regulatory agencies to review the progress on the current OU 5 field work (anticipated completion August 11, 1993), to review the remaining OU 5 RFI/RI schedule as it currently exists (without this Phase II recommendation), and to justify the upcoming DOE request for milestones extension. This would serve as the ideal opportunity to present an outline to the regulatory agencies of the course of action DOE would like to pursue for Phase II activities at OU 5.

EG&G Rocky Flats proposes that Section 7, FSP of the Phase I Work Plan, be modified with a TM to cover the projected data gaps. An outline of the proposed work can be presented to the regulatory agencies at the scheduled meeting with the agencies in August 1993, a draft TM to modify the OU 5 FSP can be completed, and a final TM can be generated by the first quarter of FY94 outlining most of the work that would be required.

Implementation of the field portion of this work could commence in the third or fourth quarter of FY94 if funding is available. Currently, this proposed Phase II work is not in the FY94 Work Package because:

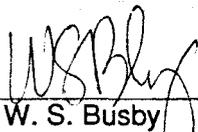
- DOE, RFO has not yet agreed to the work, although the DOE Project Manager is aware and supports moving in this direction;
- The regulatory agencies have not yet been approached for their concurrence. Regulatory concurrence is required because this work would have a major impact on the IAG milestone schedule; and,
- Because the analytical data is not yet back to review, the scope of the work cannot yet be identified, except in broad brush terms (see Attachment #2).

Pursuing this course of action would accelerate field activities into the third quarter of FY94 from a projected start date of the fourth quarter of FY95 (if this work were to follow the sequence outlined in the IAG). Also, by attaching this field work to the Phase I field activities, a significant dollar savings will be realized by avoiding an additional procurement cycle and probable change in subcontractors, avoiding the start up costs

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associated with a new contract (i.e., Health and Safety Plan, training, site indoctrination), and would also eliminate the necessity and cost of a Phase II Work Plan.

Written concurrence is necessary from DOE prior to pursuing this change in scope. If you have any questions regarding this transmittal, please contact E. C. Mast of Remediation Project Management at extension 8589.



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W. S. Busby  
Acting Director  
ERM/Remediation Project Management  
EG&G Rocky Flats, Inc.

ECM:dmf

Orig. and 1 cc - R. J. Schassburger

Attachments:  
As Stated (2)

cc:  
F. R. Lockhart - DOE, RFO

## DATA GAPS - OPERABLE UNIT 5

The additional field work that is needed falls into two categories:

- Data gaps that are currently known; and,
- Data gaps that may be identified from the results of the analytical work not yet received back from the labs. The unvalidated database for OU 5 will not be complete until the middle of October 1993.

### **Data Gaps that are Currently Known:**

#### The 133 series of IHSSs

Within the 133 series of IHSSs, the extent of the Ash Pits has not been completely identified by the recently completed field program. Some of the reasons that caused this include:

- Approximately 20 percent of the area in and surrounding the 133 series of IHSSs was negatively influenced by high voltage power lines so that the results of the geophysical (magnetic and electromagnetic [EM]) surveys were unusable in those areas, and data from the areas not effected by the power lines are somewhat inconclusive.
  - The HPGe survey is an excellent tool for the investigation of surface and near surface (three to four inches) radioactive contamination, but not for anything at depth. Completed drilling activities located radioactive (depleted uranium) material in several of the Ash Pits.
  - Visual inspection of the cored intervals through the Ash Pits could not always positively identify ash or other waste.
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- The heretofore unknown Ash Pit? [north of the HPGe U238 anomaly between IHSSs 133.3 and 133.4 with radioactive (depleted uranium) hot samples] had no surface expression leading to the concern that other pits with no surface expression might be located in the same area.
  - Ash Pits IHSSs 133.2, 133.3 and 133.4 had no surface indication of radioactivity, but subsurface radioactive (depleted uranium, above background) samples were collected.

#### IHSS 115, the Original Landfill

- The program as originally designed in the OU 5 Work Plan was not adequate to completely identify the nature and extent of contamination at the Original Landfill. At the time the RI Work Plan was written, all parties acknowledged there were too many unknowns concerning the Original Landfill to completely design a program to meet all the goals of the RI and that at some point additional investigations would be required.

**PROPOSED OUTLINE FOR PHASE II**  
**FIELD ACTIVITIES - OPERABLE UNIT 5**

The following section broadly outlines the activities that may be associated with the potential addition of Phase II field activities to the scope of the FY94 Work Package. The following outline for proposed scope is unfunded and not included in the FY94 Work Package. The approximate cost for this work is \$1.2 M with a range from \$0.7 M to \$1.7 M.

This scope is not a part of the FY94 Work Package because:

- DOE/RFO has not yet agreed to the work, although they are aware and support moving in this direction;
- The regulatory agencies have not yet been approached for their concurrence. Regulatory concurrence is required because this work would have a major impact on the IAG milestone schedule; and,
- The analytical data is not yet back to review, and the scope of the work cannot yet be identified, except in broad brush terms.

All parties (DOE, CDH and EPA) have adopted the observational/phased approach to field investigations at OU 5 and all are currently satisfied with this approach. Generally speaking, the strength of this methodology is that it allows the observer to evaluate data as it is being generated and to tailor the preceding activity to the needs identified. Secondly, the regulatory agencies have a "hands on" involvement by having to review all the Technical Memorandums (TMs) that modify the Work Plan or guide the work. The biggest drawback to this approach is the time required to go through the TM review cycle. Because of the time difference (between the observational approach and the conventional approach) to complete a Phase II, all parties should be in agreement prior to proceeding with an investigation methodology.

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The observational approach would increase the duration of the field activities by approximately a month per TM; this assumes that some of the TMs could be generated prior to completion of preceding field activities. There would probably be between three and five TMs required.

A broad outline of the proposed scope (for the third or fourth quarter of FY94) is as follows:

- I. Data Review
  - A. IHSS 115, the Original Landfill
  - B. IHSS 133.1 through IHSS 133.4, the Ash Pits and the HPGe anomaly
- II. Revise Health and Safety Plan
- III. Develop Integrated Work Control Package (IWCP) or Standard Operating Procedure (SOP) for trenching through the Ash Pits

IV. IHSS 133.3 - IHSS 133.4, Ash Pits and HPGe Anomaly

A. Write Technical Memorandum

1. Geophysical Surveys
2. Drilling/Monitoring Wells
3. Ground water sampling
4. Surface Soil Sampling
5. Trenching

B. Implement Technical Memorandum (Field Work)

1. Geophysical Surveys
2. Drilling/Monitoring Wells
3. Ground water sampling
4. Surface Soil Sampling
5. Trenching

V. IHSS 115, Original Landfill

A. Write Technical Memorandum

1. Drilling/Monitoring Wells
2. Ground water sampling
3. Surface Soil Sampling
4. Aquifer Testing

B. Implement Technical Memorandum (Field Work)

1. Drilling/Monitoring Wells
2. Ground water sampling
3. Surface Soil Sampling
4. Aquifer Testing

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The plan would be to integrate activities associated with a Phase II RI into the Phase I Report. The impact would be to delay the RFI/RI Draft and Final reports by 9 to 12 months. Pursuing this course of action could potentially accelerate field activities into the third quarter of FY94 from a projected start date of the fourth quarter of FY95 (if this work were to follow the sequence outlined in the IAG).

This plan would also move up the estimated completion date for the Feasibility Study (FS) because it would bypass the need of a standalone Phase II Study. Currently the 5 year plan does not address Phase II activities in the FS or elsewhere. There are no Phase II or FS milestone delivery dates in the IAG other than the FS which will be completed 90 days after the acceptances of the Final RFI/RI Report by the regulatory agencies.

Under the current guidelines (IAG), data gaps identified in the Phase I program would be addressed, and a Phase II RI program would be designed to fill in the data gaps in the Draft

Phase I RFI/RI Report. The timing of the Phase II RI activities would follow the review of the Draft Phase I Report by the regulatory agencies. This draft review by the agencies is currently scheduled to begin November 9, 1994 (assuming the agencies grant a milestone extension). The delivery of the Final Phase I RFI/RI Report (May 23, 1995) should then initiate the implementation of the Phase II activities. Assuming a three month procurement process (writing an SOW, procuring a subcontract or in house implementation), two months mobilization (write or modify HASP, training, procuring equipment), then field work would commence about November 1995, although because of probable adverse weather conditions, DOE may want to wait until spring to go to the field).

### **BASELINE PLANNING ASSUMPTIONS**

The baseline planning assumption is that the data collected in the field program is inadequate to define the nature and extent of contamination at the 133 series of IHSSs and IHSS115.

If funding becomes available, a second Phase to the RI could begin in approximately the third or fourth quarter of FY94.

The possible impacts of not implementing this program are:

- The regulatory agencies may find the Phase I RFI/RI Report to be incomplete and request/require additional RI activities to complete the report; and
  - The Phase I RFI/RI Report will recommend a Phase II Study be initiated prior to or as part of the FS.
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