

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.

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 vitae, 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.

[Please go to Part II](#)

[Home](#)

Rocky Flats Citizens Advisory Board

Minutes of Work Session

September 5, 1996
Part II

[Click here to go back to Part I](#)

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.

Question: Jack Kraushaar: Are you going to look at the uptake of plutonium and other metals into plants and its flow through the ecosystem, or are you just going to consider soils and transportation within the soils?

Answer: Bruce Honeyman: Our charter and our expertise is the geochemical behavior, but the biotransformations are an important part of the issue. We aren't going to look into that, but one of the things we will do as a panel is assess holes in the data knowledge. It might be useful, in terms of long range remediation strategies, to include plant uptake. We're not going to do it in this panel, it's one of our recommendation for work to be done.

Question: Hank Stovall: If there's any question about whether or not plutonium got offsite, I can tell you that plutonium did get offsite. We shut our water system down because the reading of plutonium in our bypass ditch went from less than .05 picocuries per liter to about .2. If you're not aware of it, you might want to check with CDPHE and

others. Our concern was big enough we shut down the water system to our public.

Answer: Bruce Honeyman: I have always believed that the chemical environment is in flux. Three years ago Iggy and I had a talk about plutonium moving when he said that it was fixed in the soil and I said it doesn't make sense geochemically, physically. What I was responding to here was the large amounts of radionuclides that Iggy was postulating were leaving the site. A couple of picocuries per liter, I know that occurs. David Janecky: We are comfortable with the fact that yes, plutonium was moving around. The question is how much and how do you calculate how much went offsite or how much was moving onsite and potentially how much could go offsite. The only viable path forward from here is to look at where we are. Our job on this panel is to evaluate what is the best recommendation of what should be done for remediation, and how best to respond to events so that you don't see any plutonium in your water system.

Question: Eugene DeMayo: In this field it seems we have a limited understanding of what happens to the plutonium when it changes. I wonder about your goals, do it right, do it once and get it done on time. I have a problem with that, because it seems that the second two parts of that preclude the first part, which is if you want it done right you may have to do it more than once, and it may not get done the way you want because you don't know what you're dealing with. We have a Ten Year Plan and I think it's ludicrous. It's good to try to do these things and try to do it right, but we don't know enough to do it right the first time in a limited amount of time, and that applies both to the Ten Year Plan and to deciding what plutonium is doing out there. There's a lot of ego and pride put into getting it done right the first time on time, and that works against us as a society because we're not really capable of that. Politically it looks good and sounds great, but I don't see how it's possible.

Answer: Bruce Honeyman: There's an old saying in building houses: measure twice, cut once. What we're trying to do is the engineering or science version of that. I'm saying do whatever you're going to do when you have your best understanding of what needs to be done. There's always going to be a trade-off. Good engineering is based on two things: 1) a thorough understanding of the basics of what's going on, and 2) building in some sort of a safety factor. Nobody wants to spend money doing more studies if you don't need more studies. You want to do tactical studies and you want to have them done with a specific purpose and a specific objective. David Janecky: When I look at that goal statement and I look at doing things in stages, my idea is to identify a high priority problem and then fix it. Where are the problem spots we know of, how do we strategize? Budgets are going to constrain us, and the effort has been put on where we know the bit problems are.

Comment: Eugene DeMayo: We deal with DOE and Kaiser-Hill all the time, and as a community member I haven't seen any particular need to have Rocky Flats cleaned up in ten years. If we can, that's great, but more important, clean it up right. From what I can tell, we don't have the technology to clean it up right now.

Question: Elizabeth Pottorff: You mentioned uranium in your introduction, could you tell us about what you're studying as far as uranium goes?

Answer: Bruce Honeyman: We're looking at plutonium, americium and uranium. We've focused on plutonium tonight because it is the radionuclide that is primarily on the public's conscience, and also it is a more complicated radionuclide to understand. What we're doing about uranium is looking at the body of work and have come up with conclusions about uranium mobility in the soils, as well as americium. David Janecky: There is more data and more potential for plutonium mobility, so that has become the focus. Americium has been ignored because if you understand the one, you start to understand the other. Uranium has not been as highly charged in terms of concerns about it.

Question: Susan Johnson: David, what do you think of the RESRAD model and the parameters?

Answer: David Janecky: RESRAD is a good baseline model. It has some validity to it. You have to understand it's also flawed like all models. I look at RESRAD like a business plan, what are the projections - it's a baseline for comparison. Because of that, you need to also look for where it doesn't work.

Question: Susan Johnson: What are its weaknesses?

Answer: David Janecky: One of the weaknesses is in terms of dealing with things like plutonium that have a large particulate potential for transport. That's both a plus and minus, because the particulates are not as mobile as the species that are dissolved. I'm not sure what changes I would propose.

Question: Susan Johnson: Do you think it's scientifically reasonable for them to be setting these soil action levels with this much uncertainty?

Answer: David Janecky: If you don't set it, you can't evaluate what you're doing.

Question: Kenneth Werth: I found your remarks about Iggy misleading. He was cut off at the knees when he wanted to extend research on plutonium migration. Iggy was working as an independent, and you are working for Kaiser-Hill.

Answer: David Janecky: I'm sorry you feel we're working for Kaiser-Hill, because Kaiser-Hill has come to see that we can be as critical of them as we are of other people. In order to have people here, somebody has to pay for it, the money has to come from someplace. Iggy was operating as an independent, and that had a tight focus. My scientific evaluation

of that is that pieces are missing, and there are capabilities that did not exist to evaluate plutonium mobility. As a scientific reviewer, had I received a proposal from Iggy to do the next step, I don't think it would have passed my review. I don't believe that I have any long-term right to a job or to a set of research funding. I take issue with statements that because I developed something, I have a right to it. Somebody makes a decision and I have to make the next step, to decide what to do next on the research. That's the reality of scientific life.

Question: Kenneth Werth: Iggy was doing research two years before Kaiser-Hill even came on board. How can you dismiss his work and state your own conclusions?

Answer: David Janecky: I haven't dismissed his work. Bruce Honeyman: My understanding is that Iggy was supported by the DOE complex in one way or another for the entire time he did his work, by EG&G or Kaiser-Hill, just as we are. I want to know what the truth is about what's going on with radionuclides at the site. I have no bones to pick with Iggy. He did a good job at looking at water flowing through the site. Three years ago I told him he had to look at chemical speciation; he ignored me. He ignored a review in 1992 that said he should look at chemical speciation. We now know a lot about where water's going at the site. But we don't know about the chemical form. The good that he did with water transport is offset by the fact that there is essentially nothing on chemical speciation.

Question: Beverly Lyne: I was at the meetings in June, and it was great that CAB was invited. I wonder why did you meet in Los Alamos for your August meeting, where is the public participation, I would like to know what your budget is, and what's the plan for continuing to involve the Board?

Answer: Bruce Honeyman: Our budget was \$50,000 for four people, that includes overhead and benefits. It comes out to about two weeks per person; we have each spent far more than that because we're interested. It was convenient to sit down and talk about technical issues rather than writing notes or talking on the phone. Some of our meetings, it just was not efficient to have a lot of people there because they were very technical discussions. For future participation, we believe that public participation is important to what we need to do. Our panel funding is up at the end of the month, we're trying to find ways to continue the funding and to find ways to be more effective at addressing your concerns. We want to know what is important to you and how to work on some of these issues. David Janecky: Dave Clark and I didn't have any money to travel. It was important to talk face-to-face, and Bruce and Peter were able to come down to Los Alamos to meet with us. We need input on whether what we're looking at is what is perceived or what are the questions you have. Knowing what the concerns are is good input for us.

Question: Gary Thompson: I understood from Dr. Litaor that migration was more

flotation, because of the water. My recollection is that the plutonium had not migrated much at that point. Now there is concern that it is moving around a lot. Apparently plutonium does more moving than we heard in the past.

Answer: Bruce Honeyman: If you understand the dynamics of the system, the fluid flow and the speciation, the spring event shouldn't come as a surprise. Good engineering starts out with knowing what you're dealing with. Plutonium environmental chemistry is complicated, but it is understandable. There's enough known to chart a path forward. But we probably don't know enough to know with absolute certainty what is going to happen. If you know the detailed chemistry and the physics, then you can anticipate.

Question: Tom Marshall: There is a history of problems regarding research in the DOE complex, where those hired to do the research are expected to suit the wishes of those who are paying them. A number of us will look closely at the work you do, and it will be up to you to demonstrate that you're being objective in your analysis. Regarding the RESRAD model, Bruce, you mentioned that the geochemical parameters were consistent with the state of knowledge at the site now and seemed to indicate it was okay. Earlier, you said the state of knowledge at the site regarding speciation is not good. That raises a question. You also mentioned that Iggy Litaor did not provide data to back up his work, and since heard you talk about the fact that he did not look at speciation. However, it's important to remember that his funding was cut and he was not allowed to complete his studies. My question is, you indicated you don't think there is a need for further study, is that true or are you going to recommend following up this issue?

Answer: Bruce Honeyman: There are holes in the data, so one of the things we are assembling is a list of recommendations for the work. I don't want you to leave us with the feeling that we know everything about radionuclides in the soil, or that nothing is known. We're somewhere in the middle. Regarding RESRAD, two weeks ago Peter and I were asked to look at a draft document RESRAD. We assembled a list of questions that we sent back to Rick Roberts. We looked at the geochemical parameters that went into the model. Within the bounds of what I understand about the site and given the large uncertainty in studies, I feel okay with what they're doing. Iggy has had six years to look at speciation. You don't do speciation at the end, you do it at the beginning. It's a fundamental difference in philosophy, and I personally feel that was a mistake. David Janecky: There is a calculation that was stated, that half a curie of plutonium was transported, the implication is offsite. The statement was made, but we were not given information on how that was interpreted. That's a big question to us.

Comment: LeRoy Moore: I would like you to write to Iggy Litaor and ask him to send a letter that you can make as part of your report explaining to CAB why he hasn't provided information to you. I would also like you to invite Iggy Litaor to comment on your paper.

Response: David Janecky: Okay, no problem.

Question: Mary Harlow: There was a fire at Rocky Flats this past week, a grass fire, and I think it would be a prime time to take some samples from the plants, and also to be able to monitor that area for erosion and the effects of rainfall. Are there any plans to do that?

Answer: David Janecky: We haven't made any proposals. That has a lot of merits to it. It meets some areas that we had identified as needing more information. There are probably some measurements already going on. Frazer Lockhart: The fire was not in an area that's known to have any plutonium. I don't know what's being pursued by Kaiser-Hill, but it would surprise me if they are pursuing it.

Question: Tom Marshall: That's in the southern part of the site, you're saying there's no contamination?

Answer: Frazer Lockhart: As far south as that was in the buffer zone, there are no identified elevated plutonium levels. The plutonium distribution goes mostly out to the east and southeast. This was well south of Woman Creek.

Question: Beverly Lyne: Can you tell me who asked you to review RESRAD, what agency and when?

Answer: Bruce Honeyman: Rick Roberts, with RMRS I believe. I can't remember when they asked, about the second week in August. David Janecky: Some questions about RESRAD were asked at the first meeting we had in June.

PUBLIC COMMENT PERIOD:

Comment: Kenneth Werth: I was wondering if the Board would consider hiring an independent researcher?

Response: Tom Marshall: Right now the Board is considering that, we have a certain amount of money we can contract out to have research done. We are putting out a preliminary request for expression of interest. We'll be developing specific RFPs from that. We have not talked about doing an analysis of Iggy's work specifically.

Comment: Kenneth Werth: Not Iggy's work, just see if a couple of different members would look into what these four on the panel are saying.

Response: Tom Marshall: You're talking about members of the Board taking a close look at what they're saying. It sounded to me like there was a fair amount of interest expressed by the Board, so I assume we will be following up on that. The E/WM Committee is the

logical place to take a look at that. We will be discussing our work plan scope of work, and we can make sure this issue comes up for consideration.

Comment: Kenneth Werth: I'm concerned about fire and wind out there too, because they get 100 mile per hour winds out there. What kind of effects will that have? All they're doing is looking at water or floods. I want them to look into fire and water. Chernobyl had a huge fire, and it blew it into four different countries, and they found a high rate of thyroid and all different kinds of cancer.

Response: Tom Marshall: As I said, we will be discussing issues at our retreat, and we can respond to your questions at our next Board meeting.

ENVIRONMENTAL/WASTE MANAGEMENT COMMITTEE - CLEANUP PRINCIPLES AND CRITICAL REPORTING ELEMENTS (Tom Gallegos): CAB completed its work on this recommendation, the final step in completing its work plan for last year. The purpose of this recommendation is to incorporate public/stakeholder perspectives into DOE's process of determining appropriate cleanup levels. These principles are meant to provide guidance to DOE and regulators of Rocky Flats cleanup activities, and to provide standards for important information that should be considered in each cleanup project. Highlights include:

- Health and safety during cleanup: Safety management must be equally and consistently implemented to ensure maximum health and safety protection for workers, the public and the environment. CAB believes retention of a trained work force will help achieve this goal.
- Waste generation: Cleanup should not generate more waste than necessary to meet cleanup goals.
- No further degradation of the environment: Protecting natural resources is a priority in selecting cleanup alternatives, including ecological, geological, hydrological, and air resources. Precautions must be taken to prevent cross-contamination, and to ensure that no new or previously cleaned areas are contaminated.
- Technology utilization: An inventory of cleanup needs should be matched against current technology to identify where new technologies may be more cost-effective or efficient.
- Background levels: CAB believes the ultimate long-term goal for cleanup should be to achieve a level of residual contamination equal to or less than average background of radiation for the Front Range, when technology allows for this. In

the near-term, standards must be set that are protective of human health and the environment.

- Risk levels/land use: Residual contamination and associated health risks should be compatible with future site use.
- Budgetary considerations: Budgetary constraints should never affect the actual level of risk reduction.
- Institutional controls/risk elimination: Risk elimination is the preferred method of controlling the hazards of contaminant escape, and all restricted use areas must require an institutional control program to provide monitoring, testing and contingency plans in the event of a contaminant release.
- Timing of decisions: Cleanup activities and environmental restoration must be completed before future land use planning is finalized.

***Decision:** Approve Cleanup Principles and Critical Reporting Elements recommendation, incorporating changes to the text. APPROVED BY CONSENSUS.*

PRESENTATION BY NATIONAL ISSUES COMMITTEE ON PRIVATIZATION

(Tom Clark): Tom gave an outline and overview on the background of privatization issues. Generally, privatization is considered to be a government agency selling a portion of its operation to a private sector organization, thus allowing market forces to define the price, nature and quality of the service. Rocky Flats is considering privatization for many of its future projects. Currently, the National Conversion Pilot Project (NCP) is one example of a privatized project. Rocky Flats has set the following requirements for privatization in waste management: 1) define the product DOE wants to buy; 2) characterization of the waste stream to be treated; 3) well-defined regulatory framework; and 4) financial guarantees to protect investors. The goals of privatization are to be cost-effective, comply with pertinent laws, ensure high safety standards are met, help the schedule acceleration, and mortgage reduction. Possible privatization projects for Rocky Flats' Ten Year Plan include: treatment and disposal of pondcrete/saltcrete; construction and operation of plutonium vault; D&D of buildings 779 and 886; water treatment of OU 1 and OU 2 areas; construction of TRU waste repackaging/storage facility; construction of both low-level waste storage and low-level remediation waste storage facilities. The National Issues Committee will continue to study this issue and will provide a recommendation to CAB in the near future.

Q&A Session:

Question: Ralph Coleman: Under the third party financing, does it imply that the work

doesn't have to get paid for? You're going to stretch the budget, but somewhere down the line that all has to be paid for, eventually DOE has to pay for it.

Answer: Tom Clark: It has to do with where the dollars are coming, either a huge amount of money in the beginning or a future cost at the end. Mike Bolles: We feel that every dollar we take out of a certain area and put into risk reduction is a better return for the Department. This way we can get someone else to front the capitalization costs, and we can pay the bills later rather than sooner.

Question: Kenneth Werth: In terms of privatization, have you ever looked at the Corps of Engineers? The Corps is looking for work.

Answer: Frazer Lockhart: Yes, they have done some work at Rocky Flats and at other DOE sites. Since they are a governmental agency as well, I don't know that it falls under the definition of privatization.

Comment: Tom Marshall: You're talking success in terms of being cost-effective. We need to look at success in a number of ways, and one is that we have a good cleanup that is protective of public health and safety and the environment both during the cleanup and when it's completed. That means we must make sure there are avenues for public input.

Question: Tom Marshall: When you say accountability of the private sector, what kind of accountability?

Answer: Mike Bolles: The financiers have a level of scrutiny attached in order to agree to lend money. The contractor must agree to work with regulators. With privatization, you don't pay the contractor until they do the job and meet the specifications. They are strongly motivated to do the job properly and on time and within budget. They are financially accountable.

Comment: Tom Marshall: If Kaiser-Hill was doing the work that MSC is doing, I wonder whether there would be union people performing that work. That's something I would be interested in finding out.

Question: Mary Harlow: Did anyone mention the loss of history when you privatize in a certain cleanup area, what happened, what was taken out, what methods were used, where did it go? Doesn't that information get lost when you privatize?

Answer: Tom Clark: I didn't find anything about that in my research.

Comment: Ralph Coleman: One thing we're missing, some private contractors have experts in doing specific jobs but sometimes it's pretty hard to hire those people because

they're working somewhere else. There are some things that have to be done that nobody at DOE or Kaiser-Hill has ever done. A private contractor has employees with the skills you need.

Response: Tom Clark: In general we're moving from government-owned contractor-operated, to contractor-owned contractor-operated, that's what privatization is looking at. Some of the outsourcing functions may not fit that. Mike Bolles: With privatization the company brings the capital to the job, we pay it off with an amortized cost such as a fee. Mariane Anderson: We pay more in terms of a product rather than a process. The contractor owns the process, and we pay for the product.

Question: Steve Tarlton: I see possible conflict between minimizing risk of failure and being innovative, trying something that you can't make work within the DOE system, do you have any comment on that? The minimum risk approach is what we're doing now. What we're trying to do in privatization is to break that mold. To me there has to be risk to have a reward.

Answer: Frazer Lockhart: There are many things that must be balanced, that's part of the struggle.

Question: Joe Rippetoe: I have no problem with privatization, but four to six months ago I hand-carried a letter to CAB requesting a detailed update on the MSC program. I would like an update on what phase they're in, are they standing on their own feet, I have problems with them not being unionized, and about hiring the right kind of people. I would just like accountability and a program presented about how they are doing.

Answer: Tom Marshall: I agree that we should get information on that and follow up on their progress. The problem now is there is a lot going on, important things. But we should consider your recommendation.

Question: Tom Gallegos: Couldn't some of Hanford's experiences be rolled into a set of requirements for considering privatization projects, that might be a good project for some committee?

Answer: Tom Clark: There's a lot to be learned from looking into other's homework on this issue.

Comment: Jeremy Karpatkin: A lot of this within DOE is still a work in progress. The issue of third party financing, for example, to what extent is the government prepared to guarantee, even under certain circumstances, something beyond the fiscal year. Absent that guarantee, what kind of funding can a company get in the private capital market? All of these issues are dynamic.

BOARD BUSINESS:

- Approval of retreat agenda. CAB approved the agenda, with one addition to Session 1. Board members were asked to fill out and return the Board evaluation questionnaire which was included in the packet, and return to staff immediately.
- Announcement of facilitation training. The Board has agreed to provide facilitation training for its members. Staff will set up a date for the training, sometime in October. Training is mandatory for CAB co-chairs; however, all Board members are encouraged to participate. A form was passed out to all CAB members to give staff their preference for the date of the training. Members were asked to complete the forms and return to staff as soon as possible.
- Update by Health Committee. The literature review was completed, and formally presented to the Board. Linda Campbell, a nursing student, prepared the literature review and Beverly Lyne edited. Also, Linda Campbell must do a clinical preceptorship this semester, and she will do that work with the Health Committee. The preceptorship is an advanced level community health course in the community health nursing masters program. Linda has 150 hours to devote to Health Committee projects at no cost to the Board. In addition, the Community Needs Assessment completed this spring is currently at DOE-HQ awaiting approval.

EXECUTIVE SESSION:

Update on Soil Action Levels consultant/approval to fund additional dollars, if necessary. Contingent upon an acceptable presentation on Monday night, the Board members present will determine whether or not to ask the consultants on the Soil Action Levels to prepare a report. If the Board decides to, the consultants will be given guidelines toward preparing that report and ask them to come up with a breakdown of the costs. The contract will not exceed \$4,000.

Update by Personnel Committee. The Board is approving the advertisement recommended by the Personnel Committee with some possible revisions, the advertisement will be run in local papers only.

NEXT MEETING:

Date: October 3, 1996, 6 - 9:30 p.m.

Location: Doubletree Hotel, 8773 Yates Drive, Westminster

Agenda: * *Presentation on Kaiser-Hill FY97 Performance Measures; Recommendation on Soil Action Levels; approve CAB 1997 work plan*

ACTION ITEM SUMMARY: ASSIGNED TO:

- 1) Revise and forward to DOE recommendation on cleanup principles- Staff
- 2) Prepare and return Board evaluation questionnaire to staff - Board members
- 3) Revise retreat agenda - Staff
- 4) Complete form regarding preference for facilitation training - Board members
- 5) Revise and run advertisement for personnel opening - Staff

MEETING ADJOURNED AT 10:00 P.M. *

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

RESPECTFULLY SUBMITTED:

David Navarro, Secretary

Rocky Flats Citizens Advisory Board

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.

[Top of Page](#) | [Index of Meeting Minutes](#) | [Home](#)

[Citizens Advisory Board Info](#) | [Rocky Flats Info](#) | [Links](#) | [Feedback & Questions](#)