

MINUTES FROM THE FIRST MEETING
OF THE
BLUE RIBBON PANEL ON EMERGING TECHNOLOGIES FOR
THE TREATMENT OF MIXED WASTE

Department of Energy
Washington, D.C.

June 22, 2000 - 9:00 a.m.-2:00 p.m.

CALL TO ORDER AND INTRODUCTIONS

Chairman Ralph Cavanagh called to order the first meeting of the Secretary of Energy Advisory Board's Blue Ribbon Panel on Emerging Technological Alternatives to Incineration. He welcomed the members of the panel, honored guests, members of the press, and members of the public to this meeting. He advised that the Panel is charged with a complicated and challenging review. The Secretary has asked for recommendations by December 15, 2000. Given that short time frame the Panel's approach must be organized and disciplined. A tremendous amount of information must be reviewed and considered in a relatively short timeframe. He suggested spending most of the meeting time on procedural matters to ensure that the task is completed efficiently and on time.

The Chairman indicated that Panel members would likely be contacted by entities with commercial interests on the Panel's topic. He requested that Panel members indicate to such entities that all information submissions be made in writing and submitted to Ms. McCann. This panel must go to Idaho Falls and Jackson, as part of the effort to make itself available and listen to the folks in the communities. One of the challenges in reviewing technological alternatives to incineration will be to take into account a host of legal and environmental requirements.

A Transcript of today's proceedings will be available in the Public Information Reading Room on the first floor of the DOE Headquarters. Minutes of this meeting will be available to the Public Document Room or at the Secretary of Energy Advisory Board's Web site at www.hr.doe.gov/SEAB or the Secretary of Energy Advisory Board Office at 202-586-7092.

The Secretary of Energy Advisory Board Panel on Emerging Technological Alternatives to Incineration is a subcommittee of the Secretary of Energy Advisory Board (SEAB) a duly constituted advisory committee under the Federal Advisory Committee Act (FACA). As a subcommittee of the SEAB, the Task Force is governed by the rules of the Federal Advisory Committee Act. Ms. Mullins, Executive Director of the Office of the Secretary of Energy Advisory Board, has been named as the designated federal officer for this meeting. Ms. Mullins will be handing off Panel support role to Francesca McCann, who will become the designated federal officer for subsequent Panel activities. Ms. Mullins introduced Ms. Ellen Livingston, senior advisor to Secretary Richardson, who would be assisting the Panel. Also introduced was Carl Cooley from the Office of Environmental Management (EM) who would be providing technical support to the Panel.

In response to the Chairman's request, the Task Force members introduced themselves, described their background and described areas in which they felt their expertise might be especially helpful to the group.

TERMS OF SETTLEMENT AGREEMENT

The Chairman introduced Mary Anne Sullivan, DOE General Counsel (GC-1), who reviewed the Terms of Settlement [Settlement Agreement, *Keep Yellowstone Nuclear Free v Richardson et al.* No. 99 CV 1042J (D. Wyo.)].

Ms. Sullivan indicated that while DOE had prepared an Environmental Impact Statement (EIS) in compliance with National Environmental Policy Act (NEPA), suit was brought under NEPA but right to a jury trial was denied. The plaintiffs then claimed civil rights violations. Rather than pursue further litigation, the Department negotiated the Settlement Agreement with the plaintiffs to allow the permitting of the Advanced Mixed Waste Treatment Plant (AMWTP) to continue with the exception that the incinerator portion of the Plant would not be included at this time. As part of the Agreement, the Secretary established this Panel to evaluate technological alternatives to incineration.

She explained that DOE is also exploring "regulatory alternatives" to reduce the amount of waste that needs incineration. Options being explored include disposing of PCB-contaminated waste at the Waste Isolation Pilot Plant (WIPP), transportation of solvent-contaminated waste, and transuranic isotopes in wastes.

Ms. Sullivan indicated that DOE signed a Consent Decree with the State of Idaho to remove this waste by December 2018. DOE had an interim obligation to begin shipment by April, '99 and it met that obligation. The Department also has an obligation to ship a total of 3,100 cubic meters by December 31, 2002 and it can meet that with the waste that does not need to be incinerated. Then the Department has to meet shipment quantity objectives after 2002, but it does not need to be finished until December 2018. Thus, the Panel can consider technology alternatives that could be put in place in time to meet the 2018 compliance deadline. That is the legal framework within which the Panel's task will proceed.

The Panel posed several questions to Ms. Sullivan regarding some details relative to the Settlement Agreement:

1. Mr. Bardacke asked about the allegations in the civil rights claim. Did they claim that their due process had been violated because of substantive issues, or because of procedural issues? Were there any rulings in the Court that would have given any kind of efficacy to their claims? Did they provide expert testimony that would have given efficacy to the claims that this proposed incinerator endangered the people in Wyoming?

Ms. Sullivan responded that the Court did not issue any rulings that would suggest there was any merit to those claims. Mr. Bardacke inquired if this Transcript presents any expert testimony, which would have indicated that there was some harm or danger from the engineering? Ms. Sullivan said that it never got to that point.

Ms. Long-Glickman stated that the citizenry had a strong feeling that their civil rights had not been considered, and that the people of Wyoming had been disregarded in the decision-making process.

Ms. Sullivan said that DOE has a long-established record of notifying citizens in all surrounding communities, including across the mountains in Wyoming, and until recently there has been very little community interest. What the Department did was to ask the State to proceed on the non-incinerator portion and issue that Permit.

2. Dr. Resnikoff wanted to know whether the waste acceptance criteria at WIPP dictate what technologies are appropriate? Are acceptance criteria of WIPP also on the table as part of the Panel's charge?

Ms. Sullivan replied that the DOE is actively pursuing discussions with EPA and with the State of New Mexico, both of whom would need to approve the changes in the waste acceptance criteria to allow disposing of PCB-contaminated waste at WIPP. This facility will contain the waste and protect the environment since it is going to contain the radioactive waste and the PCBs. A deep geologic repository is a much better protection for the PCBs than a basic PCB landfill.

3. Dr. Budnitz asked if the Board is constrained to alternatives that will leave the waste in a form that could be disposed of using today's rules, regulations, and legal constraints. Has the Panel to evaluate alternatives that have some semblance of financial common sense to them? And also do the alternatives include watchful waiting, which is an alternative in which nothing is done until 2016; then two years are spent shipping the waste.

Ms. Sullivan said that the DOE is looking for a safe, sensible approach. This waste must go to WIPP where transuranic waste is disposed of.

Mr. Bardacke observed that the criteria for waste acceptance were created for a purpose, after much mature debate among scientists and changing those criteria might result in trading one problem for another.

Ms. Sullivan agreed that the DOE does not want to trade the concerns of the citizens of Wyoming for the concerns of the citizens of New Mexico. The WIPP goes through a recertification by EPA every five years, so there are opportunities in the established process to look at some of those issues. Because WIPP is the world's first deep geological depository for radioactive waste, a level of conservatism was built in. After some experience with WIPP, people may not feel as concerned about it.

4. Chairman Cavanagh inquired of Ms. Sullivan if there are other requirements or constraints the Panel should be aware of? Are there other arenas for which the recommendations of this group might be useful or timely?

Ms. Sullivan responded that the DOE has other mixed wastes and the Advanced Mixed Waste Treatment Facility was to be perhaps a treatment facility for these offsite wastes. The Panel's report may have broader relevance than the Idaho situation specifically.

5. Dr. Resnikoff asked whether it is customary to have a minority report if the Panel cannot agree on recommendations? Ms. Sullivan replied that it is not customary, but it is acceptable. Ms. Sullivan would like the Panel to work towards consensus. If consensus is not possible, the Department would like to hear everybody's views.

Chairman Cavanagh expressed hope that the Panel will deliver a consensus report, but agreed that none of the members are giving up the right to express individual views in the process.

REMARKS BY THE SECRETARY

The Secretary of Energy, Mr. Richardson, addressed the Panel regarding their charter and thanked the Panel members for their help. The Secretary expressed the absolute need to receive the Panel's report by 15 December 2000 so that its recommendations could be considered during the budget process. He also articulated the need for the recommendations to be realistic and reasonable to be of use by the Department.

Chairman Cavanagh said that there are those in the community who are worried that the Department has already made up its mind and asked the Secretary to respond to that skepticism. Secretary Richardson replied that nobody has a predisposed view. He emphasized that the Panel members must feel, and make the various communities feel, that their views are being listened to. This will require some outreach. The Panel has to talk to the relevant parties at Idaho, Wyoming and the Lab. He also emphasized the need for a meaningful, unambiguous report.

When questioned by the Panel as to the enormity of the task before them, the Secretary indicated they had full access to DOE resources and any other assets they may need such as the National Academy of Sciences, National Science Foundation. While acknowledging the challenge before the Panel, the Secretary requested the Panel to give the project their best effort.

Dr. Budnitz noted that this is a formidable charge because the time frame is very short and the panel is not large enough. If the Panel needs resources from other communities, the Department will make arrangements to meet those needs. Chairman Cavanagh remarked that the Panel was not asked to solve the problem but rather to help the Department solve it. The Panel's job is to help the Department identify and develop more plausible alternatives to incineration. Secretary Richardson added that the Panel might have a national solution and an Idaho solution.

REMARKS BY THE ASSISTANT SECRETARY

Ms. Carolyn Huntoon, Assistant Secretary for the Office of Environmental Management, said that the Environmental Management Group would help the Panel with anything it might need. Mark Frei will provide the Panel with all the information it might need. She applauded the member's willingness and courage for attempting to do this task. She wants to make sure the Panel knows that it will receive all the help it needs. The country needs to meet its commitments. Regarding the State of Idaho, DOE made commitments that it needs to meet

DISCUSSIONS OF PANEL'S CHARGE AND WORKPLAN

Ms. Mullins reviewed the Terms of Reference for the Panel. These were based on the Settlement Agreement. Ms. Mullins discussed how the membership of the Panel and the selection of the Chairman and Vice-Chairman were determined. She also discussed the option for the Panel to establish working groups as well as the duration and termination of the Panel. The terms of reference allow formation of working groups in case the Panel finds that the workload justifies working groups. A working group might, for example, focus on one technology and report back to the full Panel. Optionally, the Panel and/or the Secretary may recommend that the Panel remain intact after delivery of the report on 15 December. Nonetheless, the Panel report is due on December 15 and must first be presented to the 40-member SEAB. The report will be posted on the Web while it is written and distributed to the public for comments.

Ms. Livingston, senior advisor to Secretary Richardson, stressed the need to address the social issues. The work of the panel will be completely open to the public so they understand what the panel is doing.

The Chairman introduced Carl Cooley to the Panel to review proposed issues on which the Panel should focus. These issues included disposal at WIPP, PCB-contaminated waste driving the treatment process selection, Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC), waste transportation issues, and alpha mixed waste treatment. Alpha mixed waste (below 100 nanocuries per gram) might require the same kind of technology as transuranic waste.

Dr. Resnikoff asked if PCB-contaminated wastes at Idaho are a large percentage of the volume. Mr. Bonkoski (DOE/Idaho) answered that they are not. Only one to two percent of the waste contains PCBs, above the current WIPP WAC, 50 parts per million requirement.

Ms. Livingston inquired about the different types of wastes that were going to be incinerated in Idaho. Mr. Bonkoski responded that the original contract to remove the wastes from Idaho specified that the wastes must meet Land Disposal Restriction (LDR) requirements. Much of the waste was planned for incineration to reduce volume. After it was determined that the LDR requirements could be relaxed, it became obvious that many of the individual waste constituents did not have to be incinerated. Only PCBs would have to be treated in some manner to make them acceptable at WIPP. Mr. Bonkoski indicated that other waste types to be treated included sludges which must be treated to meet shipping requirements for hydrogen generation, and organic-type sludges where the contained solvents must be removed prior to transport to WIPP. Total waste volume that must be treated is about 1,500 cubic meters which represents about 2.5 percent (range of 0.5 percent to 4.0 percent) of the 65,000 cubic meters of ID waste. Initially, DOE's planning was based on 22 percent.

Mr. Bardacke requested a history of incineration in the U.S. related to treatment of ID's type of waste. He also requested information on the type of incinerator that was planned for the AMWTP, how it would function, and the hazards associated with its function.

Dr. Budnitz would like to know the character of the waste that was to be burned; how long the incinerator would have been in operation, and how the waste would have been compacted. He also asked what hazards operating the incinerator would create for those who live nearby and at what distances those hazards abate.

The Chairman reminded the Panel that their charter asked for an evaluation of non-incineration technologies, not to review the merits of incineration. Secondly, the Panel is to assist DOE in enlarging the array of alternatives available for treating ID waste and offer insight on establishing priorities for the research and development of potential emerging technologies for waste treatment. The members are asked to resolve the issue of how to confront portions of the 65,000 cubic meters of waste stored on a pad in Idaho.

Mr. Bardacke remarked that he needs to understand what kinds of problems incineration poses to the general public so that he can understand in a context in which the alternatives must be considered.

Dr. Anderson questioned whether wastes to be treated at ID would only be presently existing ID waste or would wastes from other sites be transported to ID for treatment. Ms. Livingston indicated that the Panel should address two issues – alternative technologies to handle ID waste but also to make recommendations on technologies for wastes at other DOE sites so that the incineration issues at ID can be avoided at the other sites. Mark Frei, (Deputy Assistant Secretary, EM Office of Project Completion) will provide the Panel with a listing of waste types by DOE site where incineration is the currently recommended treatment technology. Ms. Livingston also noted that although the Secretary wants the Panel to focus on the waste at Idaho, he is interested in having the Panel consider the broader issue of waste throughout the DOE Complex.

Ms. Mullins introduced a Draft Work Plan and a possible outline for the final report. She noted that the EM office is supporting SEAB and that Mr. Cooley is the Point of Contact for EM. He will provide background materials requested by the Panel. Ms. Mullins suggested that the first meeting be of a basic nature, further discussing the Panel's Charter in detail and briefings on existing technologies.

Ms. Mullins repeated that there is significant interest from the private sector on this topic and recommended that DOE issue a Request for Information (RFI), inviting interested parties to provide written information on their technologies for the Panel to review.

Future Meetings Planning The Chairman suggested holding public meetings in Jackson, WY and in Idaho Falls, ID with a format of full-day meetings and an evening session followed by a morning session on the next day. Initial meetings should address the Department planning for ID waste treatment, the treatment options currently considered by DOE, and the status of the options.

Panel members expressed their desires for topics to be addressed at the meetings:

1. Characteristics of the waste to be treated
2. Public opinion on the waste treatment regulatory environment – e.g., do stakeholders perceive that current regulations are adequate?

Ms. Mullins explained that DOE's offices will assist in identifying local stakeholder groups and their likely interest areas, as well as working to suggest they focus their comments on topics of relevance to the Panel.

Dr. Budnitz noted that there might be some of the public that feels that a technology may not be desirable because even though it meets today's applicable regulations, those regulations do not protect them. That would be of interest because the Department is trying to find the right way of doing something not only in terms of technology and cost and impact in dose and health, but in terms of perceived acceptability by the public. Dr. Budnitz would like commentators to identify gaps in the system of public health and safety regulation.

Mr. Bardacke indicated the hope that the Panel can communicate to the public that the Panel is looking for alternatives, and wants public comment about alternatives, and not the pros and cons of incineration.

At the request of the Chairman, Mr. Cooley reviewed the potential briefing topics and background materials that are available to the Panel. These include information on the waste, the AMWTP, INEEL, the AMWTP EIS, EPA information, regulatory documents, and stakeholder principles. Mr. Cooley asked the Panel for input on specifically what kinds of material and/or briefings they desired.

One of the key issues associated with regulatory requirements is meeting standards such as the new Maximum Achievable Control Technology (MACT) standard, which all incinerators will have to meet. The issue associated with alternative technology is that there are no regulations for alternative technology; regulators are relying on the regulations for incinerators.

Dr. Resnikoff noted that it would be useful to get a copy of the EIS, because it discusses the Department's evaluation of alternative technologies. He also noted that Lawrence Livermore had done a critique in 1990 that wasn't on the list. He requested the Livermore paper and any critiques of that paper.

Mr. Bardacke asked whether there were any constraints on the examination of alternatives given that the non-incineration portion of the AMWTF is proceeding. Mr. Cooley and Ms. Livingston indicated "no." Ms. Livingston added that the design of the facility is virtually modular, and the section of the facility where the incinerator would have been located is on hold. None of the ancillary equipment that would have been required for the incinerator is going to be installed.

Mr. Till would like to know the BNFL plans.

Ms. Long-Glickman expressed concern that the aquifer surrounding the area has already been harmed and would continue to be harmed if the Panel took the watchful waiting approach. Mr. Frei responded that the pre-1970 wastes sent to Idaho and simply buried are subject to the CERCLA. There is an agreement between the State of Idaho, DOE and EPA Region X with enforceable milestones and enforceable activities which cover the risks and possible remediation alternatives of materials buried before 1970. Ms. Mullins suggested doing an overview of the existing problem for the Panel's information.

The Panel requested the opportunity to view the ID waste that was destined for treatment. The Chairman agreed that the schedule for the Idaho Falls Meeting should allow time for the Panel to have a site visit.

The Chairman revisited the topics for the public meeting indicating concurrence for briefings on the waste characteristics, but no need for details on the AMWTP. It was agreed that an hour briefing on the regulatory requirements by EPA or State regulators would be beneficial. The briefing should address the potential evolution of the regulatory framework. Advance material to the Panel would be helpful for the regulatory session so that questions could be formulated in advance. Panel members requested that all briefing material be presented to them at least 48 hours before the briefing and that any resource material be summarized for them in an executive summary format where the important items are highlighted. Ideally, the Panel will provide questions to the presenters in advance of the meeting so that there may be an informed discussion during the meetings.

REMARKS FROM SNAKE RIVER ALLIANCE

The Chairman introduced Gary Richardson, Executive Director of the Snake River Alliance. Mr. Richardson indicated that the Alliance considered incineration as an obsolete technology and hoped that the Panel would identify superior alternatives. He invited questions from the Panel. The question of how many meetings and the schedule to receive public comments was raised. Mr. Richardson advocated meetings early in the process and again towards the end so that progress could be monitored and to overcome public distrust of the Panel's process. He was also requested to provide any relevant information that the Alliance had to the Panel. Material is to be submitted to Ms. Mullins or Ms. McCann.

In response to a question related to the risks associated with potential alternative technologies, Mr. Richardson indicated that the position of the Alliance is that the waste to be treated in the AMWTP is safely and securely contained and does not believe the movement of this waste is wise. The Alliance also believes that other INEEL wastes have a higher risk of environmental detriment and that is where attention should be focused.

The Chairman summarized the discussion with Mr. Richardson as noting that the evaluation of alternative technologies needs to be rigorous in terms of addressing the concerns raised with incineration. Also, the Panel needs to avoid considering alternatives that are really incineration by another name. Mr. Richardson indicated the opposition to incineration was based principally on the emissions to the atmosphere. Dr. Anderson concurred.

The objective of the Panel is to have an active interchange with the presenters during the allotted time period.

Mr. Cooley invited the Panel to review the resource material that was displayed in the room and to identify which items they would want from the bibliography in the briefing book. Panel members may request copies through Ms. Mullins or Mr. Cooley.

Dr. Molina stressed that the Panel wants people not to give long presentations, but to answer questions. Dr. Molina would rather have executive summaries. Dr. Budnitz urged that there be no presentation the substance of which is not distributed in writing at least 48 hours beforehand. Furthermore, he urged to generate questions and send them in before so that the speaker will know what questions will be discussed based on the written material. Dr. Resnikoff would like to have someone who is involved in the regulatory process discuss EPA plans because this affects what waste streams are eventually going to leave Idaho, and how. Dr. Anderson hopes that the Panel is provided with executive summaries that would stress the important points in each area. Chairman Cavanagh agreed by saying that a great challenge in preparing for these meetings is to provide a manageable base of material. He stated that the Panel would have all of the substantial presentations to the Board out in advance of the meetings so that the presenter can interact based on questions that hopefully he would have in advance of the presentation. Chairman Cavanagh concluded that there would be substantive materials in writing, and that the speakers be asked to provide short summaries.

Chairman Cavanagh concluded that an EPA representative should be invited to talk about the regulatory requirements. It is important also to hear from the State of Idaho and Wyoming. Dr. Resnikoff wants someone who can speak to the likely evolution of the Waste Isolation Pilot Plant requirements, because the PCB criteria may change. He interested in what the future trend will be so that the Panel does not propose something in December that is already out of date.

Dr. Anderson pointed out that there has been some discrepancy between the State of New Mexico acceptance criteria and the EPA acceptance criteria and asked whether there are other discrepancies involved? Ms. Mullins responded that she would provide with both versions and highlight any differences.

Dr. Anderson considers the shipment options for alpha mixed waste a first order issue that needs a separate briefing, a summary of land disposition requirements is second order and could be handled with just a briefing paper. Chairman Cavanagh commented that constraints on shipping material are part of the description of the problem.

The Chairman initiated a discussion of the final report based on the outline provided. Mr. Cooley stated that the Panel needs to establish the criteria upon which the Panel will evaluate alternatives. A Panel member requested that it be made clear what the constraints are on alternative technologies, e.g., no air emissions unreduced volume, etc. The consensus was that the Panel should receive a briefing on the non-incineration technologies DOE believes are currently viable. However, some Panel members requested that, in addition to a DOE briefing on alternatives, a non-DOE presentation also be offered which would present a non-DOE perspective to the Panel (i.e., independent expertise). The Chairman charged Mr. Cooley with organizing the DOE presentation and including independent ideas in it based upon input from the Panel. It was agreed that the briefing would be based on groupings of technologies. The Panel members will identify candidates for the independent presentation over the next month.

The Chairman next addressed the technology evaluation criteria. Mr. Cooley presented a brief overview of the criteria using a briefing package with the Panel. The briefing addresses functional requirements, completion of reaction, as well as products and by-products of treatment systems.

The Panel agreed to use the technology evaluation criteria as presented. The Panel needs to decide what is an alternative to an incinerator and where will it draw the line on thermal technologies.

Mr. Cooley replied to a question by Professor Molina that almost all of the alternatives to incineration emit gases into the air whenever a compound is destroyed unless the waste is encapsulated as in cement.

Mr. Frei reiterated that volume reduction is only addressed in the contract to reduce the shipping costs and has nothing to do with regulations. PCB is an issue, and hydrogen generation and release is another.

Ms. Long-Glickman thinks it's important not only to have DOE expert review but also there is a need to hear from independent expertise as well.

Chairman Cavanagh concluded that the Panel should have a set of questions available for the people who are presenting alternatives before the meeting to provide a sense of the kinds of things we're looking for. Chairman Cavanagh asked Mr. Cooley to make sure part of the general bibliography and background provided to the panel include work products by panels and groups that have been given similar challenges.

The Chairman inquired if any members of the public attending the meeting desired to provide comments. None were forthcoming.

Ms. Livingston distributed to the Panel for review a proposed DOE press release describing the Panel's members and the meeting plans for ID and WY.

FUTURE MEETINGS SCHEDULE

The Panel is to arrive in Idaho Falls on Monday, 21 August 2000. Idaho Falls Meeting on Tuesday, 22 August, commencing at 9:00 AM (includes evening session at 7:00 PM), reconvening on Wednesday morning at 9:00 AM, 23 August. Adjourn at noon and travel to Jackson, WY the afternoon of 23 August after which a 7:00 PM Public Meeting will be held at Jackson. Reconvene on 24 August at 9:00 AM and adjourn at noon. Another Panel meeting is scheduled in Washington, DC on Wednesday, 27 September 2000, 8:00 AM - 3:00 PM. Pre-meeting conference calls are scheduled for Wednesday August, 2 from 4:00-5:30 PM EDT and Friday August, 18 from 2:00-3:30 PM EDT.

2 nd Meeting	9:00am August 22, 2000 – noon August 24, 2000. Fly into Idaho Falls August 21, fly out of Jackson August 24. Evening Sessions on August 22-23.
3 rd Meeting	8:00am –3:00 pm September 27, 2000. Washington, D.C.
Teleconference	4:00pm EDT Wednesday August 2
Teleconference	2:00pm EDT Friday August 18
Teleconference (biweekly)	3:00pm EDT beginning Monday, October 2, 2000

ADJOURNMENT

Chairman Cavanagh adjourned the meeting at 2:07 PM EDT.

PANEL MEMBERS

Ralph Cavanagh, Chairman
Senior Staff Attorney
Natural Resources Defense Council
San Francisco, California

Dr. Mario Molina, Vice-Chairman
Professor, Department of Earth, Atmospheric and Planetary Sciences
Massachusetts Institute of Technology
Massachusetts

Andrew Athy, Jr., Chair
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