

Jessie M. Roberson
May 24, 1994
94-RF-05898
Page 2

assessments were incorporated into the Fernald draft FS and how they are proposed to be incorporated into the CMS/FS reports. DOE's comments from this meeting will be incorporated into a methodology for use in the Detailed Analysis of Alternatives (DAA) portion of the CMS/FS process By June 28, 1994. This schedule does not affect the OU 1 schedule because surface soils are not involved.

At the May 31, 1994, meeting EG&G Rocky Flats will also propose how short term risk to workers and the public from implementation of various remedial alternatives will be evaluated in the CMS/FS reports. Again, DOE's comments will be incorporated into a methodology for use in the DAA portion of CMS/FS reports by June 28, 1994. Specific details on short term risks on the OU 1 CMS/FS will be discussed so that the OU 1 schedule is not impacted.

At the May 31, 1994, meeting EG&G Rocky Flats would like to discuss the use of the Radiological Exposure Rate (RESRAD) code. EG&G Rocky Flats is not currently planning on using the RESRAD code to assess radiation exposure in either the RCRA [Resource Conservation and Recovery Act] Facility Investigation/Remedial Investigation (RFI/RI) or the CMS/FS risk assessments. First, this computer code was not included in any computer modeling technical memoranda for OUs 1 through 7. Since DOE/RFFO, the Environmental Protection Agency (EPA) and the Colorado Department of Health (CDH) are currently approving these documents without RESRAD, it is not understood why RESRAD is being made a requirement in the Comprehensive Environmental Response and Liability Act (CERCLA)/RCRA programs. Second, an environmental pathway analysis and dose assessment will be performed at all OUs per the exposure scenarios, contaminant of concern, modeling, and the toxicity technical memoranda required by the IAG. All of these documents are reviewed and approved by DOE/RFFO, EPA and CDH for use. The pathway analysis, risk assessment and radiation dose assessment performed per these four technical memoranda meet the requirements of DOE Order 5400.5.

In order to provide DOE/RFFO with an update on current methodologies used to ensure adequacy and consistency among the ecological risk assessments at DOE/RFFO, EG&G Rocky Flats proposes to meet with DOE/RFFO staff and the subcontractors performing the ecological risk assessments at DOE/RFFO at 9:00 a.m. on May 26, 1994, or the week of June 3, 1994. While several of the individual DOE/RFFO ER OU managers have participated in the presentations of the current methodology to the regulatory agencies as part of the "Three Phase Approach" specified in EPA's "Framework for Ecological Risk Assessment" and are familiar with current methodologies, a meeting with other interested DOE/RFFO staff describing this approach is warranted. Tables listing the assessment endpoints, measurement endpoints and receptors associated with the effects assessment of each OU ecological risk assessment will be presented. Any changes to the current methodology will be presented to DOE/RFFO by July 8, 1994.

2

R

Jessie M. Roberson
May 24, 1994
94-RF-05898
Page 3

In addition, a list of the screening level exposure assessment models currently used for ecological risk assessments for each receptor in each OU can also be presented. Discussions among the attendees may lead to a consensus as to specific methodologies which can then be incorporated into RFI/RI and CMS/FS methodology guidance documents if this is warranted. However, preparation of methodology documents by May 31, 1994 is not feasible.



S. G. Stiger
Associate General Manager
Environmental Restoration Management
EG&G Rocky Flats, Inc.

JKH:mp

Orig. and 1 cc - J. M. Roberson

Enclosure:
As Stated

cc:
M. H. McBride - DOE/RFFO
S. J. Olinger - " "
R. J. Schassburger - " "
M. N. Silverman - " "
L. W. Smith - " "

also 29619

memorandum

DATE: MAY 6 1994

REPLY TO:
ATTN OF: ER:BKT:05262

SUBJECT: Risk Assessment Per the Rocky Flats Plant Interagency Agreement

TO: Susan Stiger, Associate General Manager
Environmental Restoration Management
EG&G Rocky Flats, Inc.

This memorandum is a follow-up to the weekly risk assessment meeting held on March 18, 1994, between DOE/RFFO and EG&G. Three topics were discussed at this meeting where further direction from DOE/RFFO is necessary. These topics are: (1) exposure parameters; (2) as low as reasonably achievable (ALARA); and (3) radiological performance assessment. The latter two topics are related to: DOE Order 5400.5, Radiation Protection of the Public and the Environment; DOE Order 5820.2A, Radioactive Waste Management; and 10CFR Part 835. You should note that DOE Order 5400.5 was placed in the Federal Register on March 25, 1993 as a proposed rule under 10CFR Part 834. The current estimate for the finalization of this rule is June, 1994. When this occurs, 10CFR Part 834 will become an ARAR under CERCLA.

Site-specific exposure factors were discussed in light of EPA, Region VIII, reluctance to accept exposure parameter assumptions that deviate from the Exposure Factors Handbook (EPA, 1989). The use of site-specific exposure factors is important if our risk assessments are to be useful tools for risk managers. Overly conservative assumptions tend to result in risk assessments that have little relation to reality. We request that EG&G prepare a listing of exposure parameters to be used as Rocky Flats Plant (RFP) standard assumptions. These exposure parameters should include site-specific factors where sufficient justification exists for their use. The justification should be provided along with the EPA-recommended value. Once DOE/RFFO has approved the parameters, they will be transmitted to EPA and CDH for review, discussion and approval. Once approved by DOE/RFFO, EPA and CDH, any Operable Unit deviating from the the RFP list of exposure parameters will require the submittal of technical memorandum to DOE/RFFO which lists the deviation along with the rationale for the deviation. We will forward the technical memorandum to EPA and CDH for review and approval. The listing of exposure factors, along with justifications for deviation, should be provided to DOE/RFFO by May 13, 1994.

We have attached a copy of DOE's March 14, 1991, "Guidance for Implementation of ALARA Requirements for compliance with DOE 5400 Series Orders: For Interim Use and Comment". We request that this document be reviewed, along with other appropriate documentation such as 10CFR Part 835, and a methodology for integrating DOE's ALARA requirements with the FS/CMS process be proposed. The ALARA methodology should address workers, the public and environmental (including ecological) receptors, as appropriate. We encourage your staff to involve DOE/RFFO health physicists,

environmental transport, fate and effects specialists, and waste management specialists as necessary in the preparation of this methodology. In addition, since FERMC0 has completed a FS which incorporates ALARA, we recommend that a copy of their draft FS be obtained so that we (1) avoid "reinventing the wheel", and (2) achieve consistency with other DOE facilities. We request that the proposed methodology for incorporating ALARA into the FS/CMS be provided to DOE/RFFO by May 20, 1994.

A copy of "Guidelines for Radiological Performance Assessment of DOE Low-Level Radioactive Waste Disposal Sites" dated July, 1988, has been attached for your review. A radiological performance assessment is a systematic analysis of the potential risks posed by waste management systems to the public and environment, and a comparison of those risks to established performance objectives. We request that this document be reviewed, along with other appropriate documentation, to facilitate the integration of a radiological performance assessment with the FS/CMS. We encourage your staff to involve DOE/RFFO health physicists, environmental transport, fate and effects specialists, and waste management specialists as necessary. Again, we recommend review of the Fernald Draft FS to assist in this effort. We request that a proposed methodology for incorporating the radiological performance assessment into the FS/CMS process be provided to DOE/RFFO by June 10, 1994.

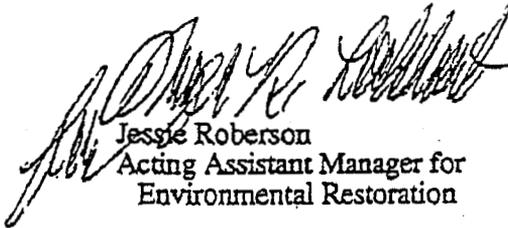
You should note that previous DOE/RFFO guidance (attached) relating to DOE Order 5400.5 contained in ERD:SRG:1403 dated February 4, 1992, remains valid. This guidance relates to the use of the RESRAD computer code. Both RFI/RI baseline risk assessments and FS/CMS risk assessments should include, as appropriate, radiological dose assessments for all media using the RESRAD code. Chapter 10 of EPA's Risk Assessment Guidance for Superfund (RAGS), which is a requirement of the RFP Interagency Agreement, also requires a radiological dose assessment when radionuclide chemicals of concern are present.

Additional items not discussed at the March 18, 1994, meeting regard (1) ecological risk assessment, and (2) health and safety issues for workers and the public. We request that EG&G provide DOE/RFFO with a methodology for RFI/RI exposure and effects assessment as related to ecological receptors. The primary purpose for the methodology will be to assure adequacy and consistency among our ecological risk assessments. This methodology should be consistent with EPA's "Framework for Ecological Risk Assessment" (EPA/630/R-92/001) document and should apply to the RFP buffer zone and off-site Operable Units, since these are where significant ecological resources are located. In addition, ecological effects of contaminant removal as well as remedial action need to be considered in the FS/CMS along with human health effects. We request that the RFI/RI and CMS/FS methodology document(s) for ecological receptors be provided to DOE/RFFO for review by May 31, 1994.

Similarly, we request that EG&G seek input from health and safety specialists as well as radiation protection specialists to evaluate short term risk to workers and the public from various remedial alternatives evaluated in detail. Both potential contaminant hazards as well as physical hazards (e.g., potential for construction accidents) shall be evaluated. This evaluation shall be consistent with EPA's "Risk Assessment Guidance for Superfund:

Volume 1 - Human Health Evaluation Manual (Part C, Risk Evaluation of Remedial Alternatives)" dated December, 1991. These evaluations will be critical for presenting arguments to EPA, CDH and the public for cases where remediation alternatives create more health hazards than they solve (i.e., "cure is worse than the disease"). This methodology for the FS/CMS should be provided to DOE/RFFO by June 10, 1994.

Any questions or concerns regarding this memorandum and attachments should be directed to Bruce Thatcher of my staff at extension 3532.



Jesse Roberson
Acting Assistant Manager for
Environmental Restoration

Attachments

cc w/Attachments:

S. Nesta, EG&G
T. Greengard, ER, RFFO
B. Ramsey, SMS

cc w/o Attachments:

S. Olinger, AMESH
G. Hill, ESH, RFFO
A. Howard, ER, RFFO
F. Gerdeman, ESH, RFFO
T. Lukow, WMD, RFFO
F. Lockhart, ER, RFFO
S. Grace, ER, RFFO
R. Birk, ER, RFFO
J. Pepe, ER, RFFO
S. Slayton, ER, RFFO
B. Thatcher, ER, RFFO
T. Reeves, ER, RFFO
E. Dille, ER, RFFO
M. Guillaume, ER, RFFO
J. Burd, ER, RFFO
A. Primrose, EG&G
T. O'Rourke, EG&G
R. Roberts, EG&G
F. Harrington, EG&G