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ROCKY FLATS PLANT

DATE
9/14/94

TO	Andy Ledford	DEPT	Solar Ponds	BLDG	080
FROM	Kathy London	DEPT	Solar Ponds		
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MEMORANDA

"SAY IT IN WRITING"

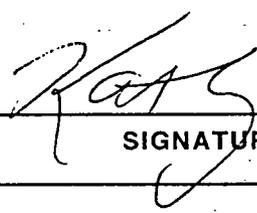
MESSAGE

In resposne to RFFO request, information was provided as noted below.

Attached:

- CAB questions
- Response information
- Copies of folder contents

I dropped off the information and folders at RFFO this morning. You may also want to take some of the poster-boards to the CAB meeting.



 SIGNATURE

- cc
- Project Files
 - ERM files
 - AR

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

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ADMIN RECORD
1101-A-000107

ANSWERS TO QUESTIONS FROM:

**Citizen's Advisory Board
Waste Management Subcommittee Meeting
of August 19, 1994**

Questions are summarized and responses provided. "Folder A" and "Folder B" contain visuals. Where the question is not clear, suggestions are made for requests for clarification. It may be appropriate to request clarification prior to providing the response.

a) **Will they plug the holes for wells and sampling?**

Yes. Boreholes are filled with bentonite, following a Standard Operating Procedure at the plant. Wells have casings removed, are filled with bentonite, and capped with cement, following the Colorado regulations on well "abandonment".

b) **Examples where similar caps have been placed.**

Clarification: WHAT DOES THE QUESTIONER HAVE IN MIND AS "SIMILAR"? WHAT ASPECTS OF THE CAP OR OF THE REMEDIATION ARE OF INTEREST?

The first cap of this specific design is being built at Hanford. The design represents an improvement over the standard "RCRA cap" since

- (1) it is tailored to improve performance in arid climates and
- (2) avoids reliance on manmade plastic liners. While a little more expensive, the materials used will last much longer.

c) **Are we putting the cart before the horse re: feasibility study?**

No. The cap is part of "Phase I" remediation, an Interim Action which will control the source of contamination and close the ponds. The feasibility study will support "Phase II" remediation, which will complete remediation. By addressing the source and pond closure first, DOE can eliminate the ponds as a source of environmental contamination and close the ponds, as required by law, much sooner than waiting for the final studies and final action.

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The following block of questions all appear to request information on the design. It may be helpful to use some diagrams during this discussion: (see Folder A)

d) Concerns about water level/protectiveness.

Clarification: WHAT ARE THE CONCERNS REGARDING THE WATER LEVEL? WHAT ARE THE QUESTIONS ABOUT PROTECTIVENESS?

The remedy is protective of ground water and surface water. The contaminant-bearing layer will be isolated from the environment and ground water will be monitored to ensure the standards for compliance are achieved.

e) Will there be a barrier beneath the cap?

Clarification: WHAT DOES THE QUESTIONER MEAN BY "BARRIER"?

There are several barrier-layers in the conceptual design for the cap and the structure below the cap: a surface layer for erosion control; a biotic barrier of rip rap; a low-permeability layer of asphalt; and a subsurface drainage layer to resist ground water intrusion. Each layer serves a function in isolating the contamination from the environment. The structure will ensure protectiveness is achieved.

f) Will there be a barrier around the ponds?

Clarification: WHAT DOES THE QUESTIONER MEAN BY "BARRIER AROUND PONDS"?

See (e). There will also be barriers against trespassers, provided by the standard site security.

g) Concern of continual ground water movement.

Clarification: WHAT IS THE CONCERN?

No changes in ground water movement are planned. The cap reduces infiltration (downward movement of precipitation), and the structure of the remedy will isolate contamination from the ground water. Working with the ground water flow provides an effective control and is simpler than trying to re-route the ground water.

h) How does NRC fit in (10 CFR 40 Appendix A, Criterion 6)?

Clarification: WHAT ASPECTS OF THE CLOSURE IS THE QUESTIONER INTERESTED IN?

10 CFR 40 applies to uranium mills and tailings. As such, it does not apply to OU 4.

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[Summary of 10 CFR 40: Domestic Licensing of Source Material,

Purpose is to license the receipt of source and byproduct materials:

Source Material is defined as Uranium and Thorium and their ores; specifically says NOT SNM;

Byproduct Material is defined as tailings and wastes from source material.

Appendix A: Uranium mills and tailings

Criterion 6 requires

- An earthen cap over tailings and wastes
- Radiological hazards be controlled for 1000 years as reasonable, but at least 200 years
- Limit radon concentrations to extent practicable
- Direct gamma radiation be background
- Non-rad hazards be addressed to prevent threats to human health and the environment
- The installation should minimize future maintenance.

The OU 4 remedy will accomplish/address these items; but 10 CFR 40 not the governing regulation.]

i) How will the new regulations for RCRA landfill play into Solar Ponds?

Clarification: WHAT NEW REGULATIONS DOES THE QUESTIONER HAVE IN MIND? WHAT ASPECTS OF THOSE REGULATIONS ARE OF INTEREST?

j) Overview of site and geology.

Clarification: WHAT ASPECTS OF SITE GEOLOGY ARE OF INTEREST? AT WHAT LEVEL OF TECHNICAL DETAIL IS THE QUESTION AIMED?

See Folder B.

k) Tour: Aiming for October 11, to be confirmed by Karen Lutz (ext 4546).

l) What is the written document that leads towards final design?

The Decision Document, which the CAB has in draft form, selects the remedy and presents the conceptual design. This Decision Document leads to the final design, which we call the Title II Design. The Decision Document will go out for public comment and regulator approval prior to start of the remedy-construction.

Folder A contains drawings of the cap and excavation area from the Draft Decision Document:

Figure IV.3-9 Cross Section of the Final Engineered Cover
Figure IV.3-1 Zones of Soil Excavation
Conceptual Design Drawings
Final Site Plan (51045-112)
Engineered Cover Plan (51045-121)
Drainage Plan (51045-130)
Engineered Cover Cross Sections (51045-122)

Also, from our files, an "example" RCRA cover with drainage layer

Folder B contains drawings from the Phase II Work Plan:

Figure 3.3-10 Location Map of Geologic Cross Sections
Figure 3.3-11 Cross Section East/West through 207C, A, and
B-North
Figure 3.3-12 Cross Section Hill North of Ponds
Figure 3.3-13 Cross Section North/South through 207C
Figure 3.3-14 Cross Section North/South through B-series
Figure 3.3-15 Cross Section North/South between A and B
Table of Lithofacies Descriptions

To: Frazier Lockhart
From: Tom Forbes
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Citizens Advisory Board Waste Management Subcommittee Meeting
August 19, 1994

Questions posed during the Operable Unit 4 discussion

Subcommittee does not agree with plan and does not understand how they got to where they are today. Questions raised:

- a) Will they plug the holes that were punched for wells and sampling?
- b) Examples of where similar caps have been placed.
- c) ~~Are~~ Are we putting the cart before the horse by putting on the cap before the feasibility study is complete?
- d) We are not being protective of the water. Concerns about water level.
- e) Will there be a barrier beneath the cap? Many questions about the protectiveness.
- f) Will there be a barrier around the ponds?
- g) Concern of continual ground water movement even if capped?
- h) How does the NRC fit in? (Referencing Title 10 Part 40 Appendix A, Criterion 6)
- i) How will the new regulations for RCRA landfill play into the Solar Ponds?
- J) Want an overview of the site and its geology.
- K) Want a tour of the Solar Ponds (T. Forbes working with K. Lutz)
- L) What is the written document that leads toward final design of closure of the ponds?

A discussion is scheduled for September 15, 1994 at 7:00 p.m. at the Westminster City Hall.

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