

# Internal Letter



# Rockwell International

Date November 17, 1987

No DB 34.4

TO (Name Organization Internal Address)

J. V. Horvath  
Purchasing  
Bldg.131

FROM (Name Organization, Internal Address Phone)

N. M. Daugherty  
Environmental Management  
Bldg.T452B  
7005

SUBJECT - REVISION 2 OF "STATEMENT OF WORK FOR ENVIRONMENTAL ASSESSMENT FOR FLUIDIZED BED INCINERATOR (FBI) TRIAL BURN"

Attached is Revision 2 of the Statement of Work for the Environmental Assessment (EA) on the RFP Fluidized Bed Incinerator (FBI) Trial Burn. Los Alamos Technical Associates is the Contractor preparing this EA. Please request that a proposal be submitted by LATA to include the addition of the requirements of Revision 2 in their project. If you have any questions concerning this, please contact myself or Barbara K. Greer, Program Manager, FBI, Waste Operations, x7264.

Nancy M Daugherty  
Environmental Management

- cc.
- G W. Campbell
- B. K Greer
- M. E. Levin
- G. L. Potter
- G. H. Setlock
- W F. Weston



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**CONFIDENTIAL**  
**ADMIN RECORD**

SW-A-003919

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STATEMENT OF WORK  
FOR  
ENVIRONMENTAL ASSESSMENT  
FOR  
FLUIDIZED BED INCINERATOR (FBI) TRIAL BURN  
REVISION 2

ROCKY FLATS PLANT  
GOLDEN, COLORADO

PREPARED BY  
HS&E ENVIRONMENTAL MANAGEMENT  
ROCKWELL INTERNATIONAL  
NORTH AMERICAN SPACE OPERATIONS  
ROCKY FLATS PLANT  
NOVEMBER, 1987

APPROVED BY:

*George H. Setlock*

11-17-87

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## REVISION 2

Revision 2 of the Statement of Work for the Environmental Assessment for the Fluidized Bed Incinerator (FBI) Trial Burn includes all of the original requirements of Revision 1 (August, 1987) and the additional requirements found in Addendum 1 at the end of this Statement. Briefly, Addendum 1 includes the consideration of impact to Rocky Flats Workers, as well as members of the public, in the environmental assessment of the FBI Trial Burn and in the environmental assessment of alternatives to routine operations of the FBI.

Addendum 1 also includes impact assessment of a revised mix of feedstocks for the FBI Trial Burn as indicated in the document entitled "Revised List of Feed Materials for the Rocky Flats Plant Fluidized Bed Incinerator Trial Burn," November 16, 1987, to be added to the APPLICABLE DOCUMENTS section of the the FBI Trial Burn Statement of Work.

Item j. in SERVICES REQUIRED is amended to provide for bi-weekly, rather than monthly, status reports.

1. SCOPE

This task consists of the preparation of an Environmental Assessment (EA) document for the Rocky Flats Plant (RFP) Production Unit Fluidized Bed Incinerator (FBI) Trial Burn. The document will be prepared for submittal to the Department of Energy, Albuquerque Operations Office and Washington Headquarters.

The purpose of the EA is to determine if an Environmental Impact Statement (EIS) is required or if a finding of no significant impact (FONSI) is appropriate. The EA should provide a thorough, quantitative assessment of the programmatic and operational-, cost-, and environmental-impacts of the FBI Trial Burn. In addition, it should provide quantitative assessments and comparisons of such impacts associated with alternatives to the Trial Burn.

The EA should be prepared in such a manner that another EA on FBI routine production operations can be readily prepared subsequent to the Trial Burn EA. Quantitative assessment of the environmental impact associated with alternatives to routine production operations shall be prepared as part of the Trial Burn EA contract. A contract for preparation of the remainder of the EA on the FBI routine production operations is contingent upon the quality and timeliness of the Trial Burn EA.

2. SERVICES REQUIRED

The Contractor shall provide all necessary engineering, management, administrative, clerical and consulting services to prepare the FBI Trial Burn Environmental Assessment. The Contractor's activities shall include, but not be limited to:

- a. Periodic informal progress reviews, including submission of draft sections of the EA as they are written for review and revision by the buyer.
- b. Site visits and consultations.
- c. Review existing available engineering data, operating manuals, and other pertinent information.
- d. Review FBI design plans.
- e. Review Rocky Flats Plant EIS (1980), the draft FBI Trial Burn Plan, Rev. 2 (July 1987), and other pertinent documents.
- f. Review existing data obtained from the FBI Tests and incorporate the data as appropriate into the EA.
- g. Participate in periodic meetings with the Department of Energy (DOE) and Rockwell International (RI) as necessary for resolution of strategies, criteria, and details for preparation of the Trial Burn EA.
- h. Prepare the Trial Burn EA document. Preparation

to include: an outline of the EA; a description of normal operation and accident scenarios and of the alternatives to be included in the EA. The description should include identification of those which will be treated quantitatively; a first draft EA; a final draft EA; and a final EA.

1. Prepare an assessment of the programmatic and operational-, cost-, and environmental-impact of alternatives to routine production operations of the FBI. Preparation to include: an outline of the alternatives to be assessed; a description of the alternatives to be assessed, including identification of those which will be assessed quantitatively; a first draft of the assessment; a final draft of the assessment; and a final assessment of the alternatives to routine production operations of the FBI.
- j. Provide brief monthly status reports. This report shall include a summary of the activities that month, any problems that have been identified, and a total cost-to-date accounting. This report will be addressed to the Rockwell International purchasing agent (currently John Horvath), with a copy to the Trial Burn EA general coordinator (currently Nancy Daugherty).
- k. Provide nationally-recognized technical expertise as needed for an accurate and thorough preparation and review of the Trial Burn EA and the routine production operations alternatives assessment. This expertise to include, but not be limited to, the area of chemical combustion engineering.

### 3. APPLICABLE DOCUMENTS

The EA shall be prepared in accordance with and meet all applicable federal requirements including, but not limited to, the following:

#### Federal Documents

Council on Environmental Quality (CEQ) regulations  
40 CFR 1500-1508.  
DOE Guidelines found in 45 FR 20694-20701 and  
47 FR 7976-7979.  
Other Federal guidance as appropriate.

#### Buyer Documents

Considerable buyer documentation will be made available to the Contractor for use in preparing the EA. A partial list includes:

Rocky Flats Plant EIS, DOE/EIS-0064 (1980)  
FBI Trial Burn Plan (1986) and Draft Revision 2 (July 1987)

RCRA Part B Permit Application (1986)  
Waste Characterization Project Report (1987)  
Draft EA on the Plutonium Recovery and Modification  
Project (1987)

4. FORMAT AND CONTENT

As excerpted from 40 CFR 1508.9, the EA is "...a concise public document...that serves to:

"(1) Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

"(2) Aid an agency's compliance with the [National Environmental Policy] Act when no environmental impact is necessary.

"(3) Facilitate preparation of a statement when one is necessary.

"(b) Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted."

The proposed action is to conduct the Trial Burn at the Rocky Flats Plant Fluidized Bed Incinerator. In accordance with the above guidance, the Trial Burn EA shall contain the following information:

- a. A clear and concise description of the proposed action.
- b. Need for the action (justification).
- c. Description of the existing environment affected by the proposed action.
- d. A qualitative and quantitative assessment and risk analysis of direct and indirect impacts associated with FBI Trial Burn normal operation and credible accident scenarios. Impacts evaluated shall include programmatic and operational impacts, cost impacts, and environmental impacts. The Contractor shall identify those normal operation and accident scenarios which pose the potential for a release to the environment of radioactive and/or chemically hazardous materials. Consideration shall be given to the potential for the creation of chemically hazardous materials and gaseous forms of hazardous chemicals and radioactive materials in both normal and credible accident FBI Trial Burn combustion processes. A quantitative evaluation of the increase in risk associated with normal operations and credible accident scenarios shall be performed using standard methodology approved by the buyer. The cumulative increase in risk from these scenarios shall then be evaluated for significance. Both short-and long-term effects shall be evaluated.

An explanation of methods to be used for risk analysis, with references when appropriate, shall be submitted to

the buyer for comment prior to beginning the analysis. If requested, the Contractor shall present the results of the analysis at a technical review meeting prior to preparing the initial draft of the risk analysis section of the Trial Burn EA.

- e. A qualitative assessment and comparison of the programmatic and operational-, cost-, and environmental-impacts of alternatives to the FBI Trial Burn and a quantitative assessment, risk analysis and comparison of those alternatives which are identified as reasonable. Alternatives to the proposed action shall include, but not be limited to: 1) Having no Trial Burn (no action alternative); 2) Having no Trial Burn, using an alternate means of permitting; 3) Holding the Trial Burn at an alternate location.
- f. Discussion of the relationship of the proposed action to any applicable Federal, State, regional, or local land use plans and policies likely to be affected.
- g. Agencies and/or persons consulted.

With respect to the proposed action of conducting routine production operations of the FBI, the following shall be included:

- a. A qualitative assessment of the impacts (programmatic and operational, cost, and environmental) alternatives to the FBI routine production operations and a quantitative assessment and risk analysis of those alternatives which are identified as reasonable. The alternatives shall include, but not be limited to: 1) No routine production operations of the FBI, but continue to generate low-level and mixed waste at the Rocky Flats Plant; 2) No routine production operations of the FBI and discontinue waste generation; 3) Use of alternate technologies for waste treatment/disposal (at RFP or other facilities).
- b. Discussion of the relationship of the proposed action to any applicable Federal, State, regional, or local land use plans and policies likely to be affected.
- c. Agencies and/or persons consulted.

## 5. DELIVERABLES

The following documents and deliverables will be required.

- a. Provide outlines of strategy with subtasks for the Trial Burn EA and for the routine production operations alternatives assessment.
- b. Provide a description of the method(s) to be used for risk analysis, including references when appropriate.
- c. Provide a minimum of ten (10) copies of the first draft of the Trial Burn EA and of the routine production operations alternatives assessment.
- d. Provide ten (10) copies of the final draft of the Trial

Burn EA and of the routine production operations alternatives assessment.

- e. Provide twenty (20) copies of the final Trial Burn EA and routine production operations alternatives assessment for submittal to DOE/AL and HQ.

ADDENDUM 1  
TO THE  
STATEMENT OF WORK FOR ENVIRONMENTAL ASSESSMENT  
FOR  
FLUIDIZED BED INCINERATOR (FBI) TRIAL BURN

The following addendum, in addition to the original Revision 1 of the subject document, shall constitute Revision 2 to the Statement of Work for an Environmental Assessment for the Rocky Flats Plant Fluidized Bed Incinerator (FBI) Trial Burn.

Item j, Section 2, SERVICES REQUIRED, shall be amended to require biweekly, rather than monthly, status reports.

Following the first draft of the Environmental Assessment for the Rocky Flats Plant Fluidized Bed Incinerator Trial Burn, all subsequent drafts and final versions shall incorporate the revised mix of feedstocks for the FBI Trial Burn as indicated in the document entitled "Revised List of Feed Materials for the Rocky Flats Plant Fluidized Bed Incinerator Trial Burn," November 16, 1987. The above document is to be added to the list of Buyer Documents provided to the Contractor for preparing the Trial Burn EA under Section 3, APPLICABLE DOCUMENTS.

The following shall be added to the requirements of Item d, Section 4, FORMAT AND CONTENT for the FBI Trial Burn EA:

The Contractor shall include an evaluation of health impact to Rocky Flats workers for normal operations of the FBI Trial Burn and for the credible accident scenarios assessed in the FBI Trial Burn EA.

The following shall be added to the requirements of Item a, Section 4, FORMAT AND CONTENT for the routine production operations:

The Contractor shall include an evaluation of health impact to Rocky Flats workers for the alternatives to the FBI routine production operations. The assessment shall include both normal operations and the credible accident scenarios associated with those alternatives.

REVISED LIST OF FEED MATERIALS  
FOR THE ROCKY FLATS PLANT  
FLUIDIZED BED INCINERATOR TRIAL BURN

Liquid Feed Run #1	17,000 BTU/LB (4 61% C1), 5% CCl <sub>4</sub> , 95% Diesel
Liquid Feed Run #2	17,000 BTU/LB. (4.61% C1), 5 17% Trichlorethene, 94 83% Diesel
Solid Feed Run #3	8,333 BTU/LB. (2.75% C1, 0.26%F), 0.92% CCl <sub>4</sub> , 0.96% Trichloroethene, 0.43% Freon-113, 0 17% Teflon, 2 22% PVC, 58 4% Paper, 18.0% Polyethylene, 18.9% Inert Solids
Solid Feed Runs 4 & 5	8,088 BTU/LB (3.7% C1, 0.26%F), 0.92% CCl <sub>4</sub> , 0 96% Trichloroethene, 0.43% Freon-113, 0 17% Teflon, 5.4% PVC, 15.1% Latex, 63.32% Paper, 1 4% Polyurethane, 1.4% Polyethylene, 2.7% Cloth, 1.4% Leather, 4.1% Wood, 2 7% Water
Liquid Feed Run #6	17,000 BTU/LB (3.46% C1 & 0 62%F) 1 25% CCl <sub>4</sub> , 1.29% Trichloroethene, 2 03% Freon-113, 95 43% Diesel

Test	Feed	Feed Rate Lb/Hr	% of Design	R1-T (°C)	R2-T (°C)	CAI/Na2 CO3 (Ratio)	Flue Gas		U & Pu Added*
							SCFH	Lb./ Min.	
1	Liquid	60	68	575	625	20/80	524	42 3	No
2	Liquid	80	91	575	625	20/80	682	55.1	No
3	Solids	180	100	575	625	20/80	720	58 2	0.136% U
4	Solids	125	67.4	575	625	20/80	529	42.7	0 20% U
5	Solids	125	67 4	575	625	20/80	529	42.7	0.00014% Pu**
6	Liquid	36	41	575	625	20/80	380	30 7	0.00014% Pu**

\*U will be added as uranium oxide, Pu will be added as a solution in carbon tetrachloride-methanol  
 \*\*This is based on 100 nano Ci of transuranic alpha activity per gram of waste (technical definition of low level waste)