

ROCKY FLATS CITIZENS ADVISORY BOARD

MINUTES OF WORK SESSION

September 5, 1996

FACILITATOR: Reed Hodgins, AlphaTRAC

Tom Marshall called the meeting to order at 6:05 p.m.

BOARD / EX-OFFICIO MEMBERS PRESENT: Jan Burda, Tom Clark, Ralph Coleman, Eugene DeMayo, Tom Gallegos, Paul Grogger, Mary Harlow, Susan Johnson, Sasa Jovic, Jack Kraushaar, Beverly Lyne, Tom Marshall, LeRoy Moore, Linda Murakami, David Navarro, Gary Thompson / Jeremy Karpatkin, Frazer Lockhart, Gary Kleeman, Steve Tarlton

BOARD / EX-OFFICIO MEMBERS ABSENT: Alan Aluisi, Tom Davidson, Kathryn Johnson / Shirley Olinger, Tim Rehder

PUBLIC / OBSERVERS PRESENT: Kenneth Werth (citizen); Theresa Nash (DOE/RFFO); Dave Shelton (K-H); Larry Helmerick (DOE); Elizabeth Pottorff (CDPHE); Richard Murphy (citizen); Kelly Sexsmith (citizen); Charoen Sanpawanitchekit (citizen); John Lenhart (citizen); Ravi Batra (DOE/RFFO); Joe Rippetoe (IMAA); Patrick Etchart (DOE); John Corsi (K-H); Hank Stovall (City of Broomfield); Gretchen Williams (Broomfield); Mariane Anderson (DOE); James Horan (citizen); John Golden (CSM); Melody C. Bell (DOE); G. Arpula (citizen); Mike Bolles (DOE); Victor Holm (citizen); Ken Korkia (CAB staff); Erin Rogers (CAB staff); Deb Thompson (CAB staff)

PUBLIC COMMENT PERIOD: No comments were received.

PRESENTATION ON KAISER-HILL FY97 PERFORMANCE MEASURES (Theresa Nash, DOE): Theresa gave an update on the FY97 performance measures negotiations. Unfortunately, the performance measures have not yet been set; the negotiations have been postponed. Kaiser-Hill had submitted a draft budget including performance measures, but DOE asked them to resubmit a new proposal which would be more in line with site priorities. The new proposal is due from Kaiser-Hill on September 9, and when negotiations have finished, those performance measures agreed upon will be placed in the contract by October 1. DOE will return to CAB's meeting on October 3 to give a briefing on the finalized performance measures.

Q&A Session:

Question: Bill Kemper: How are the performance measures affected by budget delays?

Answer: Theresa Nash: In order to negotiate the performance measures, we have to know exactly what's going to be funded and what's not.

Question: Bill Kemper: I thought we were talking about past performance measures.

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Answer: Theresa Nash: No, we're talking about future performance, about communicating to the contractor exactly what we think is the highest priority work that needs to be done during the next fiscal year. Part of that is outlining exactly how we're going to measure them on those things, how we will determine the completion of those tasks. We're setting this up for the next fiscal year. At the end of the year, when these activities are due to be completed, Kaiser-Hill will then submit a document to us stating what they have completed; we will go back and evaluate and pay a fee based on that.

Question: Bill Kemper: Is there nothing to date that you can talk about, have they completed anything?

Answer: Theresa Nash: Certainly, we had measures in FY96. What I was asked to talk about today was the FY97 performance measures that are going to be put into place for next year. Frazer Lockhart: There's a summary sheet through the third quarter, the end of June, that tabulates the performance measures set for FY96 and how Kaiser-Hill did against them. I think they're running at about 85% of completion success on their performance measures. That can be provided to CAB. Theresa Nash: I would be happy to provide that to you if you want to leave information on how to contact you.

Question: Steve Tarlton: Were there any specific comments you could make about the comments you received on the performance measures, and adjustments that were made in response to those comments?

Answer: Theresa Nash: We received comments from both CDPHE and RFLII, and those were taken into account. Some are still being evaluated. Some of them brought up issues we had already identified and corrected, or were in the process of correcting. In other cases, questions were brought up that had to do more with a misunderstanding or misinterpretation of the material we gave you. Because you did not have the entire rating plan which went into further detail, there was a miscommunication about what you thought we were trying to do versus what we were actually trying. In other cases, there are only a couple out there that we are still evaluating and trying to determine the validity of those comments. They are all being addressed and being used in the process of developing these performance measures. We will discuss the disposition of each of those comments at the October 3 meeting.

Comment: Beverly Lyne: For the formal presentation next month, it would be helpful to have the acronyms spelled out.

Response: Theresa Nash: I apologize for that. We will change it for the next presentation.

Question: Joe Rippetoe: On the first cut some months ago, weren't there more than eight priority items, and have these eight priorities stayed about the same?

Answer: Theresa Nash: I believe we ended up with six in the top priority, but they have not substantially changed from what you saw previously. Those priority measures are still the ones we are working now. Until Monday morning when we get the new budget information and are able to compare that with the performance measures, I really can't tell you whether there's going to be any substantial change.

Question: LeRoy Moore: Evidently there's a problem between Kaiser-Hill and DOE, what is it?

Answer: Theresa Nash: They sent us work authorization documents, a budget proposal for FY97, and we did not feel it was closely enough aligned with what we believe are the site priorities.

Question: LeRoy Moore: In what ways?

Answer: Theresa Nash: In many ways. We had some disconnects. One of the things they initially did was try to come to agreement on the prioritization. If we have a different idea than Kaiser-Hill about what the priorities should be, then we need to come to more of an agreement.

Question: LeRoy Moore: You're still being general, can you be more specific than that?

Answer: Theresa Nash: It's difficult for me to be more specific because I'm not that involved in the budget process, and that's essentially a budget question. Frazer Lockhart: I can maybe help a little more, but I'm not sure it will answer your question much better. The work authorization documents group all the work on the site into 57 groupings. Out of those 57, we found only two or three that didn't have some kind of problem. The others all had some kind of disconnect, and we asked Kaiser-Hill to take another look. Some were major priority issues, like why is this plutonium stabilization so low down on the list, and some were just minor issues, perhaps a typo or an oversight. Throughout the proposal it was sufficient enough that DOE felt it was appropriate to ask for a resubmission rather than try to take on the issues one by one.

Question: Joe Rippetoe: There is one item that I remember on the last cut, it had to do with organizational operations such as document management and property control, has that completely fallen out or is it hidden in one of these issues?

Answer: Theresa Nash: This is not a list of performance measures, this is a list of the acceptance criteria that we use in order to determine which performance measures we want to accept. We use this prioritized list and we compare it against each of the performance measures Kaiser-Hill submits to us and the ones we develop ourselves to give them a relative ranking of prioritization based upon the criteria.

Question: Tom Marshall: Under the acceptance criteria, it addresses an important step in the ten year closure plan. Is that based on the Ten Year Plan, which has not yet been finalized or been through any public input?

Answer: Theresa Nash: This is in part based on, and contains major elements of Al Alm's criteria for the Ten Year Plan.

Question: Tom Marshall: He has certain criteria that the Ten Year Plan is supposed to meet, but my assumption is that their performance measures are supposed to be fulfilling a ten year plan. I'm wondering is that the Ten Year Plan that is out now? Because that Ten Year Plan is not finalized.

Answer: Theresa Nash: Yes, it's based on the draft Ten Year Plan. The plan is not finalized, but what we've found is that it was already very closely aligned with the site priorities anyway, so much of this might be a change in language.

Question: Tom Marshall: It leads me to believe that you've already made your decisions on the Ten Year Plan, that it's set and you're going to have Kaiser-Hill start developing its work plan to meet this draft Ten Year Plan.

Answer: Theresa Nash: This performance measure criteria is based on meeting the site goals and the site priorities that are out there. Those are in line with the draft Ten Year Plan, you're right, but the draft Ten Year Plan is draft, it has not been finalized. However, these criteria, while they are consistent with the Ten Year Plan and what Al Alm would like to see, they're also consistent with our site goals.

Question: Tom Marshall: Where do we find those site goals?

Answer: Theresa Nash: In various documents. You've seen them in ASAP, RFCA, everywhere.

Question: Tom Marshall: The assumptions criteria are numbered one through eight, are they ranked?

Answer: Theresa Nash: Yes, that's a ranking.

Question: Tom Marshall: Regulatory commitment is pretty close to the bottom.

Answer: Theresa Nash: We believe all these higher level items are aligned with stakeholder agreements.

Question: Kenneth Werth: You stated that getting hazardous material offsite is a ten year option, are you looking at ten years?

Answer: Theresa Nash: It is one of our highest priorities at the site, it is our number one priority at the site to get hazardous materials offsite. We're not planning on waiting the full ten years to do that. If the Ten Year Plan is finalized, we're still looking at getting the hazardous materials offsite. When we review performance measures for FY97, getting hazardous materials offsite within the constraints of the budget is our highest priority.

Comment: Kenneth Werth: I just got a technical summary report for surplus weapons usable plutonium disposition, and that's a high level waste. There's a real problem with your ten year agenda, because it's going to take anywhere from 15 to 30 years to research all these materials. The ten year agenda is not realistic.

Question: David Navarro: How do you give any kind of weight to things that are support items? At one point there used to be performance measures on work force restructuring. To my knowledge that's dropped off. Last I heard that was not set for a performance measure. Those kind of things, transitioning the work force to do some key things like eliminating the high risk, there needs to be support.

Answer: Theresa Nash: In order to get these things done, there are precursor things that must be done. We don't necessarily want to incentivize the precursor things, we want to incentivize the end result. That does not mean we don't recognize those things as important, and it doesn't mean we're not tracking them or not looking at Kaiser-Hill's performance in those areas. It simply means we don't believe those are things that should be incentivized.

We expect them to be accomplished under the contract as a matter of good business practice.

Comment: David Navarro: I'd like to offer an observation as a member of the Labor and Management Council at Rocky Flats dealing with work force restructuring and the worker transition issues. When that was a direct performance measure item, we got great support. When it dropped off, it's like pulling teeth trying to get support.

Response: Theresa Nash: We heard similar comments in about every area that we do not incentivize. We received requests for the development of an incentive performance measure for them. The general perception is that if money is not attached, then attention is not going to be paid to it. We are trying to change that perception through the development of non-fee performance measures.

Comment: David Navarro: I'd like to note there has been a phenomenal impact by it falling off the table. There are some very crucial things here that are not worker related, and if some of those don't get performance measures attached to them, I'm afraid the same type of thing will happen. We need to figure out a way to incentivize support items that are crucial to your key issues.

Response: Theresa Nash: There's a certain amount of what we call non-fee items for which we're considering developing a global performance measure. But we cannot make a performance measure for everything, we'd be going back to the M&O days. We want to incentivize the highest priority work out there, with the recognition that support activities must be maintained in order to accomplish those goals.

Comment: David Navarro: There is more than one way to incentivize things. If there are fees in the reverse mode where it is going to cost money for not doing things, that can be effective too.

Response: Theresa Nash: We are looking at alternate methods of incentivization, other than just fees, and we are trying to address this problem.

PRESENTATION BY ACTINIDE MIGRATION EXPERT PANEL (David L. Clark, Los Alamos National Laboratory; Bruce D. Honeyman, Colorado School of Mines; David R. Janecky, Los Alamos National Laboratory; Peter Hans Santschi, Texas A&M University): Two members of the panel, Bruce Honeyman and David Janecky, were on hand to give an overview of the background and goals of the Advisory Panel on Radionuclides in the Environment. The panel's major focus has been on plutonium, americium and uranium. Its goals are to review the status of knowledge of radionuclides in the environment, to advise the site on a path forward for remediation and management, and to provide an independent assessment. The panel was established in June 1996, and has since that time reviewed site documentation on radionuclides and held two meetings. Individual assessment of radionuclides in soils has occurred throughout the summer. The panel was established because of significant public concern about the issue of plutonium migration, and because remediation is required and there is a need to determine appropriate cleanup levels and remediation actions. The panel is also concerned about the possibility of the loss of "site memory" and hopes to integrate the information that is known into a cohesive memory. In the past, there has been inconsistency and narrowness of previous peer review and scientific guidance, questions about the behavior of radionuclides over a range

of environmental conditions, as well as a controversy about storm events in spring of 1995. The panel believes there is a need for a site conceptual model for radionuclide fate and transport that is comprehensive and has a strong scientific basis, could pass outside expert peer review and is defensible, and frames the issues well. Panel members will provide technical input to negotiations on action/cleanup levels, develop focused remediation strategies for plutonium and americium-contaminated soils, and establish a basis for public confidence in decisions. The panel believes the site goal should be: "clean it up once, do it right and do it in a timely manner." Panel members feel that there is no historic site expertise on radionuclides in soils, particularly relating to chemistry and transport issues; that radionuclide issues need to be managed as an integrated whole; and that the site needs the right amount of technical assessment necessary to support remediation and closure. So far, the site's overall assessment, knowledge and understanding of water flow and plutonium distribution and the physical processes has been strong. However, its knowledge and understanding of plutonium speciation, fate and transport has been very weak. Speciation, fate and transport issues are important because depending on the form of plutonium, it may either move quickly or slowly. Knowing more about these issues will help to design efficient, cost-effective remediation systems, and to predict radionuclide fate over a wide range of environmental conditions. The panel will deliver by September 30 the following: 1) an assessment of draft site technical document, *Evaluation of Existing Data on Actinide Migration at Rocky Flats*; 2) an assessment of issues associated with radionuclides in the environment; and 3) recommendations on a path forward.

Q&A Session:

Question: Joe Rippetoe: At least two on the panel might not have clearance to get the materials you might need. Are you having difficulty when you request something, is it given to you in a timely manner?

Answer: Bruce Honeyman: Yes, in fact we are given more materials than we would ever want to look at. One of the criteria for us being on this panel is that Kaiser-Hill take us seriously, and that means they will respond in a timely fashion to our request for materials. One of the challenges has been finding documents that are scattered throughout the literature, there are historical things that we're still trying to dig up. There's work that was done 30 years ago that is very applicable today. That's part of the loss of site memory, and we're trying to reconstruct that. David Janecky: As you mentioned, there is potentially a clearance issue here, and that is an advantage that Dave Clark and I have in being at Los Alamos. In reality, there are no documents I know of on the environmental distribution of the radionuclides and environmental characterization that are classified. It's surprising how many things that you might at first think might be classified aren't.

Question: Susan Johnson: Have you assessed the RESRAD model, and if so what is your opinion?

Answer: Bruce Honeyman: We have informally assessed it. Our primary charter was to look over the historic data set of radionuclides in the environment at Rocky Flats, and we were also asked to look at the RESRAD document particularly with respect to the geochemical parameters that are part of RESRAD.

Question: Susan Johnson: What do you think of the parameters they've used?

Answer: Bruce Honeyman: There are a lot of parameters. The ones I feel competent to talk about are the geochemical parameters, not biological. The parameters being used in RESRAD are commensurate with the state of knowledge at the site. I believe they are good values.

Question: Bill Kemper: You use the term historical site expertise, what does that mean?

Answer: Bruce Honeyman: Of the people who over the past 10 years have been conducting research and investigations into radionuclides in the environment at Rocky Flats, the expertise was not a combination of understanding speciation and transport together, which is required to understand fate and transport.

Question: Bill Kemper: I wonder whether we're attacking the right problem to make a difference in the cleanup. Just knowing what's distributed in the soil isn't nearly as important as the effects of plutonium and to what level we should reduce it. Who appointed this panel and who funds it?

Answer: Bruce Honeyman: The panel is being funded by Kaiser-Hill, but I want to emphasize we are an independent panel.

Question: Steve Tarlton: One of your objectives is to provide technical input into negotiations, and your report is going to be submitted September 30. Our public comment period on the action level framework end on October 4. How will your information help us to make that decision?

Answer: David Janecky: Today we received the documentation you are looking at, so we're in a similar position. Our evaluation is that with the calculations that are being done, the information we have is probably as good as you can do with RESRAD. We've worked a little bit with the site trying to evaluate, and calculate from the existing data. It's conservative compared to what's been used. We've emphasized speciation, the need to know how much plutonium is there and where it is, and the need to know what's moving things. The next step in order to make remediation decisions is, what is the speciation. We have gone beyond the response to the initial evaluation of cleanup levels. But we can't do a good job with the time we have.

Question: Steve Tarlton: Is the answer, you're not going to be able to help us at all now, but that maybe in a couple of years you'll be able to?

Answer: David Janecky: We can certainly point at where the weaknesses are now, and better identify that.

Question: Steve Tarlton: Are the weaknesses in the way the action levels were calculated, or something else?

Answer: David Janecky: There are sites that have been cleaned up two and three times. The action levels defines a certain set of high priority items, which sources to clean up first. Over the long-term, there will be revisions. This will help you prioritize in the near-term.

Question: Kenneth Werth: In your report, are you going to treat these radionuclides as a high-level waste or a low-level waste?

Answer: Bruce Honeyman: Our report is an evaluation of the existing data set for radionuclides in the soils. They are low-level.

Question: Kenneth Werth: Are you finding more hot spots than was originally thought?

Answer: Bruce Honeyman: We're not doing additional investigative work, so our reports are constrained to the existing data. We've looked through the data and as far as we know all of the hot spots are reported. We're evaluating the movement of radionuclides, and one part of the information given to us is the distribution of plutonium in the soil, including hot spots.

Question: Kenneth Werth: But you're going to have to find out over a 30-year period how far the radionuclides have leached, or is it staying put?

Answer: Bruce Honeyman: That's our goal, to assess the extent to which we can make those evaluations. In the areas where we can't, what is needed to be able to.

Question: LeRoy Moore: I'm going to back up because there are some people who may not realize the background of this conversation. Iggy Litaor is a scientist who recently left the area because his funding was taken away. He found that plutonium was migrating in the soil at Rocky Flats. Almost as soon as he found that out, his work was taken away from him, his graduate students from the University of Colorado had to be dismissed because there was no more funding, and his research project was undercut. When we brought that up at a meeting here, someone from Kaiser-Hill lied to us in the meeting and told us that the funding had been restored and his work was proceeding. It took about a month to find out in fact the funding had been restored to a small extent and he was able to continue for a while. There was a lot of controversy about it because Iggy was convinced that he had discovered something new about the characteristic of plutonium on the Rocky Flats site; that is, that it could migrate in a heavy rain. That's an important finding if it's true. Kaiser-Hill, under the pressure of this controversy, decided to appoint a panel to review Mr. Litaor's work. Tonight I hear it differently, you're assessing all of the material about plutonium in the soil at Rocky Flats and the water, which seems to be a bit more than simply an assessment of whether or not Mr. Litaor's findings are accurate. It sounds like you believe that in fact plutonium moves in the soil. Ward Whicker from CSU may also have discovered this even before Iggy Litaor had done his work. It bothers me that we're not really talking about the issue, the controversy about the spring 1995 rainstorms. The question is whether a panel selected by Kaiser-Hill is a reliable panel. From your vitaes, you appear to be the kind of scientists anybody would appoint if they wanted independent observers. But the question remains about where can we get credible study of what's going on at Rocky Flats, and how can we rely on what you tell us. You haven't really told us anything except that you have some uncertainty about speciation and therefore even greater uncertainty about fate and transport. I would like to know if you've made an evaluation of Iggy's work, and whether you're really coming up with objective information or trying to produce a document that satisfies the goal of fitting into the site cleanup plan. That disturbs me. It sounds like your work is precluded ahead of time. I want to know how did you assess Iggy's work, and are you going to give Iggy a chance as soon as you produce your paper to comment on it.

Answer: Bruce Honeyman: When the panel was convened in June, one of our resources was Iggy. We asked him to supply us with all the materials he wanted us to evaluate. That material was added to everything else that was available about the site, because as with any scientific work, it has to be put in the context of what has been done before. One of the

products of this document will be an overall assessment of the current data, including Iggy's. He spent about five years studying actinides at the site. Our assessment is that Iggy was a good technician, and he did technically a good job at setting up monitoring and sampling stations. However, the thrust of his work and the his scientific attitude toward radionuclides in the soil is not commensurate with prevailing understanding of what is needed in order to understand fate and transport.

Question: LeRoy Moore: That's why he was unable to get his work published in peer review journals? He did get it published in peer review journals, didn't he?

Answer: Bruce Honeyman: That's true.

Question: LeRoy Moore: So that's not the best contemporary science?

Answer: David Janecky: Iggy contributed a lot to revising our understanding of where plutonium is around Rocky Flats. There is some controversy with his previous works, but that's common in scientific areas. There's also a strong piece of work on how things transport in the soil, how the water moves, what are the bulk levels of plutonium in the systems, and initial measurements on the spring 1995 system. The problem is that because the chemistry of the system was not heavily part of the program, we can't evaluate the whether the hypothesis is the best interpretation of the data. The right measurements were not made on that type of a system. I am not criticizing Iggy's work at that point. He measured something, he has a hypothesis, it's now up to the scientific community and DOE/Kaiser-Hill to evaluate it based on how it should be fixed. That requires chemical analysis and evaluation not within the scope of what the plant can do. One of our drivers is to evaluate what we think those should be. That's why we believe plutonium speciation is critical to making the next step, to testing those hypotheses and evaluating next steps. One problem is the constraints on the work and evaluation of environmental conditions was fairly narrow. This was a synaptic view of what is there and what is happening in real time on a gross scale. The question that was raised by the 1995 event points back at the program plans - what about changes in climate, what about changes in the order of storms coming through this area, how does that affect us? From that perspective, those issues were not included in all of this work. Those are the serious holes in terms of fate and transport. That's what we're looking at as a future. We've got a great basis on which to go. Iggy's work is a large part of that. The other potential problem that hasn't really been evaluated is Iggy's work was centered on the hillside at the 903 pad. What about the other parts of the site? How does that data integrate? Work at Rocky Flats, as at many sites with different sciences, has intense spotlights on a few places. Our job is to look across all of that and try to find out where the problems lie, where we should look, and how to go forward.

Question: LeRoy Moore: It sounds like you might propose that since there are so many unknowns, more work needs to be done, and we're not ready to move as fast as people are talking about moving, because we don't know what we're talking about.

Answer: Bruce Honeyman: What this panel is doing now is something that should have been done 10 or 15 years ago. There's no difference between trying to understand radionuclides in the environment than building an airplane or constructing a waste treatment plant.

Question: LeRoy Moore: You exist only because Iggy did his work and there's a

controversy that brought you into existence.

Answer: Bruce Honeyman: If Iggy had done his work completely, we wouldn't have this controversy. You haven't seen the dynamics between the panel as a whole, or the panel and Kaiser-Hill. As is the nature of science, we're critical with each other and with Kaiser-Hill. Our goal is to understand what's going on at the site. The best way is to find the truth. Iggy would have made our jobs a lot easier if he had been up front about his data and provided data so that we could evaluate it. With scientific issues, if you make a claim, you have to back it up. Personally, I was incensed by having a claim made and not having it backed up - that's part of the scientific discourse. Scientists argue with each other all the time. But we're trying to find the truth. Believe me, if I thought plutonium was screaming offsite, I'd be the first one to call the governor. I live here and personally I think the waste disposal practices of DOE have been appalling in the past. But we're trying to do something about it.

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