

**ROCKY FLATS CITIZENS ADVISORY BOARD  
MINUTES OF WORK SESSION  
April 6, 1995**

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**FACILITATOR:** Reed Hodgkin, AlphaTRAC

Linda Murakami called the meeting to order at 6 p.m.

**BOARD/EX-OFFICIO MEMBERS PRESENT:** Alan Aluisi, Lorraine Anderson, Jim Burch, Jan Burda, Lloyd Casey, Chuck Clark, Ralph Coleman, Tom Davidson, Eugene DeMayo, Gislinde Engelmann, Tom Gallegos, Kathryn Johnson, Jack Kraushaar, Albert Lambert, Beverly Lyne, Linda Murakami, David Navarro, Gary Thompson / Tom Marshall, Leanne Smith, Steve Tarlton

**BOARD/EX-OFFICIO MEMBERS ABSENT:** Stuart Asay / Martin Hestmark

**PUBLIC/OBSERVERS PRESENT:** Frank Smith (Pu/SNM Committee); Eileen Jemison (EG&G); Liz Cone (ASG); Kenneth Werth (citizen); T. DuPont (citizen); Clay Smith (DU); Chris Dayton (Kaiser-Hill); Peter Hixson (ICF-Kaiser); Dr. Mike Kennedy (Denali Teknowledgy); Tom Graham (citizen); Larry Helmerick (DOE/CED); James W. Bond (citizen); John Ahlquist (DOE/HQ); Chris Timm (ICF Kaiser); Patrick Etchart (DOE); Gerald DePoorter (citizen); Sam Cole (PSR); Frazer Lockhart (DOE); Elizabeth Baracani (Suerdrup Environmental); D. Huling (citizen); Jill Paukert (EG&G); Benton Howell (citizen); Simone Shields (citizen); Carl Sykes (DOE); Mary Harlow (City of Westminster); Bob Nau (citizen); Joelle Klein (CRC/DOE); Carol Peabody (Advisory Committee on External Regulation of DOE Nuclear Safety); W. H. Diment (citizen); Dan Miller (Stoller/Parsons Brinckerhoff); Nancy Hartman (citizen); Don Scrimgeour (citizen); Jessie Roberson (DOE/RFFO); Patrick J. Higgins (Advisory Committee on External Regulation of DOE Nuclear Safety); Jeremy Karpatkin (DOE/RFFO); Nancy Tuor (Kaiser Hill); Fred Eastom (citizen); Sujit Gupta (E/WM Committee); Briand Wu (DOE/RFFO); Harlen Ainscough (CDPHE)

**PRESENTATION - PLUTONIUM AND SPECIAL NUCLEAR MATERIALS COMMITTEE WORK PLAN** (briefing by Frank Smith): The committee has been working since October of 1994 on preparing this work plan, and developing priorities for Board review. The categories are:

- 1) Analyze the consolidation of plutonium into Building 371 or elsewhere;
- 2) Analyze storage options for plutonium and special nuclear materials;
- 3) Track the Corrective Action Plans for the Plutonium Vulnerabilities and DNFSB

ADMIN RECORD

Recommendation 94-1;

4) Study the pros and cons of external regulation of plutonium and other special nuclear materials; and

5) Study the disposition of excess nuclear materials. A process and work product for each activity has been developed to achieve these broad goals.

No comments were made on the content of the committee's work plan. CAB members were asked to give any input on the work plan to staff as soon as possible.

**BUFFER ZONE FOLLOW-UP** (Joe Wienand, DOE): The entire RFETS site is on the national priority list under CERCLA law as a contaminated site. What Kaiser-Hill proposed to DOE is that they would work to redefine the boundaries and eliminate policy and the environmental constraints that surround much of the land in the buffer zone that is not contaminated. Kaiser-Hill would work with the regulators to indicate which land is at a risk level that could allow it to be open to the public. We are still working with the Future Site Use Working Group to implement their recommendations on what to do with the land at Rocky Flats.

**Recommendation:** Approve recommendation to DOE regarding possible release of buffer zone land.

**Action:** Motion to accept. APPROVED.

**FY 96 FUNDING AMENDMENT UPDATE** (Leanne Smith, DOE): DOE/EPA/CDPHE held a retreat last week. They discussed deferring some environmental restoration activities in order to refocus those resources on plutonium vulnerabilities and stabilization. DOE is considering taking \$31 million out of ER budget and putting it on Category 1 and 2 risk residues and plutonium metal. ER will review altering the IAG milestones in order to accomplish this. The decision was made to amend the budget for FY 96 to put \$31 million additional into plutonium vulnerability and stabilization activities. Not yet decided is which environmental restoration activities will be deferred. There is still time to comment on how the shift is made. The state and EPA have agreed, with conditions expressed in letters forwarded to DOE.

**Recommendation:** That the issue be referred to the Site Wide Issues Committee for review and monitoring (other committees can then review the proposal from Site Wide).

**Action:** Motion to accept. APPROVED.

**SOLAR PONDS DECISION** (discussion lead by Tom Gallegos): The Environmental/Waste Management Committee was assigned this issue by the Board, and developed a plan of action in August 1994. Committee members toured the site, prepared comments and questions on the issue for clarification by DOE, reviewed the IM/IRA, and requested feedback from CAB members and the public prior to submitting this recommendation for CAB approval. Decision issues developed included:

- 1) Is on-site disposal/storage acceptable?
- 2) What is this, storage or disposal? (CAMUs must eventually be treated.)
- 3) Should the solar pond wastes be treated before being put under the engineered cap?
- 4) Should the solar pond wastes be put into the planned location or located in a consolidated RCRA landfill at the RF site? (Consolidated or individual disposal areas?)
- 5) Is the OU-4 proposal too postured as disposal (permanent) because of the 1,000-year engineered cover?
- 6) Should a different approach be taken for OU-4; above ground, retrievable waste storage?
- 7) Has a specific risk analysis been performed to cover the solar ponds? DOE and EG&G team expect that the SWEIS will cover the risk aspects of the closure?
- 8) Should the pondcrete, pond sludge, site debris, miscellaneous contaminated site materials be placed in the closure?

The IM/IRA proposes that liners, sludge, pondcrete and some contaminated soil and debris in the area be removed, treated and deposited under the solar ponds cap. The engineered cover will isolate the contamination within. Contaminants include: Arsenic, Beryllium, Cadmium, Chromium, Americium-241, Plutonium-239/240, Uranium-233/234, Uranium-235, and Uranium-238. Pondcrete contains more than 90% of the plutonium that would be deposited underneath the cap. The depth of contamination to area groundwater was compared at the mean seasonal high water table. To protect the groundwater, within the design there is a subsurface drain. Tom discussed the votes made by committee members and public present, and how the recommendation now brought before CAB was developed.

#### DECISION PROCESS:

- 1) Straw poll on recommendation as submitted by the committee was taken (no consensus).
- 2) Round-robin comments on the proposal:
  - Should Rocky Flats be a permanent waste disposal site? Future technology may provide better options for treating the material. Proposal should be postponed while other alternatives are reviewed.
  - Would like to see commitment from DOE that the waste will be retrieved if a better technology is found in the future.
  - How much longer will be monitoring be carried out? (Unlimited - as long as material is under the cap.) Not sure that we know how to construct a cap that will last 1,000 years - it's presumptuous.
  - Concerned with the limited life of the subsurface drain. The cap is 1,000 years - but the drain may get clogged after a shorter period of time. Also concerned with the peak high groundwater rather than the mean. Opposed to any internal dumping at Rocky Flats of contaminated material.
  - Re-excavation is possible and other alternatives could be used in the future.

- DOE is being irresponsible by storing this kind of material in our area. Our goal should be removal of wastes from the site.
- This sets a precedent for future cleanup. Questions: whether an engineered cover can actually last for 1,000 years; the contaminants will be dangerous for much longer than 1,000 years even if the cap lasts; the lack of a comprehensive plan for managing wastes on-site; ad-hoc approach to making decisions about cleanup and waste management on-site. Dilution doesn't mean it's okay - the fact that contaminants are low in comparison to the amount of materials that are there doesn't negate the fact that those are very dangerous contaminants.
- Feel this is a reasonable approach, and concerned about waiting too long and expecting some new magic technology. Questions: CDPHE may not accept pondcrete and sludge, and will this project be reprioritized.
- For the proposal, but emphasizing a concern about dealing with a system capable of detecting failures.
- For the proposal - hazards are part of earth's evolution, objections to breakthroughs always exist - it's time to stop analyzing and start doing.
- For the proposal, with a good monitoring program there should be no problem.
- Indefinite monitoring should be performed. Solar ponds are one of the largest source of contamination on the site. Concern: groundwater evaluation will be done down the road after putting the landfill above the cap. Groundwater contamination already has been detected - is it traceable to the solar ponds? Further characterization of fractures needs to be performed on the site.
- Would consider it without the pondcrete and sludge - the Arapahoe aquifer formation is right there at the ponds. Arapahoe sands also are at the bottom of Standley Lake - the water supply for Westminster, Thornton and Northglenn. It's hazardous enough to have the ponds there anyway, but including pondcrete and sludge is a bad mistake.
- Generally support the recommendation, but EPA and CDPHE don't approve the pondcrete and sludge. If that's the case, we shouldn't go ahead until such approval exists. (CDPHE won't make a decision until all public comment from CAB and others has been received.)
- The proposal came one step short - it should not include pondcrete and sludge. Would like to evaluate the cost effectiveness of not including pondcrete and sludge.
- The proposal is technically sound, but would like to see something about retrievability, as well as isolation from the groundwater. Also, Kaiser-Hill may have a different approach for the solar ponds closure.
- Don't approve of inclusion of pondcrete and sludge.
- Problems with issues of groundwater - mean vs. true high water mark. The technology of the drains is also a problem, and don't like leaving the pondcrete within. It may be okay to store some on-site, but in a way that oversight can be managed a little more believably.
- Issues with retrievability, and groundwater.

### 3) Second course of round-robin comments on the proposal:

- If we modify the proposal, pondcrete and sludge should be removed, and add specifics on length of monitoring (indefinitely or until contamination is removed). Also suggest that we don't hammer ourselves into supporting this proposal - that it be prefaced with possibility of better options should they be discovered. Would like to wait for a year or so. Also have DOE not consider this as a long-term storage and disposal.
- Compliment to the committee on their conscientiousness, and has a lot of trust in what they are telling us.
- Would like to see if DOE goes ahead with this proposal, if cities whose water source is affected are provided some guarantees by DOE that the solar ponds and their 1,000 year containment will not affect the local city water supply. There should be some legal, binding guarantee.
- There are many contaminants of concern that are included. Also support the concept of DOE returning the area to contamination levels that are close to background.
- CDPHE is leaning toward not accepting the pondcrete, but approving inclusion of the sludge.
- We're always complaining about DOE not making decisions - if we postpone, we are doing the same thing.
- Not satisfied with the design. The source of the contamination is not isolated. How will the construction of this landfill affect remedial activities or investigation of the groundwater on-site? Should be evaluating the groundwater in conjunction with the solar pond closure.
- Would agree to go ahead without including pondcrete and sludge.
- We do need to get on with it. If it's cost effective - without pondcrete and sludge - let's do it.
- The intent of RCRA was not to permit the disposal of hazardous waste in the ground. On the economic side, storage or some other manner can be found as a solution to this problem.
- Mary Harlow read a memorandum from the City of Westminster stating its position on closure of the solar ponds.
- We may need to spend a few extra dollars and take a few extra steps to re-establish trust in the process.

### 4) Public comments:

- EPA is receptive to the concept of on-site disposal, as well as sludge and pondcrete being included, but still would like to review specific elements of the design.
- CDPHE feels that the proposal is protective of the environment, but questions whether pondcrete can be included because of the definition of remediation.

- Reservations about putting a cap over a contaminated area in the middle of an industrial site - and also how can you spend \$108 million to just put a cap over contaminated dirt and leave out the sludge and the pondcrete?
- The contaminants have no business in a metropolitan area and should be shipped out.
- Use the term "interim" - never say "long-term." Also, one of the decommissioned buildings could be used to store the sludge in isolation from groundwater for an interim period.
- Would rather see the funding put to better use - go ahead and cover it up and spend the dollars on funding cleanup of plutonium.
- Some of this technology has already been used at Savannah River - you might consider technology transfer. Also, in order to make a decision, we have to know the standard of measurement on the data used to identify contaminants.
- Before you do anything, find out how far groundwater travels and where.
- The proposal is legal and the design is protective; there will be an ongoing period of monitoring so that we will know if the cover is performing to our expectations.
- Oppose the proposal: anytime you put something in the ground it ends up staying there permanently; it's a lot easier to take care of waste that's stored above ground; and you can't honestly say it won't get into the groundwater.
- Rocky Flats has an indefinite responsibility to ensure the safety of public health and the environment for all designated approved uses of the site. That says you do the right thing that you possibly can. This is a flexible solution. If you do have a failure, this is not a catastrophic problem - you can find the failure with the proper monitoring system.

5) Identify key issues

- Pondcrete and sludge (include or not?)
- Should disposal occur at the site?
- Should storage occur at the site?
- Groundwater contamination (do we know enough; is the system protected?)
- Monitoring (how much, how long, how well?)
- Cost evaluation (can dollars be better used elsewhere?; life cycle costs?)

6) Second straw poll on recommendation as submitted by Environmental/Waste Management Committee (no consensus).

7) Vote on which alternate recommendation to be used as a starting point for crafting an alternate recommendation:

Eugene DeMayo's proposal (text submitted to CAB) - 5 votes

Tom Marshall's proposal (text submitted to CAB) - 5 votes

David Navarro's proposal (change the E/WM Committee's recommendation so as not to include the pondcrete and sludge, and keep indefinite monitoring) - 7 votes

8) Straw poll on David's proposal as is (no consensus).

9) Construction of alternate recommendation:

Preface: CAB advises DOE that if it chooses to use the proposed RCRA cap over the solar ponds at Rocky Flats, DOE should consider this project a means of providing low-maintenance, low-cost, long-term containment and storage of the solar pond materials contaminated with low levels of hazardous waste and radionuclides (from Eugene's proposal). Changes recommended:

--Change "long-term containment" to "interim containment."

--Remove "low-maintenance" and "low-cost."

Monitoring: Recommend indefinite monitoring.

Inclusion of pondcrete and sludge in solar ponds cap: CAB members spent time attempting to come to agreement on whether pondcrete and sludge should be included under the solar ponds cap. They discussed cost benefits, risks, impacts on groundwater, above-ground storage, off-site disposal, whether the storage should be temporary or permanent, and if interface between phases would satisfy CAB members' concerns. After discussion, CAB members were divided and did not agree on whether or not to recommend inclusion of pondcrete and sludge. A series of votes were then taken:

--Straw poll on inclusion of sludge, exclusion of pondcrete (2 "no" votes).

--Vote to move to super-majority (12 "yes" - 14 needed).

--Proposal to table the measure ("no" votes in majority).

--Proposal to state: "CAB is divided on whether DOE should include the pondcrete and sludge in the Solar Pond closure" (approved by consensus).

Other issues to be included in recommendation:

--Recommend a design for groundwater remediation (phase 2) before beginning closure (phase 1).

--Recommend a comprehensive monitoring plan before beginning closure (phase 1).

--DOE should consider this interim containment and storage.

--Recommend that DOE develop a plan to remove the Solar Pond cap and the contaminated materials under it before the planned conclusion of the interim period should it become necessary.

--Consider postponing decision for one year in order to look at other proposals (6 "no" votes).

--Recommend that DOE and the regulators be open to a better alternative proposal for Solar Pond closure should one arise.

--From Eugene's original proposal - paragraph 1 re: DOE's Responsibility for the Rocky Flats Cleanup; and paragraph 2 re: DOE's Waste Treatment and Storage Goals.

\* CAB members to review and give input to Eugene - possible recommendation for the

future.

10) Recommendation:

CAB advises DOE that, if it chooses to use the proposed RCRA cap over the Solar Ponds at Rocky Flats, DOE should consider this project a means of providing interim containment and storage of the Solar Ponds materials contaminated with low levels of hazardous waste and radionuclides.

CAB advises that monitoring be conducted indefinitely.

CAB is divided on whether DOE should include pondcrete and sludge in the Solar Pond closure.

CAB recommends that DOE have a design for groundwater remediation (phase 2) before beginning closure of the Solar Ponds (phase 1).

CAB recommends that DOE develop a plan to remove the Solar Pond cap and the contaminated materials under it before the planned conclusion of the interim period should it become necessary.

CAB recommends that DOE and the regulators be open to a better alternative proposal for Solar Pond closure should one arise.

**Action:** Motion to accept. APPROVED BY CONSENSUS.

**ANNOUNCEMENTS:**

- Reginald Thomas has resigned - number of CAB members now stands at 20.
- Community Outreach Committee is now meeting quarterly - next meeting date not yet set.
- Summit report-back meeting scheduled for April 10, 6:30 p.m. at the Arvada Center - agenda available at CAB office.
- Future Site Use Working Group - next meeting April 13, 6-9:30 p.m.
- FY 97 Budget Review and Prioritization, April 10, 1-7 p.m. and April 11-12, 8-4:30.
- Treatment Alternatives Workshop for Combustible Residues, April 19-20, must RSVP by April 12 (call Lisa for information)

**BOARD OFFICER ELECTIONS:** Linda Murakami re-elected as Chair (second term); Eugene DeMayo re-elected as Vice-Chair (second term); Kathryn Johnson re-elected as Secretary (second term); Jan Burda elected as Treasurer (first term).

**NEXT MEETING:** Date: May 4, 1995, 6 - 9:30 p.m.  
Location: Westminster City Hall, Multi-Purpose Room  
Agenda: Work Plan Presentation/Reports from: Site Wide Issues Committee;  
Environmental/Waste Management Committee; and Alternative Use Planning Committee

**ACTION ITEM SUMMARY: ASSIGNED TO:**

- 1) Give to staff any comments re: P/SNM Committee Work Plan - All Board members
- 2) Forward recommendation on buffer zone to DOE - Staff
- 3) Review issues re: FY 96 Funding Amendment - Site Wide Committee
- 4) Review paragraphs 1 and 2 from Eugene DeMayo's proposal - All Board members give comments to Eugene
- 5) Forward recommendation on solar ponds to DOE - Staff

**MEETING ADJOURNED AT 10:45 P.M.**

\* Taped transcript of full meeting is available in CAB office.

**MINUTES APPROVED BY:**

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Secretary, Rocky Flats Citizens Advisory Board

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**QUESTION AND ANSWER / PUBLIC COMMENT PERIOD:**

Plutonium and Special Nuclear Materials Committee Work Plan:

Question: Will the Plutonium and Special Nuclear Materials Committee send representatives to the meeting of the Advisory Committee on External Regulation of Nuclear Materials, a public meeting being held April 13 at the Holiday Inn-Northglenn?

Answer: We were alerted to the meeting, and a number of members may attend - but will not send an official recommendation.

Question: Will Kaiser-Hill be approached on what this Board is recommending? Answer: There are quite a few representatives from Kaiser-Hill here tonight, and I am sure they will be involved in anything we may recommend.

New Contractor:

Question: To Nancy Tuor, Kaiser Hill: Do you have any preliminary organizational structure charts yet? Answer: We're trying to get off to as quick a start as possible - within 10 days we expect to be able to distribute organizational charts, a discussion of the purpose and function of each of the major units, responsibilities of key individuals, and scopes of work of the major subcontractors. Those will be distributed at the site, and copies will be made available to CAB.

Regarding the Buffer Zone:

Question: Why did DOE's press release say that over the next two years, the company will release 4,100 acres of land to the public. That's not what the contract requires Kaiser-Hill to do. Answer: Kaiser-Hill can't release the land, they don't own it - DOE does.

Question: What can you do to make certain that this type of faux pas doesn't occur again in the future? Answer: In the future, access to information will not be as restricted.

Comment: The public sees this type of headline and assumes it's a done deal. That really interferes with the Future Site Use Working Group's ability to get public comment into its actual recommendation.

Comment: This caused me to question whether or not Kaiser-Hill got the message that public involvement in the cleanup process is important. This Board needs to have a role in ensuring that there is some sort of quality control in cleanup, and that they are not merely checking off boxes.

FY 96 Funding Amendment:

Question: Where can we get information on what the proposed changes to the environmental restoration program will be? Answer: We'll provide CAB with a copy (Jessie Roberson).

General Public Comment:

Comment: Many of these issues have been discussed for 20 years or more. You've got a problem to deal with - the public.

Question: What would you do if you didn't have any budgetary constraints? Answer: The proposal would be very similar to what we have now. We looked at the contaminant levels and balanced that against some of the urgent needs at the site. This seemed to be an approach that was reasonable. I would find it hard to justify digging up tons of soil with virtually no contamination, and to ship it off to some other state.

Question: What's your next priority? Answer: Draining plutonium nitrate liquids out of the tanks.

Comment: I compared the risks to the PRGs (Preliminary Remediation Goals) - by putting the pondcrete and sludge in the cover, it did not show a major shift in risk from the original site cleanup decision.

The Rocky Flats Citizens Advisory Board is a community advisory group that reviews and provides recommendations on cleanup plans for Rocky Flats, a former nuclear weapons plant outside of Denver, Colorado.

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