

Final

These notes are in the following order:

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1. Attendance

Members/Alternates Present:

See Attached Sheets.

Others Present:

C. Adey, S. Aronson, P. Bond, H. Carrano, A. Carsten, J. Carter, J. D'Ascoli, K. Geiger, G. Goode, L. Hill, M. Holland, B. Lein, S. Kumar, M. Lynch, C. Ng, M. Parsons, S. Penn, D. Quinn, R. Rimando, S. Robbins, J. Tarpinian

2. Correspondence and Handouts

Items one through three were mailed with a cover letter dated July 6, 2006. Items four through six were provided in the member's folders.

1. Draft agenda for July 13, 2006
2. Draft notes for June 8, 2006
3. Final notes for April 20, 2006
4. Copy of flip chart notes from June 8 meeting
5. Copy of Environmental Stewardship Activities, George Goode
6. Information on the NASA Summer Student Program at BNL

3. Administrative

The meeting began at 6:36 p.m. Those present introduced themselves. Reed Hodgkin went over the ground rules and the draft agenda.

Reed asked for corrections, additions or deletions to the June 8, 2006 Notes and Action Items. Member Garber asked for a correction on page four to reflect his question as follows, "Could the radioactive materials in the HFBR be used to serve some existing experimental effort?" Member Chaudhry noted there were two sections labeled as number four. He asked that the second be changed to number five to reflect its proper order. Additionally, on page eight, Member Chaudhry asked that his last comment be changed to "There must be a third

alternative between Alternative D and Alternative C.” The notes were approved as modified with four abstentions.

Reed introduced Jeanne D’Ascoli. She apologized to the CAC and explained that the responses to the Action Items from the June meeting would not be available. She offered to include the Action Items in next month’s notes. This was acceptable to the group. Jeanne acknowledged Chek Beng Ng of the New York State Department of Environmental Conservation, who was attending his first CAC meeting.

4. Dr. Sam Aronson, Lab Interim Director

Dr. Aronson provided a brief overview of his personal history at Brookhaven National Laboratory prior to becoming Interim Director. He is a native of Long Island and has been at the Lab since 1978 serving in a variety of positions in the areas of High Energy and Nuclear Physics. Dr. Aronson has served as the Chairman of the Physics Department and worked on the RHIC experiment, and was the Associate Lab Director of High Energy and Nuclear Physics until asked to serve as Interim Director.

Dr. Aronson presented his views on the current scientific status of BNL stating the Lab was in excellent shape. His assessment was based on many things including the performance of the large facilities such as RHIC and NSLS. Dr. Aronson said RHIC had a terrific year producing data for more than a thousand Users around the world. He noted RHIC was able to run this year thanks to support from Renaissance Technologies Corporation, a Long Island company, and the DOE. He added that other initiatives in energy research like medical imaging and computing were doing very well. BNL will host the United States’ component of a very large experiment in Europe called ATLAS, which will create more activity on-site as Users from around the United States come here to learn how to analyze that data.

Noting BNL’s impact as a research institution, Dr. Aronson referred to statistics that examined citations in scientific papers of research institutions around the world. In terms of total number of citations for papers published in the last ten years, Brookhaven National Laboratory was in the top 20 institutions worldwide. More importantly, when looking at the impact of the citations, BNL was number four in the world with Stanford, Harvard, Princeton and MIT. He said the impact of the BNL’s research is felt around the world and recognized by people who cite the Lab’s work in their papers.

At this time BNL has good support from the DOE and Congressional representatives, both in the Senate and the House. The first visit of the Secretary of Energy earlier this year, went very well. Dr. Aronson stated it was the start of a good relationship.

Dr. Aronson commented that the future for BNL was very bright, though everything depends on funding. The President’s proposed budget for FY 07, including the American Competitiveness Initiative was very good for physical sciences in general, and also for Brookhaven. The budget from the Office of Nuclear Physics, which runs RHIC, went up by nearly 25%. Next year, if Congress gives its support, BNL could have a terrific year for RHIC, the Light Source and for designing the new Light Source. He acknowledged New York State and Stony Brook University for their generous support in designating \$26 million for an IBM Blue Gene supercomputer. Planning is underway to have it running by the end of this calendar year or early in the next. This computer has the capacity of 100 teraflops. It will be one of the largest computers in the world. The State has also promised another \$30 million for a Joint Photon Science Institute to be built in conjunction with the new Light Source, which is pending DOE approval.

Dr. Aronson spoke about the construction of the Center for Functional Nanomaterials, which will begin limited operations next spring. Full operations are planned for a year later. A proposal is being developed for the Light Source to get the critical decisions from the DOE for a go ahead on the project. Dr. Aronson said there is very good support in the President’s budget for the

design and engineering work that would have to occur next year. RHIC II is an upgrade to RHIC, which would enable the experiment to look at more rare processes and allow the researchers to take more data. Dr. Aronson would like to get first approval for this project sometime next year. It is smaller than the Light Source but very important to the future of RHIC. The ultimate future for RHIC, which is just in the planning stage, is to build a machine called e-RHIC. E-RHIC will add electron collisions to the heavy ion collisions that are done at RHIC now.

Dr. Aronson also spoke about his priorities for the Laboratory. He is most concerned with safety. BNL has made progress in the last few years. His goal is to create an environment with zero injuries to the staff, visitors and Users at BNL. That goal will require new approaches and a change to the BNL safety culture. Security and cyber security are also concerns, as well as the environment and the infrastructure of the Laboratory. Dr. Aronson noted that the shabby quality and appearance of the infrastructure is not only a detriment to the look of the site but also a detriment to the effort to attract and retain top scientific staff to BNL.

Member Sprintzen: One thing you might consider is putting sculptures around. I assume there are lots of open spaces on the site and putting sculptures around might provide an enhancement. Perhaps you would have artists who would be willing to donate material in an effort to have it displayed.

Aronson: It is an interesting idea. I was thinking about sculptures recently when we sought to honor the Renaissance Technology Corporation for their contribution to the Lab. I found out I was not allowed to name a building after the company, but I don't think anyone would stop me from putting up an outdoor sculpture. That's a good idea.

Member Garber: Would you tell us how the process of finding a permanent Director is going?

Aronson: Sure, but I am not a party to that search process. There is a BNL search committee. You can communicate with the committee on the BNL website. You can tell them what you think or what qualities you would like to see in a Director or even who you would like to see as the Director. The process is pretty far along toward recommending a permanent Director this summer. They have interviewed about a half dozen serious candidates.

Member Guthy: When you were talking about RHIC and the money you said something ended a few weeks ago?

Aronson: The run.

Member Guthy: You mean the run for the year is done?

Aronson: This year's run ended in June. I think it would probably help to define what a year means in this case; what's more important for RHIC is the operating year. It's usually done with a particular fiscal year's money. Often startup is in the fall or winter as it was this year, before the hot weather and the high-energy prices hit. We planned to start in early December, but the budget had its unfortunate train wreck in the Conference Committee in Congress and BNL didn't get the extra money in the 2006 budget needed to run. Eventually, the financial gift BNL received from Renaissance Technologies enabled the startup to begin in February. There was enough money for RHIC to run 20-22 weeks this year and that concluded in June.

Member Guthy: What do you do from now until November?

Aronson: There is a tremendous amount of work to do to refurbish things, add new equipment to the experiment, and add new equipment to the accelerator itself. Actually, the busier time of year for the technical staff is when RHIC is not running.

Member Graves: What is the primary application for the supercomputer?

Aronson: There will be several. We met earlier this week with the planning and steering group. Amongst its participants were representatives of various areas interested in computational biology, studying supernovas and the collapse of magma stars. We will do simulations that will help us understand the information we take from RHIC. Currently there are two computers on-site that are a tenth of the size of this Blue Gene computer. We are also interested in getting involved with a very large telescope project to study dark energy. That will also be a computer hungry enterprise. This machine is so big it can be carved into several smaller machines, which are also the largest in the world that can run simultaneously. I don't want to have a big computer on-site and rent it out. I want to build science activities around it that really require the most available computing on the floor. Things like protein folding for studying biological processes take a lot of computing power. These are very interesting topics. I think we can draw a lot of customers, especially if we have scientists here and at Stony Brook encompassing those science areas.

Member Corrarino: You said that RHIC was slated for a 25 percent increase for the next fiscal year?

Aronson: The Nuclear Physics budget as a whole in the country, and for RHIC itself, calls for that.

Member Corrarino: Twenty-five percent over this year, not including Renaissance Technologies?

Aronson: Right, over a bad year. It's still probably over a 15 percent higher budget in Nuclear Physics as a whole in the country, than we had in 2005, which was a reasonably good year. It represents a very significant, real increase in funding.

Member Corrarino: So you will be able to run 52 weeks at full capacity?

Aronson: No, we can't run RHIC 52 weeks for the reasons we were talking about before. We need time to stop and nod, to fix things and get ready for a new set of experiments. The typical full year of running RHIC is 30 weeks of actual operation of the machine. This is with liquid helium temperatures and the beam going around.

Member Corrarino: So that proposed money would allow RHIC to run for 30 weeks?

Aronson: It will run for 30 weeks and it will allow us to do some much-needed investing in future upgrades to the experiments to maximize all of its capabilities.

Member Sprintzen: If and when it fits in with the schedule and other events, I would love to have a report on the dark energy studies you just mentioned, or the ATLAS study, and on the RHIC II upgrade.

Aronson: Great. You guys tell me what you want and I'll provide it. I'm open but I don't want to deflect from the business of this group.

Member Sprintzen: It's important for us to know what's happening even though it's not immediately pressing.

Member Chaudhry: I'm just curious to know, briefly, is most of the work being done in this Lab exclusively being done for this Lab? Is there some work that is being done in duplication elsewhere?

Aronson: All the work is highly collaborative, but I think there is less direct competition nowadays. That competition used to be because of budgets, mostly. I could say unequivocally,

that almost all the experiments we are doing at RHIC are unique in the world. In a place like the Light Source where we have many industrial and academic Users, you will find Light Sources around the country that serve similar clientele. Not that there is direct competition between an experiment here or there, but it is the same spectrum of use. The Light Sources are more like that. The new Light Source will be the best of the current generation. It will be able to do things that other Light Sources cannot.

Member Corrarino: A few meetings ago, we talked about putting the issue of women and science on the agenda, things like recruiting more women, the culture of science, and retaining women. I wonder if you could put that on your radar screen.

Aronson: I'd be happy to. This is an issue that I care about because when I was in the Physics Department and head of the group that was doing the PHENIX project we recruited and brought several women up through the ranks. Two women come to mind that were very good, and we couldn't keep them. Universities were able to give them an academic path that was different than that at the Lab, so we lost them. We train top-notch women; one in particular won the Presidential Young Scientist Award. Then we have to compete for them in a very scarce market. It's tough.

Member Corrarino: I think the Lab is very well positioned within the community and the region to do that. As a former physics major, I think getting women into the pipeline to begin with is the challenge.

Aronson: We surely don't do enough of it in some areas. Part of that is availability and part is the competition from other institutions that are also trying to improve in this way. It's a tough climate out there but it's proven to be worthwhile. We have had some very good women come through our programs.

Member Esposito: You said RHIC would be undergoing upgrades. Will those be physical upgrades or construction upgrades? What kind of upgrades will they be?

Aronson: There is some construction work necessary to make the beams produce more collisions for the experimenters to study. We do that with a technique that keeps the beams as tiny as possible. When smaller beams collide, they create events. The beams are packed denser with particles. That isn't done by putting more particles in the machine or by changing the energy but by adding equipment that can keep the beam from rolling during the course of the experiment. That means adding a low energy electron beam that travels along with the ions and can absorb some of the energy that makes them expand. It's called electron cooling. There's also a little bit of construction within the detectors, adding new electronics or detector equipment. The construction won't expand the footprint of the machine, change the amount of ions we produce or the energy we accelerate. The construction is not easy to do, but if we can succeed we will be able to handle those beams much better and make them more useful over time.

The CAC thanked Dr. Aronson for his presentation.

5. Environmental Stewardship at Brookhaven National Laboratory, George Goode

George Goode gave an overview of BNL's Environmental Stewardship Activities in place to improve the environmental performance of the Laboratory. Primary among those is the ISO (International Organization for Standardization) 14001 Environmental Management System (EMS), which was combined this year with the OHSAS (Occupation Health and Safety Assessment Series) 18001, Occupational Safety and Health Management System (OSH). ISO 14001 and OHSAS 18001 audits were conducted in June. Two independent auditors were onsite for five days examining all departments at BNL. The auditors characterized the outcome of the audit by concluding "the systems were well established and well maintained." Two minor

non-conformances were identified, as were two opportunities for improvement. Nine examples of “noteworthy practices” were also identified. Goode credited Les Hill, Manager, Environmental Remediation Projects, with three of the nine “noteworthy practices.” The auditors interviewed several students and concluded that they were well trained in environmental and safety issues.

Goode said BNL has been registered under the ISO 14001 program since 2001. Three quarters of the Lab is registered to the OHSAS 18001 safety standards, and the entire Laboratory will be registered by December of this year. Goode gave an overview of the two systems discussing their similarities and differences and said they both drive continuous improvement. He listed the significant environmental aspects of ISO 14001 and the job and facility hazards of OHSAS 18001. He also talked about programs that have been established to manage significant Laboratory and facility-specific hazards.

Goode discussed the Pollution Prevention program. He stated \$28,000 was invested in the program for fiscal year (FY) 2006. There were 18 proposals submitted with noted participation by the Scientific Departments. The successful proposals resulted in savings achieved by reducing hazardous wastes. In FY2006, the annual cost savings were \$58,000. Pollution Prevention programs saved the Lab \$1.018 million dollars in 2005 by reducing, reusing or recycling 2.786 million pounds of waste. Additionally, BNL was honored with two P2 Certificates from the Department of Energy for using bio-based hydraulic fluids and environmentally friendly paint stripping practices.

Goode highlighted two specific Pollution Prevention programs. The Aerosol Can Disposal System, proposed by NSLS, uses a product called “Aerovent 3”. The product safely empties aerosol can contents into a drum. The air emissions were filtered and the cans were emptied. This produced cans eligible for recycling. Traditionally, these cans were disposed of as hazardous waste, at a significantly higher cost. This effort paid for itself in less than a year. Another program, Fluorescently Labeled Oligonucleotides Technology, eliminated the use of radioactive materials for the study of DNA damage and repair mechanisms. Proposed by the Biology Department, this process eliminated 35 gallons of mixed-waste, 72 cubic feet of rad waste and 108 gallons of hazwaste.

Member Giacomaro: Is the process for the aerosol can disposal on the market?

Goode: Yes. The trade name is “Aerovent 3”. It is commercially available.

Member Giacomaro: You said commercially available, so it’s not available for retail purchase?

Goode: You can go through an industrial supply house.

Member Giacomaro: The Town of Brookhaven has the STOP program for handling hazardous materials. This might be something they would want to look into.

Goode described two EPA programs that BNL joined in 2004: the National Environmental Performance Track and National Partnership for Environmental Priorities. Participation in these programs is an effort to move BNL beyond compliance. Membership in the Performance Track is exclusive to facilities that have a good compliance history, a proven Environmental Management System and a commitment to environmental stewardship. Membership also requires establishing four environmental commitments for a three-year period. Goode explained the commitments for the 2004 - 2007 time period.

Member Esposito: What are your new thermometers using?

Goode: We are using alcohol-based thermometers and electronic temperature devices.

Member Esposito: I am asking because there has been a discussion about whether those are as reliable as the mercury thermometers. I just want to ask your opinion on that.

Goode: We have not had complaints. We don't take the thermometers away from people; we provide the funding if they want to replace them. They find the suitable replacement. A particular thermometer may be needed for a particular device, and that is fine.

The National Partnership for Environmental Priorities Program targets the reduction of the use or release of 31 highly toxic priority chemicals, which are primarily pesticides. BNL committed to reduce mercury-bearing waste by 28 percent and PCB inventory by 50 percent. Both of these goals were achieved and the PCB inventory was actually decreased by 90 percent. This was achieved by the disposal of a huge piece of equipment from the Tandem Facility.

Member Giacomaro: Was that just an obsolete piece of equipment? Just sitting there?

Goode: Yes.

Sy Robbins, SCDHS: Is that waste sitting off-site or was it somehow destroyed on-site?

Goode: It's off-site. The liquid was drained and shipped off-site with the carcass to a licensed facility.

Member Chaudhry: It looks like most of what you are doing with environmental management is to improve your own environmental management and controls. Once you develop a plan, like the program with the aerosol cans, would you make it available to the industry?

Goode: The aerosol can product is commercially available, but we do share this kind of information all the time. We go to technical conferences and make presentations like this one. We share (information) among the DOE facilities that we work with and we have also hosted a workshop with the local community to share the ideas we have.

Member Chaudhry: Do you have a mechanism in particular? How do you share the information with everyone that would want it?

Goode: We use as many mechanisms as we can. We network with other people in industry and government that are in the environment business. We try to share our ideas and work with them as well.

Member Chaudhry: It's made available to the public?

Goode: Sure, it's on our website.

Goode spoke about electronic waste recycling efforts. BNL participated in the Federal Electronics Reuse and Recycling Challenge that began November 15, 2005 and ran through April 1, 2006. Over 69,000 pounds of electronic equipment was recycled. Nineteen computers and five printers were donated during the Computers for Learning program.

Member Sprintzen: You donated 19 computers to local schools. It seems like a small number. Was that the number available? Were there more schools available or was that all the schools wanted?

Goode: Those were the ones that were of sufficiently good quality and condition during this last challenge event. Some of the computers are old and the schools don't want older models. Some were Pentium-based and of value.

Member Sprintzen: If there were more of a demand from the schools, would you recycle more of them?

Goode: I think it depends on what comes out.

Member Sprintzen: Another possibility for the recycled computers could be non-profits. There are non-profit organizations that could benefit from the donation of these computers.

Goode: This program is in compliance with a specific regulation that exists for Federal facilities to funnel computers to schools.

Member Sprintzen: Another way to handle this is to require all manufacturers to take back and dispose of their computers.

Goode: Dell Computers has recently announced they are going to take back all of their computers, free of charge. The European Union is requiring a "take back" policy and Dell, rather than have two systems, has decided to take them all back.

Member Henagan: They will also take non-Dells for 50 dollars.

Member Garber: Brookhaven Town has an Electronics Recycling Program in as much as they put it in a big container and it goes away somewhere. Does much useful stuff come out of a scrapped computer or monitor or is it just removing the pollutant components and then dumping them?

Goode: This is a hot topic and a big issue. A lot of computers that are just being loaded onto boats and shipped who knows where are being pilfered for their valuable components. The rest are being disposed of improperly. We've looked at the companies that dispose of ours. There are companies that "remanufacture". They take a computer apart, remove the valuable parts and recycle even the plastic housing. There is a range of things that happen in the recycling world.

Goode said that work on the Annual Site Environmental Report is underway and it is planned for release on the web in September. A hard copy will follow the release and is planned to be available in October. The report will document compliance, releases, monitoring results, and environmental communications. The document will become a legal record.

Member Sprintzen: Do you think there would be a useful purpose for holding another P2 session?

Goode: Yes, I do. It is a matter of scheduling.

Member Sprintzen: I think it's also great for the Lab's public relations. That's a program that is very important to get out and share as much as possible.

Goode: It's just a matter of picking a date that works for everybody.

Member Conklin: Back to your punctured cans. I am of the understanding that there are certain chemicals that should not be mixed together because the mixing would actually create chemicals that are much more toxic than when they began. I'm thinking of the more high tech type stuff you might be using like Carbon Tet and some of the other things you use all of the time.

Goode: We have controls in place. For example, we don't puncture pesticides or wasp sprays. We dispose of them as we would flammables.

Member Conklin: If the chemical waste is mixed into a barrel, aren't you taking chemicals that aren't as hot and increasing their toxicity? That would make them more hazardous than when you began. But if you segregate it, you're not?

Goode: That's it. Yes.

Sy Robbins, SCDHS: What is the ultimate fate of the barrel?

Goode: It gets managed in the 90-day area and shipped out as hazardous waste.

Member Esposito: It goes into the ocean?

Goode: It gets incinerated.

Member Biss: How can you dispose of mercury?

Goode: The only technique that you can use is amalgamation. The mercury is amalgamated with another metal, which locks it up. It is solidified that way. If it's pure it is reused.

Reed and the CAC thanked George Goode for his presentation. Reed gave the floor to Bruce Martin to make a few announcements.

Member Martin told the CAC that Professor Audrey Capozzi has asked that Adam Martin become the principal Education representative while she becomes the alternate. Member Martin said that he would remain an alternate.

6. The CERCLA Process, Les Hill

Hill explained the processes for the HFBR and the g-2 have been running concurrently. Presentations made to the CAC have run parallel to the discussions with the regulators. Four CERCLA documents are currently under various stages of review by the regulators. Comments have been received on the g-2 and HFBR Feasibility Studies The Lab is working on the resolution of the comments. It is difficult to predict when they will be resolved. Some of the regulators' comments are simple to address and others require additional studies and data gathering. Historically, the process with the CAC started when the project was just about done. At that point there was a good understanding of what would come next. Initially, the public comment period was anticipated for at least one of these initiatives over the summer. Now it looks like they will not happen until after Labor Day. Hill told the CAC he would not run simultaneous public comment periods. The process needs to be run in an orderly fashion. Currently it appears that g-2 will happen before the HFBR. After the comment resolutions have been submitted to the regulators he hopes to forward information to the CAC. The schedule is tentative and as more information is made available it will be shared with the CAC.

Member Esposito: Was there a presentation on the g-2 recently?

Hill: There was a presentation two meetings ago.

Hill said he would like the Public Comment period to span two CAC meetings and every attempt would be made to accommodate that.

7. Community Comment

There were no comments from the audience.

8. CAC Discussion on HFBR Remedial Alternatives

Reed explained the CAC was positioned to provide direct input to the regulatory process. The goal of the evening was to encourage conversation amongst the members of the CAC.

Member Conklin: The information provided to us in response to the Action Items two meetings ago was done very well. In “The Decommissioning Status of Shutdown U.S. Power Reactors”, it states that 36 percent of these are in Safe Storage. Can we relate the HFBR to a power reactor? What is Safe Storage?

Hill: Safe Storage is one of three decommissioning alternatives that are available to commercial nuclear power plant operators.

Member Conklin: Are they available to you as well?

Hill: When you refer to Safe Storage in that sense, it is for commercial nuclear reactor sites that are licensed by the Nuclear Regulatory Commission. One of those three alternatives is prompt decommissioning; basically take the entire facility out right now. The extreme opposite of that is entombment ...

Member Conklin: Wait, you mean prompt decommissioning is Safe Storage? I’m asking about Safe Storage.

Hill: No, the third option is Safe Storage. Utilities let their commercial reactors decay in place for some period of time so that the radiation levels decrease. The structural systems are removed when the radiation levels have diminished.

Member Conklin: So in essence, in the situation you’re working with, you’re asking us to consider a Safe Storage situation?

Hill: Exactly. In the DOE realm they don’t call it as such that is a term that was developed from NRC rules but the process is the same.

Member Walker: Is that period of time for the commercial plants similar to our 75-year period?

Hill: It varies. Generally, what we’ve seen is commercial power reactors removed from service that are onsite with other commercial reactors. At Indian Point, where I came from, Unit 1 has been shut down since 1974. It has not been decommissioned. The unit is decaying in place. The two operating reactors that are licensed to operate until 2016 will probably go for a license extension. Unit 1 will probably not be decommissioned until 2020 or 2030 a period of 50 or 60 years. It’s going to vary depending on the power plant. A driver of that is if there are concurrent nuclear operations, security and a Radiation Safety Program on the site. At other sites like Connecticut Yankee, which is a single unit site, the owner/ operator of the nuclear plant took the unit from service and decided to remove the reactor immediately. There was nothing else going on at the site, and there was no security, so they made the decision in favor of the prompt decommissioning alternative. It all depends on the conditions at the site. Durations can be seen anywhere from 50 – 60 years comparable to what we’re talking about here.

Reed asked the CAC to focus on items that will provide input into the regulatory process. He said there were members of the regulatory community in the audience that could pass information on to other regulators. He suggested the CAC continue to identify issues that are important to them and begin to weigh the importance of those issues. He listed the issues identified on the flip chart notes during the previous CAC meeting and asked the CAC to identify additional issues that they would like to capture for consideration during the regulatory process. Member Conklin asked that encapsulation be added to the list of issues. Member Biss asked if the concrete or cement that may be used to contain the radioactive materials would be affected by the radioactivity. Reed added her concern to the list of issues as “Lifetime of Containment”. Member Martin reiterated his concerns about the increased risks that result from dismantling,

transporting and storing as opposed to leaving everything in place with good security. Reed added the issue to the list as “In Place versus Dismantling and Shipping”.

Reed began the discussion on the identified issues. He began with the CERCLA process and its application to the HFBR. He concluded from the last meeting that the CAC was concerned about the commitment to the application of CERCLA and wanted the commitment to be made clear in the ROD.

Member Kaplan: Even if that happens, is there any possibility that at some future date, the DOE could walk away, given that the application of CERCLA is voluntary?

Reed: The discussion last month was that it would be codified in the ROD and carried forward that way.

Member Kaplan: I understand codification in the ROD. Since this is not really a CERCLA project, can DOE say we will handle it as if it is a CERCLA? Even though it is written in the ROD, it is basically a voluntary decision. Could the parties back out at some future date?

Reed: The issue for you is, “Could something be put into the decision legally, rather than voluntarily, that would commit the department to follow that process? ”

Member Kaplan: Correct.

Member Guthy: I’m thinking about the workers. I am concerned about them. Is it possible for them to back out of the job if they do not wish to go in there and clean any of this stuff out? Can they do that without losing their jobs entirely? Can they be put on different jobs? What happens to the people that are expected to do this work? Are they from somewhere else and just agreeing to do this or do they already work here? Could they say, “I don’t want to do this” and go to another department?

Reed: Then another topic is “Worker Safety”. What you’re talking about is, “Do workers have a choice in how much risk they assume?” So it’s “Worker Safety” overall and the assurance of worker safety when they are involved with HFBR.

Member Guthy: Right.

For the issue of “Out-year requirements explicit in the ROD” Reed restated the topic as “interest in a stewardship program that would involve specific actions in out-years to inspect, investigate or assure the safety of systems and that those activities would be explicit in the ROD.”

Member Giacomaro: There is no mention of the possibility of research that may occur in the future that could circumvent or attack these problems, so that in 25 years they could be handled with much better processes than they can be handled now. Should that be noted someplace?

Reed: Are you talking about taking advantage of research that occurs or promoting such research to occur?

Member Giacomaro: I’m talking about application of future research to address the problem of the control rods that are encased in the facility of the HFBR. I think that should be part of the process.

Reed: I see this as a part of long-term stewardship. During the Five-Year Review, there is a review of the existing state of science to see if anything should be done to change the remediation process.

Member Giacomaro: I could see that in less than 75 years the issues should be resolved or at least be able to be handled in a much better way.

Member Heil: Going back to the CERCLA process, do we know if the State and the County will concur with a voluntary CERCLA process?

Hill: Just to clarify, the process that would be in place for the HFBR will not leave anything voluntary about the ROD. The HFBR will be added as an Area of Concern to the Interagency Agreement (IAG). All of the enforcement and involvement responsibilities and obligations would be the same for the HFBR as for all other CERCLA clean-up projects onsite. There is nothing voluntary about any of these commitments. It is a ROD with the same obligations and responsibilities of all the parties in the IAG.

Reed: What you are saying is that this will be driven more, or at least as much, by the IAG as by CERCLA law.

Rod Rimando, DOE: What has been described is accurate. Currently, the Federal Facilities Agreement does not identify the HFBR as an AOC in the IAG. Once the documents are submitted for public review, the Administrative Record will be formally established. That starts the process of entering the HFBR as an AOC. The ROD legally binds not just the DOE but also the Federal government. Whether it is the DOE or some other future government entity, the requirement to comply is placed on the Federal government. The enforcement arm of the government, the EPA, will have enforcement authority over the DOE as a potentially responsible party under CERCLA.

Member Martin: I have a procedural question about the Action Items, which were essentially questions. What is their status?

Reed: They will be coming to you at the next meeting.

Member Chaudhry: When I asked the question about an Alternative between C and D, I had in mind, looking at the chart, the items that encourage people to wait 75 years: The Activated Structures and Components, Confinement Building and Remaining HFBR Complex Contaminated Soils. My philosophy is each of the items probably has a smaller dose rate as compared to the control rod blades. If these alternatives can take out the control rod blades in 2009, why do we have to wait 75 years to remove the less harsh structures, like the Confinement Building and the Contaminated Soils? Why 75 years? I was thinking it should not be difficult to advance those items 15 or 20 years if we can take out the control rod blades as early as 2009. The public would be a bit more at ease to think the year 2020 or so could do it.

Reed: I'm going to deal with your questions in two parts right now. One issue is the control rod blades and the other is the structural components.

Member Sprintzen: May I ask a question of Iqbal? Looking at the alternatives on the chart, there were three different elements that were in Alternative C that would take 75 years. One was the Activated Structures and Components, one was the Confinement Building and the third was the Remaining HFBR Complex Contaminated Soils. Are you suggesting that these three could conceivably not take 75 years to be at a stage at which they could be reasonably and safely removed?

Member Chaudhry: That's what I thought.

Member Sprintzen: That's your question?

Member Chaudhry: Yes.

Reed: So that part of the question is "What can be done to bring the time period in from 75 years for the components that are not control rod blades?"

Reed clarified that the first part of Member Chaudhry's question was concerning the components other than the control rod blades. He asked the group to discuss the removal of the control rod blades as soon as it can be done without segmentation.

Member Esposito: How much money was used to upgrade the fuel pool to Article 12 standards five years ago? I would like to know much money we spent to do that.

Reed: We'll bring that back to you.

Member Esposito: Can we just add that to the Action Items for next month?

ACTION ITEM: Identify the cost of upgrading the spent fuel pool to Article 12 standards.

Member Chaudhry: It appears we have to segment them because the technology doesn't exist. Do we have to segment them? Is there really no technology to remove the blades without segmentation?

Hill: Presently, the control rod blades would have to be segmented because of the level radiation they contain. The current fleet of available shipping casks do not provide enough shielding to ship the control rod blades in one piece. The Department of Transportation regulates radioactive waste. Currently, casks necessary to undertake these shipments are not available. A lengthy campaign to design, qualify and construct a cask could be initiated. We have looked at all of the casks that are available in the market place right now and there are none available.

Member Chaudhry: Are they not available in Europe?

Hill: I would have to defer the response on worldwide availability but I can tell you there are none available domestically.

Member Giacomaro: Does that mean they're not available because they're not physically built or not available because they're being used someplace else?

Hill: They don't exist.

Member Walker: This is exactly what I wanted to talk about. Is there a waiting list, are we on the waiting list, or if they don't exist, why don't we just build them here?

Reed: Your point is, "If the casks that could do the job quicker don't exist, build them at the beginning of the process."

Member Garber: I think we should divide the removal of the control rods without segmentation into two parts, one to move and store them and two, to move them and get them off-site. If the spent fuel pool was re-flooded, the unsegmented control rods could be lifted with little effort and slid into the retaining pool. However, this means refilling the pool and contaminating more water. The second part is the problem of getting the unsegmented rods offsite. There are numerous certified casks out there. I'm sure the Lab could get them. Geometrically, the control rods could fit into one of them without segmentation. However, a "super cask" would need to be designed which would provide more shielding. There is a lot of paperwork for that. The Department of Transportation won't just give out a Hazmat sticker and let the cask go on the road. It's a five or six-year paperwork process to get this "super cask". But once it is available, it would probably be less of a chore to lift out the control rods from the flooded pool and transfer them offsite.

Reed: So the idea is to look for a "super cask" that would allow for earlier shipping of the unsegmented rods and take the steps necessary to get that cask in play as quickly as possible.

Member Esposito: To segue from what Don said, if we weren't doing D & D the rods would eventually need to be moved anyway. They would be segmented and the fuel pool would be used and they would be transported. Right?

Hill: Yes.

Member Esposito: I want to insert that information as part of the discussion. We seem to have forgotten that (procedure) would have been a matter of routine. Somehow, we've taken that off the table because we don't want them to segment, which would be terrific and wonderful. I don't think we should exclude the option, as they might have been segmented anyway as part of a routine maintenance or upgrade. So the job can be done through segmentation. It's not out of the question and I do not think it should be taken off the table just yet.

Reed: Segmentation is a regularly used approach to handling control rod blades. It's been successful as an approach and could be successful here. That means it's a viable alternative in your opinion.

Member Esposito: Yes.

Member Guthy: As a follow-up, we've been given a six year timeframe for the "super cask" and not cutting them up. What would the timeframe be for removing the blades if we were cutting them up to get them into the pool?

Reed: If the pool is going to be used, and the control rod blades are going to be placed in the pool to be segmented for shipping, what kind of schedule would be anticipated?

Hill: I would want as short a duration as possible once the control rod blades are taken out of the vessel. I would want them in the pool to have done whatever needs to be done to them, put them in a cask, ship them out and drain the pool. I would not want them sitting in the pool for a long period of time. Right now they are in the safest place. They are surrounded by a two-inch thick vessel, which is surrounded by the bioshield that is eight and a half feet thick. When the blades are moved, some of the barriers are stripped away. We would wait until the hardware was available at our fingertips before we would even consider taking the blades out.

Member Guthy: How long would the process be, when all this decision-making could be over and at least something could be started? When is the paperwork done?

Hill: We are going through the normal CERCLA process. We are working with the regulators on the Feasibility Study. We will have the Public Comment sometime this fall. There will be a ROD by the second or third quarter of next year. Then we would start to make contracts to have hardware built. The firm that I used to work for, which was the largest owner/operator of the largest cask fleet in the United States responded to our query. We were told we could have a cask designed and built in four years. I think that is aggressive. I think it's more like five years. So go out about five years from the point we start placing contracts and that is about the time that things start.

Member Henagan: Is that a standard cask or the "super cask"?

Hill: That is for the cask we will need to do the job.

Member Henagan: I've dealt with radioactive containment before and six years sounds very optimistic. It's not just paperwork. Part of the Department of Transportation requirements for shipping casks includes the destructive testing of these casks. They have to verify what

conditions the casks will endure. They smash them (the casks) on railroad cars and place them in incinerators. Six years is very optimistic and it's going to be extremely expensive to do. I would personally think about 10 years, having done this before, not only with radioactive waste but gaseous, Uranium X's. The qualification procedures that the DOE and the DOT required were very large and it was very hard to get casks specially designed and certified. A "super cask" might not be the most viable option.

Reed: We may be left with the need to look at the feasibility of this "super cask". You may not be able to do this as a group. We may need to get this looked at.

Member Martin: I want to make sure I understand this "super cask". It's not super-sized; it's super-shielded? So the control rods can physically fit in the cask but there would be too much radiation to ship it? The material in the rods will decay. At what point do the rods, which are too hot to ship now, reach a level of radiation where they can be shipped in the current casks?

Chuck Adey: In ten years you no longer have to segment the blades. They could be shipped in existing available casks.

Reed: That's one point you have clarified. If you did not want to segment, and you did want to use current technology, it would take ten years of decay for the Lab to be positioned to ship the control rod blades.

Member Graves: It seems we should consider segmenting the blades and the development of a "super cask" at the same time. It seems unlikely that BNL is the only institution that will have a need for a "super cask". The design effort and possibly even the manufacturing costs could be shared with other sectors of the community. Both of these options could be pursued in the near term without closing out either one.

Member Chaudhry: I am willing to be convinced that this has to take 30 or 50 years or something like that. But how do you convince a general public that knows you can build a whole new nuclear power plant in eight or ten years, that the production of a "super cask" would take that long? With so many other plants decommissioning, I'm sure you could accelerate the production of this "super cask".

Reed: The process may be to examine the crossover point for designing and building the cask that enables an unsegmented shipment the quickest. That may be something that ought to be examined. I don't think that is something we can determine here. There's an optimal engineering solution that could be examined, from the standpoint of what gets the control rod blades out the quickest with or without segmentation.

Member Campbell: This timetable says ten years, no segmentation. If you wait ten years you don't have to segment. If it takes ten years to develop the cask, the conversation we're having doesn't make much sense.

Reed: Yes, that's the point. If it turns out to take four years to develop and implement the cask then that says something. If not, the optimum solution may be using existing casks. My point is that the CAC could ask to have an engineering analysis done rather trying to solve this in committee.

Member Sprintzen: We may have spoken about this before, but I am having trouble understanding the desire to get the control rod blades out so quickly, increasing the health risks to the workers and the risks to the environment. I understand the longer you leave it; there's more uncertainty in the regulatory process, the funding and things like that. I certainly do not have a great deal of confidence in the liability of this government. Are there specific dangers associated with leaving the control rods there? For example, are there significant dangers associated with terrorism and the thing getting blown up and releasing all this nuclear radiation?

I assume it can be released, I just don't know under what conditions, but I wonder if that is an option. We're all going around in circles about how we can get this out as quickly as possible, which seems to increase the risk and danger to the health and safety of the workers and the community. I don't see the benefit. I'm just wondering if someone could address that. Could someone explain to me what the dangers are and why it is necessary for us to try and go through these manipulations and technical analyses to get the control rod blades out as soon as possible?

Reed: So your point is that with the protection around it right now, the overall optimum solution may be to leave it in place as long as possible while it decays.

Member Sprintzen: I'm asking that question.

Bruce Lein: There is a cost to leaving it there and an associated cost to taking it out.

Member Guthy: What's the difference between taking it out, segmenting and disturbing it and putting it in the water? If something happens, terrorism or whatever, which is more dangerous? If something happens to it while it's in the water or if it's in the metal itself? To me it would be safer leaving it in place.

Member Esposito: I need to respond to David's question. Last month the discussion started because the preferred alternative was to leave everything in place for 75 years. Then we got into a discussion about how to speed up some of the removal. So I don't think the question was, "Should the control rods be moved in 5 years or 10 years?" The question was sooner, or 75 years. Does that help?

Member Sprintzen: I'm still asking the question.

Reed: It's expected to have different perspectives around the table.

Member Sprintzen: What I'm interested in is the information. What would be the dangers of leaving it?

Reed: And the question that Helga posed, "Which represents the greater risk?" Leaving it in place, segmenting it in the pool and then shipping it off, or waiting until it can be shipped off unsegmented. Let me pose that question. Has the team thought about which of those alternatives represents the greater risk from exposure? Helga, are you most concerned about risk of exposure to the public or the workers?

Member Guthy: Well, anything. We had a leak in the pool before. I know it has a new liner. I don't know how long the rods are going to be in this pool before they're shipped, but they will be moved as quickly as possible. But the water will be contaminated. Now is that an added risk, if anything happens to this water? If something happens to the water, either while putting stuff in or taking things out? If something happens to the ground or some other kind of act that disturbs this pool? Is it worth the risk doing that compared to leaving it in place?

Reed: I think what David is pointing out it that's characterized at high level on the table, am I correct?

Member Sprintzen: Not necessarily at a high level but it does specify worker hazards. It doesn't say much about public hazards. It doesn't deal with the problems of the water issue. But it (the table) doesn't give details, it just simply says in 30 years there is low potential worker rad exposure and less potential worker exposure to contamination, which is the same thing it says for 75 years. It doesn't tell you amounts for the different years. It doesn't go into any great detail. What are the dangers of leaving it for 75 years other than the questions of reliability, supervision and funding?

Reed: Les, are you comfortable qualitatively ranking these options from a risk standpoint? Risk to worker, risk to public?

Hill: I think to some degree that's a function of my values. I don't know if I am. I feel my values are not important relative to all this. It's the values of all the folks here.

Reed: In general, what we've heard before is those who work with higher levels of radiation are at greater risk than those who work with lower levels.

Hill: If you're asking me for factual information, I can provide the information. If you're asking my opinion, that's where I start to feel uncomfortable.

Reed: It's the factual information we are looking for because what the CAC is looking to do is use the facts to form their opinions.

Hill: To give you facts relative to the question about water, if the control rod blades are put into a pool and transferred into a cask without segmenting, the level of contamination in the water would be a lot lower. If the control rod blades are segmented in the water, the contamination levels in that water would be significantly higher. Segmentation will generate radioactive cutting fines and miscellaneous debris that could be suspended in the water and create very contaminated water. The water will be contaminated to a lesser degree if the blades are not segmented.

Reed: I mentioned worker exposure, as far as the three alternatives, what is the potential for release to the environment other than the water issue?

Hill: As I mentioned earlier, in the present state we have blades inside a vessel, inside a biological shield, inside the confinement building. When this is taken apart the barriers will be stripped away for a short period of time while the blades are being handled and transported. I'm not saying it can't be done safely. We can do the job. The level of controls needed would be commensurate with the risks and this could be safely undertaken. Control rod blades can be shipped safely. Bear in mind, during this short period of time, the barriers are stripped away and you would have greater risk. But again, it would be for a short duration and risks can be managed.

Member Kaplan: Looking at the notes from last meeting, they seemed to say the alternatives were risk based. We're going around and around. When can we actually see the calculations that others have gone through comparing all of the alternatives strictly on the basis of risk?

Hill: The results of the evaluation of the various alternatives against the CERCLA criteria will be presented in the Feasibility Study. The risk assessment that will be in the Feasibility Study will be qualitative, not quantitative.

Member Kaplan: I would suggest that this whole discussion is a bit premature. We ought to wait and see what that study produces. Then we can look at it and discuss it amongst ourselves and try to decide how real it seems to be. Are we satisfied with what's been done or not? I don't see the point of prolonging this discussion when we lack information.

Member Esposito: I agree with Ed because we're all going around and around and we need additional information to go further than we've come tonight.

Reed: That's fine. I'm hoping that information gets captured from the group and is backed into the process. What is important to you for the Lab to look at? What would you like to see coming back? It looks like we're getting there. If we reach that point tonight that's fine. I just want to be sure to capture all the issues that are important to you so that plugs into the process while

they're doing their analysis. Let's see if we can go through other questions to get closure on this to be sure that everyone is satisfied that they've gotten their needs into the process.

Member Giacomaro: Will the qualitative analysis of the different alternatives identify what the greatest risk is for each one of the alternatives? For example, would it show what would be the greatest risk for A and greatest risk for B?

Reed: Like risk to worker versus risk to environment? Is that what you call risk?

Member Giacomaro: Yes, in other words, what is the greatest risk at each one of the levels, or alternatives?

Hill: There will be a relative ranking of the four alternatives against the CERCLA criteria. One of them would be protection of the environment, one would be difficulty doing the job with the available technology or short-term effectiveness; what risks are associated with actually taking the action. All of these four alternatives will be reviewed and ranked in relation to one another against those criteria.

Member Giacomaro: Will it show what the greatest risks are?

Hill: They will be ranked low, medium or high.

Member Giacomaro: For the criteria you are talking about?

Hill: Yes.

Member Henigin: When I compare the different tables, the first with Alternatives A, B, C, and D with the second, the table labeled Control Rod Blades, it seems that the control rod blades are the deal breakers in this process. After going over this myself for I don't know how many meetings, it seems the tables do not correlate on risk.

Member Sprintzen: I would like to know if there is information about the effects of terrorism, whether it is a plane that is flown into it or something else. I would like to know there is information about these options.

Reed: That would be in the Feasibility Study portion of the project.

Member Campbell: It seems to me, from a technical point of view, waiting is a highly desirable attribute. That would mean waiting as long as you can. The question then becomes, "Why not wait?" I would propose two things that are not able to be quantified or judged accurately, but are reasons for limiting the amount of time to wait. One is the general distrust of politics and politicians that is becoming widespread. This is not necessarily the feeling of one specific group. Do we trust them to carry out their word over a lengthy time period of 75 years? These are comparatively long-time intervals. We can be overtaken by world events and things we might not conceive of now could begin to happen. It is hard to predict events that could occur in these elongated time periods, especially 75 years. Major civil disruption is a danger here. The radioactive materials could be a clear and present danger.

Member Conklin: Graham, this is a small area of highly radioactive material. Do you think there is a kind of encapsulation that could be built to handle the war scenario or other scenarios for a 75-year period?

Member Campbell: My intuitive feeling is that where the stuff is now is about as good as you're going to get. That's a safe place. Maybe you could do better, but it would take a whole lot of work to get it better.

Reed: So the short of what you're saying is it's pretty much encapsulated right now.

Member Campbell: Yes.

Member Martin: I would still like to see the breakdown of the costs of security over a 75-year period. That would be helpful. But I also want to consider the fact that technology could change in 75 years. At what point will we have nano beams or who knows, that could be developed that would handle this material differently. As time goes on there could be other solutions we can't even think about, which is one of the arguments for letting it sit, not doing the more dangerous things in the short-term.

Member Esposito: I agree with Graham and thank him for articulating all his points so well. I would like to add two others points. One would be a natural phenomenon that can't be predicted over 75 years. Long Island is subject to more of those than an area like South Dakota. The other I would like to put on the table is the concept of leaving these clean ups, decisions and financial burdens to three generations from now. I feel we have a moral obligation to deal with this as best we can and to leave the 75-year alternative as a last resort so that our kids and grandkids are not left with this problem.

Member Chaudhry: First, I feel if we don't have the confidence to assure the safety in segmenting, combined with the lack of confidence in alternative C or D, we also cannot properly assure that for as long as 75 years the radioactivity stored in our backyards will not be of some hazard. The community would not be very happy about this staying that long. Second, how strong will the commitment be from Uncle Sam in 75 years to provide funding for this project for future generations? The third point I want to make is that if you can build nuclear power plants and make them safe by designing them properly, it's not really so impossible to assure the safety in segmenting the rods in a shorter period. Even Les said he does not operate in fear. He has the technology to segment them and do the job.

Member Sweet: Reviewing the information on other reactors and looking at the DOE reactors that are shutdown, it appears the DOE, through the same process of evaluating environmental concern, costs and public review, has decided to let these things (the reactors) sit for 30 to 75 years in every case that's listed here. Is that what's going to happen? Is it worth discussing shorter time period alternatives? Are there any reactors that have been decommissioned in less than 30 years?

Hill: I will have to go back and verify that.

ACTION ITEM: Provide information on any DOE nuclear reactors that have been decommissioned in less than 30 years.

Member Sweet: What about CP1? Is that just sitting in Argonne waiting to be dealt with also? You listed Hanford and Savannah River. I was just wondering if there were any other research reactors.

Hill: Keep in mind the one up the hill will be taken care of in the next few years. But the BGRR has been decaying for 40 years.

Reed: I think the question that I heard from Jean is that if a shorter timeframe were possible, would it even be plausible, in the DOE world? It could turn out not to be viable.

Adey: I do have the answer on CP1. CP1 was the original Manhattan Project. It was disassembled and moved to a site adjacent to the Argonne site and it was re-designated as CP2. Then another reactor was built called CP3. Then they were decommissioned in the 1950's. A 40-foot trench was dug and both of the reactors were buried. They were dug up in the 1980's, or early 90's and the radioactive materials were disposed of.

Member Conklin: I would just like this group to consider encapsulation of the structure. I take Adrienne's point very strongly. I agree with her to an extent but in some areas I differ from her philosophy on environmental situations. Two meetings ago I put together a sheet that I would like to read to you very quickly. (Statement from Member Conklin attached)

Member Conklin read his statement to the CAC. When he spoke about the passing of problematic wastes to others, he said there were ethical considerations to be made and asked, "Why should we should dump our problems on someone else?" When speaking about terrorism, Member Conklin added that he did not see this as much of a problem until the materials were being transported around the country. Then he saw a chance for a general disturbance of the public, not like a 9-11 incident, but something that could grow out of proportion in view of the public. When commenting on the energy presently contained in the HFBR, Member Conklin added that he had a lot of faith in science. He asked if it were possible that in 20 years there could be other ways of getting the radioactive material out and suggested, at that time, there could be a value found in the material, which could be harnessed in some way and actually be a benefit to the Lab. Currently he is assured the answer is no, at this time the material is a problem. But in 20 years, he said it might not be. When speaking about the cost of the decommissioning to the American taxpayer, Member Conklin said the decommissioning would cost the taxpayer a lot of money. He acknowledged the cost to keep it here and guard it but he said this would be the lesser cost to the general public. Member Conklin concluded by asking the CAC to consider encapsulation and suggested an additional steel wall be added for protection. He stated he did not believe in sending the material someplace else and it was a question of ethics.

Member Sprintzen: I appreciate the points both Bob and Adrienne have raised. But it seems to me that Bob is responding to Adrienne. We have an obligation to each generation, but I don't think this stuff goes away. The question is are we making it safer by moving it or by leaving it there? We can be making it safer for people around the Lab, potentially, but we're not making it safer for people elsewhere. So I don't know that the generational question is relevant here.

Member Anker: I agree with Adrienne. I don't think it's our children's, children's, children's responsibility to fix something that was done decades ago. I think we do have the responsibility of taking action now. I don't think we're a dumping ground. If we look at leaving it here, that's what we'll consider ourselves. How prepared is BNL to deal with natural disaster? We're on an island that we can't evacuate. I don't think this is the place. Yes, it's going to cost a lot of money, but we gave a lot of ourselves decades ago and I don't think it should be our children's place to clean it up.

Reed: If you're done giving your initial value based input, the next step is for the Lab to come in with the Feasibility Study and the PRAP so that you can comment on something detailed with substance. The Laboratory's plan is to continue working with your input through the IAG.

Member Martin: Most of the Action Items are relevant to our discussion. Will we have the opportunity to have this information before the next meeting so we're not first seeing them at the meeting?

Reed: Last months and this month's?

Member Martin: Yes.

D'Ascoli: As I stated earlier, I'd be happy to get them to you within a couple of weeks. They have been worked on. They just haven't been through a review cycle at the Laboratory. As soon as that review cycle takes place I will get them out to you. We'll try to incorporate the new Action Items from tonight with the items from the last meeting.

Reed: I would like to know if anyone feels they need to continue this discussion before you get more information on the Feasibility Study? No? Good. Can we then spend a moment on the agenda for next month?

9. Agenda Setting

Jeanne D'Ascoli explained the CAC had been promised a briefing on the new NSLS II Environmental Assessment. There would also be one or two upcoming presentations on g-2, which could occur in August or September. Additionally, a presentation on Nano Science and ES&H was promised for September, in response to interest expressed by several members of the CAC. HFBR will still be on the agenda. A discussion of the four alternatives and the preferred alternative will have to take place. Jeanne suggested the meeting could be postponed if that was the desire of the committee. Member Sprintzen asked for a sense of how many members felt they would be in attendance in August. After a brief discussion, Jeanne asked the group if they would be comfortable allowing the Laboratory to discuss the pending agenda items and respond to the CAC at a later date with a proposed agenda and meeting schedule. All were in favor.

August 06 Agenda

TBA

Meeting adjourned 9:36 p.m.

Flip Chart Notes – July 13, 2006
HFBR issues raised by the CAC

1. Apply CERCLA process - put in ROD
2. Out-year requirements explicit in ROD
3. Removal of control rod blades ASAP without segmentation
4. Removal of control rod blades early if technology becomes available
5. Use of fuel pool for remedy
6. Potential overall remediation schedule that is less than 75 years
7. Encapsulation
8. Lifetime of containment
9. In place vs. dismantle/ shipping risks
10. Assurance of worker safety
11. ID and application of future methods to improve the remediation process in ROD

Statement provided by Bob Conklin
July 13, 2006

In Regards to the Options for the Decommission of the High Flux Beam Reactor:

In that 99% of the radioactive inventory associated with this complex is contained within the bioshield walls...

In that only the inner few inches of the concrete of the bioshield wall are contaminated....

In that the control rod blades, reactor internals, reactor vessel, thermal shield and biological shield present a small area footprint...

In that extremely high radiation dose rates are associated with the internal, functional components of the HFBR...

In that worker safety becomes a serious overriding consideration if near term decommissioning is attempted....

In that the storage, transportation and disposition of the reactor components are dangerous to workers as well as the general public....

In that passing our problematic wastes on to others, even though they may be prepared to receive these wastes, presents an ethical consideration....

In that acts of terrorism are a concern when presenting a radioactive target....

In that the energy contained within the HFBR is not practically available with present technology - this may not be true in the future....

In that that above will come at a high cost to the American taxpayer....

Encapsulation of the internal structure, with a concrete/steel etc. cap beginning at the bioshield wall, could be added to the alternatives to be considered.

Thanks,

Bob Conklin

2006	Affiliation		First Name	Last Name	JAN	FEB	MAR	APR	No Mtg MAY	JUN	JUL	No Mtg. AUG	SEP	OCT	NOV	DEC
Chart Key - P = Present																
ABCO	(Garber added on 4/10/02)	Member	Don	Garber	P	P	P	P		P	P					
ABCO		Alternate	Doug	Dittko												
Brookhaven Retired Employees Association		Member	Graham	Campbell		P	P	P		P	P					
Brookhaven Retired Employees Association (L. Jacobson new alternate as of 4/99)(A. Peskin 5/04)		Alternate	Arnie	Peskin		P				P						
CHEC (Community Health & Environment Coalition (added 10/04)		Member	Sarah	Anker	P		P			P	P					
		Member	Adrienne	Esposito	P			P		P	P					
Citizens Campaign for the Environment (Ottney added 4/02-takenoff 1/05 Mahoney put on)(7/06 add Kasey Jacobs)		Alternate	Kasey	Jacobs	P	P					P					
E. Yaphank Civic Association		Member	Michael	Giacomaro	P	P	P				P					
E. Yaphank Civic Association (J. Minasi new alternate as of 3/99) (M. Triber 11/05) (Munson 6/06)		Alternate	Brian	Munson						P						
Educator		Member	Audrey	Capozzi												
Educator (B. Martin - 9/01)		Alternate	Bruce	Martin						P	P					
Educator (A. Martin new alternate 2/00) (Adam to college 8/01)(add. alternate 9/02)		Alternate	Adam	Martin							P					
Environmental Economic Roundtable (Berger resigned, Proios became member 1/01)		Member	George	Proios	P			P		P						
Environmental Economic Roundtable (3/99, L. Snead changed to be alternate for EDF)		Alternate	None	None												
Fire Rescue and Emergency Services		Member	Joe	Williams												
Fire Rescue and Emergency Services		Alternate	Don	Lynch						P	P					
Fire Rescue and Emergency Services		Alternate	James	McLoughlin		P										
Friends of Brookhaven (E.Kaplan changed to become member 7/1/01)		Member	Ed	Kaplan	P		P				P					
Friends of Brookhaven (E.Kaplan changed to become member 7/1/01)(Schwartz added 11/18/02)		Alternate	Steve	Schwartz			P	P		P						
Health Care		Member	Jane	Corrarino	P		P	P			P					
Health Care		Alternate														
Huntington Breast Cancer Coalition		Member	Mary Joan	Shea	P		P	P								
Huntington Breast Cancer Coalition		Alternate	Scott	Carlin												
Intl. Brotherhood of Electrical Workers/Local 2230		Member	Mark	Walker	P	P	P	P		P	P					

2006	Affiliation	First Name	Last Name	JAN	FEB	MAR	APR	No Mtg MAY	JUN	JUL	No Mtg. AUG	SEP	OCT	NOV	DEC
	IBEW/Local 2230	Alternate	Philip Pizzo												
	L.I. Pine Barrens Society	Member	Richard Amper												
	L.I. Pine Barrens Society (added P. Loris 6/05)	Alternates	Eiina Alayeva			P	P		P	P					
	L.I. Progressive Coalition	Member	David Sprintzen	P	P	P	P		P	P					
	L.I. Progressive Coalition	Alternate	None None												
	Lake Panamoka Civic Association (Biss as of 4/02)	Member	Rita Biss	P	P	P			P	P					
	Lake Panamoka Civic Association (Rita Biss new alternate as of 3/99)	Alternate	Joe Gibbons												
	Long Island Association (Groneman replace 10/05)	Member	Lauren Hill	P					P	P					
	Long Island Association	Alternate	William Evanzia		P	P	P		P						
	Longwood Alliance	Member	Tom Talbot	P	P		P		P						
	Longwood Alliance	Alternate	Kevin Crowley												
	Longwood Central School Dist. (switched 11/02)	Member	Barbara Henigin	P	P	P	P		P	P					
	Longwood Central School Dist.	Alternate	Allan Gerstenlauer												
	NEAR	Member	Jean Mannhaupt				P		P						
	NEAR (prospect taken off ¾)(Blumer added 10/04	Alternate	Karen Blumer												
	NSLS User	Member	Jean Jordan-Sweet	P	P	P	P			P					
	NSLS User	Alternate	Peter Stephens												
	Peconic River Sportsmen's Club (added 4/8/04)	Member	John Hall	P		P	P		P						
	Peconic River Sportsmen's Club	Alternate	Jeff Schneider												
	Ridge Civic Association	Member	Pat Henagan	P	P	P	P			P					
	Science & Technology (added 1/13/05)	Member	Iqbal Chaudhry		P	P	P		P	P					
	Town of Brookhaven (Graves made member 6/06)	Member	Anthony Graves	P			P			P					
	Town of Brookhaven	Alternate	None None												
	Town of Brookhaven, Senior Citizens	Member	James Heil	P	P	P				P					
	Town of Brookhaven, Senior Citizens (open slot as of 4/99)	Alternate	None None												
	Town of Riverhead	Member	Robert Conklin	P	P	P	P		P	P					
	Town of Riverhead (K. Skinner alternate as of 4/99)	Alternate	Kim Skinner												
	Wading River Civic Association	Member	Helga Guthy	P	P	P	P			P					
	Wading River Civic Association	Alternate	Sid Bail						P						