Community Advisory Council
November 9, 2006
Action Items/Notes

Final

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Update on HFBR Leak Les Hill, Director, Environmental Restoration Projects
5. Prescribed Burn, John Searing, Manager, Office of Emergency Management
6. Community Comment
7. Formulate Recommendation on the Proposed Remedial Action Plan for USTs, and g-2 Tritium Source Area and Plume
8. Agenda Setting

1. Attendance

Members/Alternates Present:
See Attached Sheets.

Others Present:
S. Aronson, M. Bebon, P. Bond, A. Carsten, J. Carter, A. Csorny, J. D'Ascoli, B. Dorsch, G. Goode, L. Hill, M. Holland, B. Howe, S. Johnson, S. Kumar, M. Lynch, D. Paquette, A. Rapiejko, R. Rimando, J. Searing

2. Correspondence and Handouts

Items one and two were mailed with a cover letter dated November 3, 2006. Item three was provided in the member's folders. Items four through six were available as handouts at the meeting.

1. Draft agenda for November 9, 2006
2. Draft notes for October 12, 2006
3. Copy of presentation on Prescribed Burn and New York Wildfire & Incident Management Academy
4. Comparison of g-2 Remedial Action Alternatives
5. Copy of Proposed Remedial Action Plan for USTs, BLIP and g-2 Tritium Source Area and Plume (PRAP)
6. Copy of presentation from Public Meeting held October 25, 2006 on the PRAP for USTs, BLIP and g-2 Tritium Source Area and Plume

3. Administrative

The meeting began at 6:44 p.m. Those present introduced themselves. Reed Hodgin reviewed the ground rules and the draft agenda. Member Esposito said she was disappointed that the process to formulate the recommendation on the PRAP for the USTs, BLIP and g-2 Tritium Source Area and Plume was last on the agenda and requested that close attention be paid to time so that the discussion may begin on schedule and attendance is not affected.

Reed introduced Jeanne D'Ascoli. Jeanne informed the CAC there would not be a scheduled meeting for December and asked the group to formulate agenda items of interest for future

meetings. Jeanne said an update on the BGRR and a discussion on the HFBR was scheduled for the January meeting.

Member Sprintzen said he would like to hear a discussion of Director Aronson's interests and research concerns and suggested that be added to the agenda.

Reed asked for corrections, additions or deletions to the October 12, 2006 Notes and Action Items. Member Kaplan asked for the word "pop" in paragraph two on page seven be changed to "puff". He also said he was still interested to see a larger replication of the map that that was contained in the PRAP. Doug Paquette said he had one with him for the evening's discussion. Reed suggested there would be time available prior to the g-2 discussion for Member Kaplan to review the larger map with Paquette. Member Garber asked that the inaudible section of his question on page fourteen be changed to read, " to allow for detection of materials that have escaped." He also asked that Steve Hoey's follow-up response contain the comment, "the consultants had discussed some similar ideas." Member Jordan-Sweet asked that "Andy" be changed to read " Andrew" and "block" be changed to read "crystallography" in paragraph one on page four. The notes were approved, with no objections and one abstention.

4. Update on HFBR Leak, Les Hill

Hill said the removal of the contaminated water from the HFBR confinement building was completed. The water is being held in radwaste storage. An inspection will be conducted to insure there was no damage done to the coating system as a result of the flooding. Hill said the secondary confinement as prescribed in the Article 12 standards performed as intended. The Causal Analysis team will finalize the consideration of various modifications, one of which is to place instrumentation at various elevations in the low points of the confinement building to enable 24-hour surveillance. Another is the possible physical isolation of the building. Hill said he would have more information at the next meeting after the team has spent more time on the project. Currently, the water has been removed from the building and there is no evidence of leakage to the environment. There were no additional questions for Hill.

Dr. Aronson asked to comment. He said he believed the CAC members desired a science talk on cosmology, rather than his own vision, which he would be happy to provide. Reed changed the proposed agenda item on the flip chart to reflect his comment.

5. Prescribed Burn, John Searing

John Searing spoke about the 9th Annual New York Wildfire and Incident Management Academy (NYWIMA) that occurred on site from October 20 though October 30, 2006 and the prescribed fire conducted by the participants. Searing said the Academy was developed in 1998 in response to the 1995 Long Island Pine Barrens wildfires and now provides "all hazards" training to its participants. The NYWIMA strives to provide quality education to emergency response personnel, develop awareness, create qualified trainers and encourage interagency cooperation in emergency management. Searing represents BNL on the Executive Board of NYWIMA that manages the Academy and helps to coordinate the participating federal, state, and local agencies. Brookhaven National Laboratory is a charter agency and one of the primary supporters of the Academy. During the 2006 session, 27 courses were offered to 482 students from the United States and Canada. Fifty percent of those who attend have been returning since the inception of the Academy. Searing showed the CAC photographs of the participants during training and helicopter demonstrations, emergency incident planning, pump and power saw courses.

The prescribed fire conducted on site was one element of training during the Academy. The first fire on site took place in 2004. This year 15 acres were burned following a strict prescription created in cooperation with The Nature Conservancy and the Department of Environmental Conservation (DEC) and with permission obtained from Mike Holland, DOE Site Manager and

Mike Bebon, Deputy Director of Operations for BNL. Various classes are conducted during the fire and critical training is obtained by participating firefighters.

Overall benefits of the Academy include providing training in firefighting skills, development of the next generation of emergency managers and instructors and improved agency interaction. These efforts benefit the Laboratory by developing partnerships with outside emergency management agencies. The Academy plays a key role in the effort to increase emergency preparedness across the Northeast region. The CAC may access additional information on the Academy's website, www.dec.state.ny.us/website/reg1/acad.html.

Member Sprintzen asked if prescribed fires were performed throughout the Pine Barrens region. Searing said prescribed fires are executed by many agencies, among them The Nature Conservancy and the DEC. Recently a prescribed burn was conducted at the Sarnoff Preserve.

Member Chaudhry asked where firefighters, especially those fighting fires currently in California, received training prior to the creation of this Academy and if the training provided is accepted on the national level. Searing said this Academy is an accepted model. Previous to this type of academy different localities conducted pockets of training, but nothing as extensive and coordinated as this program existed. Two other academies developed as an outgrowth of this effort.

Member Kaplan asked if the Academy addressed emergency evacuation and how feasible or even possible it would be to evacuate the people of Suffolk County. He asked if this was something the politicians should be encouraged examine. Searing said it would depend on the disaster. Category 5 hurricanes are fast moving and would offer little time for preparation and often people refuse to evacuate. A large-scale evacuation would be difficult but localized evacuations could occur. Member Henagan said in North Carolina, his experience was that the policy was not to evacuate everybody, but to evacuate low-lying areas. He said there is an excellent website available that illustrates the tidal surge projections for Long Island in the event of hurricane events. It shows the areas that are most likely to flood. Those are the areas that need to be evacuated. The rest of it is shelter management. His role was to coordinate multiple shelters. Searing said the website Member Henagan refers to can be found through NOAA.

Member Garber asked if the disasters of the California wildfires generated new discussions relative to protective measures in response to wind events during a fire and if there is any classroom discussion of Katrina-type refugee management. Searing said there is a lot of discussion of risk management and the priority of protecting lives before property when fighting wildfires. The discussion of refugee management is one that has just begun.

Member Husted thanked Searing and said that this type of instruction is helpful in the training and coordination of law enforcement. She has heard mention of this type of effort during discussions at the Law Enforcement Council. Member Husted suggested that the Wildfire Academy is a possible opportunity for education about prescribed burns and asked if the public could be invited to learn about, or watch, a prescribed burn next year. Searing said he would be glad to speak with civic groups about this.

Member Proios thanked Searing for his initial efforts and his role in creating the Academy. He noted Searing deserved recognition for turning an idea into a nationally recognized unit. He asked Searing to consider sharing the incident command structure knowledge with the larger community. Member Proios said during the recent June floods in upstate New York, there were more than 20 counties declared disaster areas and most of them did not know who to call or how to receive aid. He suggested the formation of a one-day incident command seminar that could be conducted in various communities, which would help new commissioners and staffers coming aboard to keep abreast of the most current procedures and tools available to help coordinate and execute emergency management. He said this could be a good public relations opportunity for the Laboratory. Member Guthy added that this type of coordination could help to

avoid a situation that occurred in Riverhead, when no one informed the Town Supervisor that there had been an oil spill at the Northville terminals.

The CAC thanked John Searing for his efforts and his presentation.

6. Community Comment

There was no community comment.

7. Formulate Recommendations on the Proposed Remedial Action Plan for USTs, BLIP, and g-2 Tritium Source Area and Plume

Reed explained the charge to the CAC was to formulate a recommendation to the Laboratory Director as to which of the proposed remedial alternatives is appropriate for the Lab to pursue for the cleanup of g-2. He reminded the CAC that they had the PRAP to look at and that it documented the detailed information they had heard over the last few meetings. He said he wanted them to focus on their discussion so they could form their recommendation tonight during the public comment period.

Doug Paquette was present so the CAC could ask final questions for clarification related to the PRAP and copies of the presentation given at the October 25 public meeting were available. Member Esposito asked if anyone attended the meeting. Doug Paquette said Member Heil was the only member of the public present that evening.

Reed reviewed the five g-2 Remedial Action Alternatives.

Member Giacomaro asked for clarification of the statement on page five of the PRAP that reads, "…the prediction of concentrations is accurate to a level of about +/-100 percent ….". He said that the uncertainty sounded high.

Paquette said there are uncertainties associated with all models because simplified assumptions are made as far as groundwater flow, steady state, and issues related to dispersion. There is a large body of knowledge associated with the modeling done for other plumes on-site. There has been extensive monitoring and modeling of the HFBR tritium plume.

Member Giacomaro asked about the ratio of tolerance of modeling as compared to actual results.

Paquette replied he did not have the details on the HFBR available, but the predicted concentrations over time look very good. He said that it was a steady state model and though the plume may shift slightly with a change of groundwater flow, the tritium concentrations have been very predictable over time. In one instance the model predicted 60,000 pCi/L in one area of the plume and the concentration observed was about 80,000 pCi/L. The modeling has provided a very good capability for prediction and in certain cases it seems to be conservative. Paquette added that there is not a reliance on modeling alone and that is why the preferred alternative calls for accurate demonstration of the modeled predictions.

Member Proios said his question is about the difference between Alternatives 3 and 4. When the groundwater treatment was done through the resins there were two issues that arose. One was that a huge volume of clean water was being treated due to the draw down and the ions in the groundwater were using up the resins more rapidly, which resulted in the development of low-flow pumping as the more cost effective method. He asked how the pumping of high volumes of water (~ 360,000 gallons) could be a weakness for Alternative 4 (Low-flow Pumping) and not of Alternative 3 (High-flow Pumping), and noted the cost differential of the two seemed disparate.

Paquette said resin is not a factor in this case because tritium is not removed from water with resin. The large volume of water estimated in Alternative 4 includes removal of hundreds of thousands of gallons of water in the high concentration areas that are over 200,000 pCi/L. The high cost of Alternative 4 is a result of the transportation and disposal costs of those large quantities of water. The High-flow pumping alternative would use wellhead dilution to pull in the tritium plume at a higher flow rate and mix it with clean water to get it to the 20,000 pCi/L drinking water standard or below. If that were accomplished, the water could be recharged on site and there would be no cost of disposal. There is a cost resulting from the removal of the water, but the larger cost is a result of the disposal.

Member Campbell asked for confirmation of the statement, “The plume is expected to naturally drop below the 20,000 pCi/L drinking water standard in the center of the BNL site by 2010-2015.” He asked if this statement applied to the entire plume.

Paquette said the assumption is that there will not be another release from the source. Monitoring is indicating the tritium concentrations downgradient of the source are diminishing, and are currently about 55,000 pCi/L. The concentrations are expected to reduce to 20,000 pCi/L. The model used the higher concentration slug areas of the plume and it indicated the tritium concentrations would drop below 20,000 around the 2010 time period, at the center of the site, about where the HFBR is now, which is the Cornell Avenue area.

Member Campbell asked if it would be accurate to say that the maximum concentrations anywhere in the plume will drop below the 20,000 pCi/L drinking water standard during that time.

Paquette agreed with the statement and said it is a requirement to demonstrate that outcome with monitoring.

Member Kaplan asked if the contour of the plume was mapped from a modeling prediction.

Paquette said it was a combination of actual monitoring data and model projection. The map of leading edge of the plume and the first slugs represents the fourth quarter of last year. There were no temporary wells in that area to obtain groundwater samples.

Member Kaplan said he had a lot of experience with groundwater models. On Long Island there are not many significant anomalies in the sub-soil surface. There is good information about how groundwater moves. The first slug happened in 1997 and we’ve had nine to ten years. He calculates it should be roughly where it is right now. He was surprised that there are still areas with 100,000 pCi/L. Member Kaplan said the statement that says there are 20,000 pCi/L at the center of the site should be cleaned up based on the questions he’s heard. He said you don’t really mean 20,000 p/CiL in the center of the BNL site.

Paquette said they were trying to provide a reference point for where the plume was expected to migrate to when it dropped under 20,000 pCi/L and to show that it would not be at the site boundary or off site. The map illustrates the plume will migrate toward Cornell Avenue and at that time it is expected to fall to 20,000 pCi/L.

Kaplan noted the four slugs shown contain over 100,000 pCi/L.

Paquette said by dispersion and decay those concentrations are expected to decrease to 20,000 pCi/L within the next three to five years.

Member Kaplan said the slugs have been flowing for nine years and they are still at 100,000 pCi/L.

Paquette said the highest concentration found at the source was 3.4 million pCi/L and over time those concentrations have dropped to less than 500,000 pCi/L.

Member Henagan said the dotted line on the map represents the boundary of where the concentration of 100,000 pCi/L occurs, but the concentrations in the slug could be higher.

Paquette said the projected concentration in the leading slug is 200,000 pCi/L.

Member Kaplan said that he does not feel comfortable with the semantics. Based upon the questions he's hearing, there are people who don't understand what is meant by it. He himself wasn't sure what it said. While he had no problem with the choice of Alternative 2, he said in terms of asking people to understand the alternatives, that statement does not add anything to the argument.

Member Garber said he interpreted this to mean, rather than "at the center of the Brookhaven site", but "contained well within the Brookhaven site".

Reed said he thought the intention of the statement was to mean, "by that time all concentrations will drop below 20,000 pCi/L and the last location where it drops below the 20,000 pCi/L will be well within the interior of the site." Paquette agreed.

Member Esposito said in 1997 and 1998 the concentrations were 3.4 million p/CiL?

Paquette said that was the highest that was observed, and that was in late 2002. He said the sequence of events was that the experiment started in 1997. There were monitoring wells put there to verify the controls in place were effective. This was an area that was not expected to have activated soils. The first analysis of tritium was obtained in November of 1999. Once it was discovered a full investigation was conducted to verify the source. As part of the investigation in 1999 a concentration of about 1.8 million p/CiL was detected. That is when the corrective actions were put in place. The monitoring that was done afterward lead to the discovery of the 3.4 million p/CiL in the groundwater in 2002. It is believed that the tritium represented in the 3.4 million p/CiL was being flushed from the soils very close to the water table.

Member Esposito said if the modeling does not prove to be accurate and there is a variation, if Alternative 2 is chosen, you have triggers. I don't call them triggers because they appear to do nothing. If you find 1 million p/CiL downgradient the verbiage doesn't really say you're going to actually do anything. It says that you will monitor, do additional characterization, and an inspection of the storm water groundwater controls, I would have hoped you would do that anyway I don't even know why that's there, and implement improvements. We don't know what kind of improvements, unless you mean improvements of characterization and improvement of monitoring, or unless you mean improvement of storm water controls, which I would hope that you would do no matter what was chosen. This tells me that if 1 million p/CiL is found, not much will be done. Then we go to the second trigger and it's the same verbiage. If you find 2 million p/CiL, and I'd like to know where these thresholds for triggers came from, the same exact verbiage is here except at the very end it says you may look at some active remediation such as low-flow pumping. But you may not. In the past there have been triggers that would activate active remediation but here, even very high triggers are really not triggering any kind of active remediation or response. My first question is where did the 1 million and 2 million pCi/L come from?

Paquette said there is still an issue of uncertainty about how much tritium is in the soils closer to the groundwater. If 100,000 or 200,000 pCi/L was detected in the monitoring wells an evaluation would be initiated to see if something was missed. There is a cap inspection program in place that calls for inspecting the cap twice a year. Paquette said they want to find problems with the cap early to prevent water seepage. It is very important make the best effort to keep the soils dry. The 1 million pCi/L trigger was established as a number that was high enough to implement

the Groundwater Contingency Plan, inform regulatory agencies as quickly as possible, and communicate with the public as necessary. Paquette said they would work with the stakeholders to keep them informed and to try to understand why, if levels of 100,000 - 200,000 pCi/L were detected but if a level of 1 million pCi/L was detected, that would indicate the need for a full evaluation.

Member Esposito said it would really need a response, which she does not see provided.

Paquette said any response taken would be in concurrence with the regulatory agencies.

Member Esposito said it is hard to support an alternative that doesn't tell her what the response is.

Paquette said the 2 million pCi/L trigger is about 600 feet downgradient of the source. He said the modeling shows that if the concentrations in that area were over 2 million pCi/L the 20,000 pCi/L level would probably not be met at Cornell Avenue. In that case, there would be prior knowledge of this because higher concentrations would be seen near the monitoring wells at the source. But if the concentration, once it traveled 600 feet downgradient, was at 2 million pCi/L, then we would again work with the regulatory agencies to determine whether active remediation was the best choice to pursue.

Member Esposito said there's nothing substantive here that she can support.

Paquette said there is not a hard trigger that states if concentrations of 2 million pCi/L are detected, pumping will occur. If 2 million pCi/L was detected, an assessment would be compiled and we would work with the regulatory agencies to get their concurrence as to whether active remediation was the best action. The determination would not be made alone. It would be made with the involvement of the stakeholders and of course, we would come to the CAC. We have that mechanism in place.

Member Heil asked if the regulators have provided comments on the plan.

Paquette said the regulatory agencies were intricately involved with reviewing and helping to reshape the plans. They are in agreement with the proposed plan. As part of the CERCLA process there must be a public comment period to evaluate what the public concerns are. Then the regulatory agencies will give their final concurrence.

Member Kaplan asked for clarification; is Suffolk County Department of Health Services (SCDHS) was one of the regulatory agencies, plus the Department of Environmental Conservation (DEC) and the Environmental Protection Agency (EPA)? Paquette said the DEC and the EPA were part of the Interagency Agreement and Suffolk County has a very important role in reviewing and giving input on the documents. Member Kaplan asked if SCDHS had reviewed this.

Paquette said yes.

Member Biss asked how often the high level slugs would be measured.

Paquette said over the past six years there were 80 temporary wells and 25 permanent wells installed. The permanent wells are monitored on a quarterly basis and the temporary wells are monitored on an individual time period. As part of this additional action, a sampling plan will be developed to characterize the slugs. The slugs will be characterized until it is verified the concentrations have dropped below 20,000 pCi/L.

Member Biss asked if the slugs would move past the wells.

Paquette said the movement last year was a result of pumping from a supply well, which caused the plume to move 50 feet to the east. After it was determined that the shift had occurred, a planning committee was established and one of the goals has been to keep groundwater flow directions steady so that when the temporary monitoring wells are installed again, the plume will remain steady over time. There are positives and negatives associated with the temporary wells. Temporary wells allow for the characterization of an avertable distribution of tritium through the aquifer. Permanent wells are in a fixed place. The wells can be sampled with some frequency but they do become stagnant. There is discussion about which method to use and the leaning is toward temporary wells because they lend flexibility.

Member Biss asked if a temporary well, with a low level of pumping, could pull in high levels of tritium.

Paquette said there are varied distributions of concentrations in the plume; a sample may yield slight variations.

Member Biss asked if pulling, even a little bit, could bring in a greater amount of tritium.

Paquette said the idea is not to pull too much. Very small amounts of water are pulled to determine the concentrations in a small area.

Member Esposito said she heard Member Biss ask if there was a sampling plan and Paquette said not yet.

Paquette said there are routine sampling plans for the permanent wells. The plan for the slugs is being devised now.

Member Esposito stated that they are being asked to support Alternative 2 and a sampling plan does not exist.

Paquette said a sampling plan is very detailed. It lays out specific locations and frequency.

Member Esposito said we don't know where the locations are and we don't know the frequency, but yet we should support that.

Paquette said there would be as much monitoring as is possible. The commitment is to demonstrate the plume degrades as predicted.

Member Chaudhry asked if the cut through the six-inch thick concrete base pad at the Alternating Gradient Synchrotron (AGS) experiment was done by design.

Paquette said yes. The experiment was built on an existing concrete pad. The design required the installation of sheet walls. In order to install the sheet wall a pathway was cut through the existing concrete pad. After the sheet wall was installed on the experiment side the cut was backfilled with concrete. The outside gap was not. However, that was where the soil activation was occurring and there was no cap there. The rainwater was able to infiltrate the soil, leach the tritium out and carry it through the cut down to the groundwater.

Member Chaudhry said he found it unbelievable that the cut was simply left there for the leaching to occur.

Reed asked if the questions could be left to clarification of the remediation alternatives.

Member Chaudhry asked if Paquette was satisfied that the four-inch thickness of the concrete cap on top of the soil shielding was enough. He asked if there was any traffic on it.

Paquette said there is no vehicle traffic on the pad. It is an above ground cap that cannot be walked on. It is a gunite cap reinforced with high viscosity concrete with a rebar mesh underneath it. The cap is also coated with asphalt.

Member Chaudhry said if the cap breaks the coating means nothing.

Paquette said that was why maintaining the inspection process is so important, so that necessary repairs can be made as quickly as possible.

Member Henagan asked if the map depicted all the test wells that are currently in existence.

Paquette said the map that Member Henagan was looking at did not show all the test wells. There is another map that shows all the locations of all the temporary wells installed.

Member Henagan asked if there have been wells dropped to confirm the slugs that shifted are where they are now believed to be.

Paquette said that is going to be done.

Member Henagan said that the map does not show any wells near the depicted area of Slug 2 and asked if the model is determining the locations of the slugs at the moment and said there is not physical confirmation at the moment that the slugs are where they are thought to be.

Paquette said that is correct. Wells will be dropped shortly.

Member Henagan wanted to confirm that there was no written plan detailing where the temporary wells were going to be dropped and asked if the plan was in the process of being developed.

Paquette said this is not uncommon. There are monitoring changes and well installations done frequently. The permanent wells are evaluated constantly to ensure they are effective. Frequently, temporary wells are installed as a response to the evaluations. There is an exchange with the regulatory agencies before the wells are installed, seeking recommendations or suggestions. It is not uncommon that the sampling analysis plan is not right up to the moment. It is dynamic.

Member Henagan said it would be nice to see a depiction of high-level criteria with a projection to drop a number of wells per slug in and around the perimeter outlined in the alternative.

Paquette said that information would not be contained in the PRAP but it is included in the process as part of the 30-year cost analysis. There are assumptions made that include the installation of a certain number of permanent wells and a certain number of temporary wells. It is a dynamic process. We can say we're going to put in ten wells and then look at the data and decide another ten, or five or three, will go in, dependent upon what will provide the clarity needed to assess the slugs.

Reed suggested the CAC would like to see a sampling strategy.

Paquette said he would be glad to come back and provide the plan next spring.

Member Henagan suggested the plan include wells that show where the flow is currently so that it is tracked as it goes by.

Paquette said the strategy is being reviewed to determine whether to install fixed or temporary wells to monitor that movement.

Reed took asked the CAC if they were concerned about time. Member Esposito suggested the next four questions be taken and then the CAC could move to discussion.

Member Garber said a Record of Decision (ROD) would follow the adoption of Alternative 2 and asked if a threshold could be determined that would nullify the ROD and begin the review process again, in order to possibly change the ROD. He said there are valid concerns that exist about the occurrence of a surprising finding.

Member Esposito said she had never seen that happen with any ROD.

Member Garber said that was the question. Could there be a ROD with a trigger (inaudible, tape change)…then you reopen the ROD.

Reed clarified Member Garber's question. He thought he heard "Was it legally possible to reopen and change the ROD".

Member Guthy asked if that was already covered by the comment in Alternative 2 that states, "Contingency plans established if unexpected levels of tritium are found."

Paquette said there are contingencies that would determine further actions. They are not hard actions. Work would be done with the regulatory agencies and the public to determine the best course of action.

Siva Kumar said there is a process for amending the ROD that is built into the CERCLA process, if new information becomes available or the remedy when implemented, is not achieving the goals. There are different processes depending upon how serious the differences are. There are fundamental differences and significant differences. A fundamental difference has a higher threshold than a significant difference. An Explanation of Significant Differences can implement a significant difference. This is the process that was implemented for groundwater a few years ago when dealing with the Magothy and the strontium-90 plumes. This process is not as rigorous as the ROD process. If the remedy is fundamentally changed, then it goes through a ROD amendment process, which is very similar to the regular ROD process. It calls for public comment and other requirements are built into it.

Member Garber asked if that would be automatically triggered if new information came to light. What happens if this approach is fundamentally flawed and it reopens a ROD process?

Reed clarified that Member Garber was asking how the event would be triggered.

Kumar said it would be a result of new information gathered and examined during the implementation of the current remedy. The 5-Year Review process could also show the remedy was not effective and action change was needed.

Reed said he thought Member Garber was asking if one of these triggers could be written in, representing a significant or a fundamental difference.

Member Garber asked to have a trigger written into the ROD that would represent a significant or fundamental change so that action would be automatic.

Member Esposito asked that the threshold trigger actions be more substantive than those currently identified in the PRAP.

Member Henagan said there is discussion of the triggers specified in the PRAP, but not as much as the CAC would like.

Member Husted said that the additional million-dollar expense of Alternative 3 appeared to yield a greater guarantee of a clean up and measure of the reduction of contamination levels. She asked for clarification of the weaknesses identified in Alternative 3 and why it is not the preferred alternative. She said the characterization of the strengths and weaknesses doesn't give her a clear picture of what will really be done. Member Husted said Alternative 3 appeared to guarantee a clean up. She said that spending $1million for a guaranteed clean up felt better to her than waiting five to ten years.

Member Esposito asked if she could follow up on Member Husted's comments. Member Esposito said she was angry that the CAC was presented only one alternative that appeared feasible. She said the practicality of the other alternatives was eliminated by the way they were presented. Member Esposito said there should have been alternatives presented to the CAC that were feasible and "doable". She did not want alternatives that were not "doable".

Paquette said all of the alternatives are "doable," but they have to be evaluated for benefits and one of them is cost. There is a lot of historical data available about how the tritium plumes degrade in the aquifer and a high degree of confidence in allowing the plume to attenuate in the aquifer over the next three years. When the cost of Alternative 3 is evaluated, the actions would add an additional $1 million. An evaluation of Alternative 4 reflects a cost increase of $5 million because of the high cost of disposing the pumped water.

Member Husted said the difference in cost between Alternative 2 and Alternative 3 is minimal compared to the costs of the other alternatives but it is significant in terms of the guarantee of clean up in Alternative 3. Member Husted asked why Alternative 3 was not the preferred Alternative.

Paquette said the model predicts that by allowing the tritium to attenuate in the aquifer, within three to four years the plume will drop well below 20,000 pCi/L without any additional action due to natural decay and dispersion. It will not affect any on site drinking water supply wells during that time. There are issues associated with Alternative 3 that would result in the installation of extraction wells. This would result in pumping water into the tritium to bring the levels below 20,000 so that it could be discharged on site. Additionally, due to the proximity of the g-2 tritium plume to the strontium-90 plume there would be a good possibility that strontium-90 could be pulled into the water at concentrations above the eight pCi/L standard. If that were the case, the water would have to be treated through resin in order to be discharged on site. When time is considered against cost, considering active remediation as compared to allowing for natural attenuation when the tritium has a known dispersion and decay rate, there is a high degree of confidence that by the time the plume moves another 400 feet it will start to drop below 20,000 pCi/L. There is a commitment to demonstrate that in the alternative. If the monitoring indicates the plume is not attenuating as predicted, the regulators would be consulted to determine if something else should be done. If the modeling assumptions are wrong, there are triggers in place that would initiate working with the regulatory agencies to determine if any type of additional remedial action would be necessary. In the case of Alternative 2, the trigger would be if the level does not drop below 20,000 pCi/L at Brookhaven Avenue. There would then be a discussion with the regulators to decide if High-flow pumping was necessary. Because tritium migrates faster than strontium-90, the tritium plume would not be near the strontium-90 plume. The water could then be pumped out and actions performed could be as outlined in Alternative 3. Potentially, if the plume did not degrade, the trigger could lead to a high-flow pumping scenario.

Member Husted said the chart she was referencing did not give her confidence in the model as presented and the opportunity for active remediation was worth the additional $1 million.

Member Heil asked if there were elements other than tritium in the plume that were cause for concern.

Paquette said there are two radionuclides of concern that could be leached out from under the activated soil shielding, the tritium and sodium-22. Sodium-22 can be leached from soils but not as easily as tritium. An estimate is eight percent of the sodium –22 produced in soils can be leached. Sodium-22 has a shorter half-life and the monitoring has shown that the concentrations are typically less than the 400 pCi/L standard. In the g-2 plume there was one sample that had a concentration that was slightly above 400 but all the rest were below. The sodium-22 has been found in wells within 100 – 200 feet of the source area. Beyond that there are only trace amounts detected.

Reed asked for clarification. Would the remedies for tritium also apply to sodium-22?

Paquette said no. Sodium-22 would not be seen at the distances from the source where the trigger for 2 million pCi/L or the trigger at Brookhaven Avenue would apply, and therefore the remedy would not include sodium-22.

Member Anker asked which other regulatory agencies were involved in the review of the alternatives, what alternative was preferred by Suffolk County, and if there was a problem with vapor from the chemicals being discussed. Paquette said the Department of Environmental Protection (EPA), Department of Energy (DOE), New York State Department of Health (NYSDOH), New York State Department of Conservation (NYSDEC), and the Suffolk County Department of Health Services (SCDHS) reviewed the documents. Modifications were made in accordance with comments received from the agencies. Concurrence has been received from each agency for Alternative 2. The public comment period is a very important part of this process. The agencies will review the comments received from the general public before the ROD is finalized. The letters of concurrence for Alternative 2 are available, and they require demonstration that the plume will attenuate as predicted and the source controls are effective. Paquette said there is tritium vapor monitoring as a part of worker safety and health. There would be no expected migration of tritium vapor into the tunnel from the activated soils.

Member Kaplan asked when the public comment period ended.

Paquette said the comment period closed Monday, November 13.

Member Kaplan said that was disconcerting. He said that now, in Alternative 3, there is a different level of certainty that strontium-90 will be pulled than before. Before it was said there was a high probability and now it is said it will be pulled. There is a level of certainty now, that wasn't there before. He said he was bothered by the figure of the extra $1 million being spent over 30 years. He questioned the $30,000 expenditure a year over 30 years as hardly enough to pay for the pumping and everything that would go into that. He said he finds it hard to accept the figure; the amount is insignificant.

Paquette said the expenditure of $1 million would not be spread over 30 years. If active remediation were implemented the money would be spent over a shorter period of time, most likely within a two-year period. The costs that extend over 30 years, beyond the active remediation, would result from monitoring the groundwater and cap maintenance. The expenditures are not spread out evenly over the 30-year period.

Member Kaplan said he was trying to be practical and suggested a poll be conducted. Reed suggested they finish the questions and then revisit Member Kaplan's comment.

Member Jordan Sweet said the chart of the alternatives was more of a hindrance than a help.

Paquette apologized and said it was meant to synthesize the information from all the previous documents.

Member Sweet asked if the three high concentration slugs would pass through the pumping areas if Alternative 3 were implemented.

Paquette said that would be the goal. They would be diluted and the water would be put into an on-site recharge basin.

Reed asked the CAC if they would like to conduct a poll as recommended by Member Kaplan, in the manner similar to what was done at the last meeting now the PRAP had been read and the CAC had an opportunity ask their questions.

Member Sprintzen said with the exception of the points made by Members Esposito and Garber related to a specification of the conditions under which an active remedy would take place, the approach seemed to be straightforward. He said he was opposed to any pumping. It would be undesirable and not environmentally sound unless there was a failure to attenuate in three to five years. He asked that the specific trigger be identified and that the process move on.

Member Proios said this is no different than the tritium plume four years ago, except the concentrations are smaller and more confined. We've gone through this whole discussion before. This is a subset of the same thing that happened with the original tritium plume that got us here. The bottom line is, no matter what the numbers are at the site boundary, there is no human impact. It is way below the point where it can get into any private well, all private wells are on public water, and there are no public wells downgradient so it doesn't affect anything. It really makes no difference what the numbers are.

Reed asked the CAC if they wanted to have a discussion and then take a poll. The CAC agreed.

Member Husted said it would make sense to her to lean toward the alternative that the regulators concurred on. She said however, the regulatory agencies have a different interest in this process in that if it is shown that the modeling is incorrect, they will have the ability to be in the process again to determine the next alternative. Given that the members of the CAC do not have that choice they should not put too much weight on their choice because they will be able to be part of the process. She said the CAC has a different concern.

Member Proios asked Member Husted what that concern was, what she would like not to happen.

Member Husted said she wants a clear, active remediation plan and trigger in the alternative chosen.

Member Proios asked if remediation meant pulling the water out of the ground and taking it someplace else.

Member Husted said that is what she wants.

Reed clarified that Member Husted would like a definite trigger that moves the action from Alternative 2 to Alternative 3.

Member Husted said that she does not see that written into any alternative and she would like to see Alternative 3 chosen. That is the alternative that she is leaning toward and trying to understand.

Member Henagan clarified that Alternative 3 does not rid the site of the tritium. It pulls the tritium up, mixes it with more water and puts it back. The same amount of tritium is there but it is being spread over a larger distance. It is picking it up and putting it right back down with some additional water for $1 million. It's basically like taking a cup of coffee and throwing it into a swimming pool. The amount of coffee is still there it hasn't gone anywhere.

Member Husted asked if they should sit on their hands and wait for a couple of years to see if the tritium goes away on its own.

Member Henagan said it would, that tritium decays.

Member Husted said she did not trust that.

Member Esposito said this is the same philosophical discussion the CAC has had in the past. There is a mindset that the solution to pollution is dilution and as long as it doesn't go off the boundaries it's okay. Then there's the philosophy that it's a public resource and if it's the DOE that gets to pollute as long as it's on site, then why isn't that courtesy extended to Grumman and other industries? She said that is part of what is seen in the different perspectives. She said the CAC could have been offered better choices and that is the problem. Alternative 1 is see no evil, do no evil, don't look for it. Alternative 2 is look for it but don't do anything about it, Alternatives 3, 4 and 5 are …..

Member Sprintzen said Alternative 4 is send it away and let them deal with it. It's not going away.

Member Esposito said she thinks the CAC could have been offered better choices.

Members asked what those choices would be. Reed said if Member Esposito is being asked what her other choice would be he suggested the CAC give her a moment on the topic.

Member Esposito said Alternative 2 does not have a definite trigger. It does not say that if over 20,000 pCi/L were found close to the boundaries, that active remediation would definitely occur. The alternative states it would look at possibly doing active remediation. There is nothing that says something will actually be done about it on a proactive basis. She said Alternative 2 is so weak it is just the "wait and see" choice and that is too little.

Member Guthy said the identification of a more definite trigger and action would make people more comfortable, which is what she read into "contingency plan". She suggested the trigger and the action should be more defined. She said the weaknesses attributed to Alternatives 3, 4, and 5, as she understood it, were only weaknesses to those alternatives because so much more money is being paid for doing something which didn't cost anything in Alternative 2. All of a sudden you're paying $2 million for something that would be nothing or $7 million that would be nothing. To me, that is why it was worded as a weakness.

Reed asked Member Guthy if she was saying that an action is being conducted that for the purposes of meeting the goal, is not needed. Member Guthy agreed.

Member Giacomaro said the Laboratory is asking for the chance to see if Alternative 2 works. If it doesn't work, then Alternative 3, 4, or 5 could be implemented. Given the likelihood based on the modeling, from past experience, the alternative should work. If it doesn't, the other alternatives could be implemented.

Member Esposito asked if that included the past experience when it was said if you cap the soil, it's going to leak and there will be a groundwater plume and they said no it isn't and that's why we're here today. She said you have to be more proactive than that. This board has been in the past. They haven't been making choices to just do nothing. The action should be more proactive.

Member Giacomaro asked if Member Esposito was suggesting spending $12 million when the same results could be achieved for $1 million or when the problem might take care of itself.

Member Esposito said the source of the contamination is being left in place. The source is not going to attenuate. The plume will attenuate. We're leaving the source in place, now we have a plume with four slugs. Even if the plume is dealt with, the source is still in place.

Member Giacomaro asked if the source was leaching anything. It is capped and the monitoring wells will see if it is not working. But if the source is capped and being monitored and the controls are working, then the goal has been accomplished.

Member Esposito said it is working today, but decisions are being made not only for today, but also for 10 or 20 or 30 years from now. She said she is concerned that if the contamination is not removed at the source, some generation might be sitting here again with another plume, and another slug, and another problem.

Member Giacomaro said if Alternative 5 were chosen, the concentration of all the material would be put in one place. If it happens to be someplace where there's an earthquake it could crack open and go all over the rest of the United States, so anything is possible.

Member Henagan asked for clarification if the soil activation had been dealt with and if there was no further soil contamination occurring.

Paquette said the g-2 experiment ended in 2001 and there is no additional soil activation occurring.

Member Henagan said there is no additional activation occurring. The radioisotopes currently in the soil will naturally decay and the activation is taking care of itself through the decay. Yanking it up runs the risk of dispersing the radioisotopes.

Member Garber said if Alternative 2 were chosen and the characterization was accurate and everything works as expected, people could sign onto that. However, if there is a surprise, there is no idea what the surprise might be. A remedial action could only be determined when an unexpected result occurs and it is characterized. A clear threshold should trigger a complete analysis of the options at that time and include revisiting the ROD. He said it is difficult to postulate now, what the hypothetical responses would be to a surprise that is unknown. He said there should be assurances that a formal analysis of the problem beyond regulatory review would occur. This would help to gain support from the CAC.

Member Esposito said she is not asking for a hypothetical response to an unknown. There is no threshold that triggers what Member Garber just said. That makes her really uncomfortable and she can't support wait and see and maybe we'll do. The majority of people might feel more comfortable with some kind of threshold triggering an action. She said Member Husted is leaning toward Alternative 3.

Member Esposito said she would prefer Alternative 3, but might find medium ground between Alternative 2 and Alternative 3.

Member Garber said that while everyone wants a real threshold, it would need an action. He said the CAC could not define what the action should be at this time. It would be reasonable that once the threshold was reached, the process would begin and take on a form very similar to the ROD, including regulatory review, a public comment period and examination of the options.

Member Esposito she was still concerned about the threat of 20,000 pCi/L or more leaving the site.

Member Garber said the monitoring should provide time so that the study and remediation could occur at Brookhaven Avenue, well within the site boundary.

Reed said he didn't know if the words were right, or if the legal terms were right, and asked if he was hearing that Member Esposito and Member Garber said the CAC wanted a harder trigger and a specific action associated with that trigger that would trigger a guaranteed regulatory and public process. Reed said that could be part of the recommendation; a significant difference will be declared upon any value of 1 million pCi/L or more. Otherwise, if a plume is approaching the site boundary at 20,000 pCi/L or greater, then active remediation of that plume must occur.

Member Henagan said the CAC is asking for an elaboration of what that assessment process is going to be, wanting to have a say in that, and to have the elaboration written down.

Member Sprintzen said the triggers should be written as well.

Member Henagan said the triggers are already there. If certain levels are hit, an assessment will be made. But there is no statement of what the assessment procedures are going to be. The CAC wants to be included in the assessment procedure. Part of that assessment should include public commentary. There is no elaboration of what the assessment should be. Details about what that assessment procedure would be will go a long way for buy-in on this.

Reed said one way to do that is to follow the CERCLA assessment processes, like those the CAC has been involved in the past, because this is a CERCLA ROD that is associated with significant and fundamental differences.

Member Giacomaro suggested tacking on to the triggers, implementation of improvements as necessary as outlined in Alternatives 3, 4, and 5.

Reed said he didn't think they had to go that far. I think what you're looking for is not what the specific actions would be but what the specific process would be. He thought the CAC was there, closer. Reed wrote the points on the flip charts. Speaking as he wrote he said at the identified triggers, formal regulatory and public review of the remedies. That's what I heard. When either of those triggers, as they are identified are reached, there will be a formal regulatory and public review of the remedy. Not just internal, but it involves both public process and regulatory process with the cognizant regulatory agencies.

Member Esposito asked that it be read back.

Reed said, "At the identified triggers, the ones that are identified in the PRAP right now, the 1 million and 2 million, there will be a formal regulatory and public review of the remedy".

Member Esposito said to make it clearer take out the 2 million, it doesn't make sense to me. Then it's very clear the trigger is the 1 million. I like that.

Reed continued, "If 20,000 pCi/L approaches the site boundary it would result in active remediation". At the point that it is approaching the site boundary, something has to be done. That now becomes part of the recommendation.

Reed said he heard that the ROD should include a sampling strategy, which is not as specific as a sampling plan but talks about what will be achieved with the sampling, how it will be laid out, and the broad outline of how sampling is going to occur since it is core to the alternative.

Member Esposito asked if it could be a sampling strategy with a public information component. I would like the CAC to know what is being tested for and what the results are.

Reed added "A sampling strategy that includes public process as part of the sampling strategy".

Member Esposito said the inspection of existing storm water runoff controls should occur routinely rather than as a result of a trigger. That is a preventative measure so that should not be viewed as a solution.

Paquette said that the inspection process is a formal process that is conducted bi-annually, at minimum. Photographs are taken and will be presented to the regulatory agencies as part of the required formal inspection reports and supporting documentation. If there were a trigger, further evaluation, including inspection would occur to determine what caused another release of tritium. It is important to ensure the cap is well maintained.

Reed asked what would be the new thing that this would trigger?

Paquette said there would be a full evaluation to determine why there were levels of 1 million pCi/L.

Member Henagan said as he read it, the inspection was being done twice a year. If an inspection was done two months ago, and suddenly a peak is seen, the trigger would result in an immediate inspection, rather than wait for four months until the next scheduled inspection.

Member Giacomaro asked if a significant difference would be at the 1 million pCi/L level.

Kumar said significant difference depends upon several factors, whether there is a change to the scope of the activity, a change in the cost where it increases more than 50 percent, or something unforeseen happens. There are definite differences between significant and fundamental differences. In the case of the strontium plume and the Magothy, it was concluded it was only a significant difference because it did not fundamentally alter how the plume would be remediated. The determination is not based on contingency levels but how the remedy is impacted.

Member Giacomaro asked if, in this particular case, the fundamental difference would be the 2 million pCi/L.

Kumar said it is not based on these contingency levels. It is based on how the remedy is impacted. It is difficult to prejudge what is going to be a significant or fundamental difference. I think it is better to refer to it as the change to the remedy rather than significant change or fundamental change.

Reed said the terms have specific legal meaning and he was not sure there was time to hash them out.

Member Giacomaro said he was wondering when referring to formal regulatory and public review of remedy, if it was being looked at a fundamental or a significant difference.

Member Campbell said that if levels are that high, there is something that is not understood about what is occurring and it makes a fundamental difference. The assumptions that have been made are breaking down and there is a fundamental change and the whole action needs to be reevaluated.

Reed asked if the CAC agreed with Member Campbell’s clarification.

Member Giacomaro said he was looking for the trigger to be called a fundamental difference.

Kumar said that significant difference does not require a public review process, though when there was a significant difference the process was voluntarily implemented. The regulations only require public review of a fundamental difference.

Reed said he captured it as a fundamental difference now.

Member Chaudhry said whatever recommendation is made is dependent upon the level of confidence in what it says. So a question may not seem like it is directly related to the recommendation. I tried to ask a question about the concrete but I understood from your reaction that maybe my question did not really relate to the recommendation, so there was no answer to the question. In my mind that question was dealing with my level of confidence in what was being said and proposed. I would like to repeat that question unless it is really not admissible. I want to ask, the information shows the concrete pad under the proton beam was cut. I asked if it was left that way, by design. The answer was it was cut to put in the sheet pilings. I want to ask if it was left that way, unpatched, by the contactor or by omission, because this leads to a level of confidence, in my mind, in the implementation of other things.

Reed said the question was, what lead to the cut in the concrete being left unsealed.

Paquette said he would try to answer the question, but that he wasn't here at that time. The concrete had to be cut to drive the sheet piling. It was sealed on one side because it was a target building and the center of the floor needed to be sealed. He said he assumed that it was decided that there was no need to reseal the other side of the sheet pile wall. If it was a designed beam loss area and there would be soil activation, there would have been engineering controls developed to ensure the soil would not be leached by rainwater. After the problem was discovered, it was determined the soil was activated in the area that was not a designed beam loss area, and the cut was a transport mechanism once the rainwater was able to get through the soil to transport below the concrete slab and down into the groundwater. I don't know if I can answer your question if it was designed in part of the construction process. I wouldn't link the two because this was not the designed beam loss area. The fact that this was an open area did not come into play as far as the design of the sheet-piling wall.

Member Chaudhry asked if during construction, supervising engineers accepted the contractor's word at having left the cut open or is it that they just didn't notice.

Paquette said there was probably no need to reseal that side of the wall.

Member Chaudhry said but the whole cause of the problem was the cut.

Reed clarified that the issue was that it wasn't considered to be a problem because it wasn't known that there was contamination below it and the real issue was that there was unexpected contamination below it. If there was no contamination, it wouldn't have needed to be sealed.

Paquette said during the design and the actual construction phase, there were no activated soils. The activation occurred after the facility became operational.

Reed said he would take Member Husted's question and then see if they could move forward.

Member Garber said they were very close and he was going to call the question. Member Esposito asked to hear Member Husted.

Member Husted asked for clarification as to how the group would become a part of the decision-making process when a trigger happens with the same status as it has now.

Reed said there is history associated with this. Normally the CAC asks for formal public process under CERCLA, and what that process is will be defined at the time, as opposed to specifying that that process would be by this group. This group may or may not be involved in that formal process. It gets the same level of specificity as requiring that a regulatory process occur, which is not a lot of specificity. The reason you are seeing it up there (on the flip chart) and not hearing a lot about it is that is the way the CAC normally sets it up for future occurrences.

Member Esposito asked if the 1 million pCi/L is reached, was it said that it may or may not come before the CAC?

Reed read the chart. “A fundamental difference would be declared, the CERCLA process will start and a formal public process is required as part of that”. The CAC may or may not be involved, because it might be 20 years from now.

Reed said there is a potential recommendation on the table. He said he would like to see if the CAC has a consensus. He read the recommendation below.

The CAC concurs with Alternative 2 with the following amendments:

1. At the identified trigger level of 1 million pCi/L, a formal regulatory and public review of the remedy would be required as a fundamental difference under CERCLA.
2. If the plume approaches the site boundary at 20,000 pCi/L or greater, active remediation will be required.
3. The Record of Decision (ROD) includes a sampling strategy, which includes public input to the sampling plan.

Reed asked if there was anyone around the table that felt their interest would not be served by making this recommendation. No CAC member indicated that their interests would not be served. Reed told them that consensus had been reached. The recommendation was captured on tape and would be transcribed as stated and submitted.

Member Esposito said the public comment period ends on Monday.

Reed said the next question was how the CAC could review what was transcribed in this time period.

Member Esposito said it might make sense to ask for an extension of the public comment period.

Member Sprintzen said he didn’t see why that had to be done. He didn’t see why the words that were captured on tape couldn’t just be the comment. He said Jeanne and Sherry would make sure that was submitted in the name of the CAC.

Reed asked if the CAC agreed with Member Sprintzen or if a different process needed to be put in place. He said Jeanne and her organization would transcribe what had just been said and submit it as a CAC recommendation.

Jeanne said it the transcription would be circulated to the CAC members as early as possible on Monday so that the members would have a chance to read it.

Member Esposito said to keep in mind that some of the CAC members have to go back to a group of people and get it approved. Some people are acting independently and some are representing a group. She was very concerned about a Monday timeline as she said she had to go back to her group with a newly crafted remedy. She also thought that Member Husted had to go back to her group and that the imminent timeline of do it now might not necessarily work.

Reed reviewed the process with the CAC. CAC members come to the table prepared to develop a recommendation that goes out from the CAC. It’s not about going back and getting approval of what the CAC has done. The members come prepared to reach consensus as part of the process.

Member Esposito said she is not sure she agrees with that. She always comes prepared for discussion. I want to give deference to people who may not be working unilaterally. We usually have some process. This feels like the first time I remember, if I'm wrong just tell me, that we don't have the ability to look at what's written and feel comfortable with it.

Reed said the CAC did have ability to look at what's written and feel comfortable and that is why he asked if the CAC was comfortable with the document going out to them on Monday.

Member Proios said we have done it this way in the past. The CAC has done this before. We've sent letters to elected officials and other things. We have been up against a time frame before.

Member Esposito said she thought sending letters to elected officials was different than making a recommendation. This would be the highest level of what the CAC does.

Jeanne D'Ascoli said in the past it has been done like this for recommendations. The document would be sent to the CAC as early as possible on the following Monday. Jeanne encouraged the CAC members to call the office they should they find the recommendation is not transcribed accurately.

Member Giacomaro said though the CAC has reached consensus, an organization could make its own comment.

Action Item: E-mail the recommendation on the PRAP for USTs, BLIP, and g-2 Tritium Source Area and Plume to the CAC as early as possible on Monday.

Reed noted proposed agenda items had been discussed at the beginning of the meeting. He said the agenda for next month was to have a happy holiday and called for a motion to adjourn.

January Agenda
Update on BGRR
Update on HFBR

Meeting adjourned 9:44 p.m.

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			P	P	
ABCO	Alternate	Doug	Dittko												
Brookhaven Retired Employees Association	Member	Graham	Campbell		P	P	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				P	P	
CHEC (Community Health & Environment Coalition (added 10/04)	Member	Sarah	Anker	P		P			P	P		P		P	
		Ann Marie	Reed										P		
Citizens Campaign for the Environment	Member	Adrienne	Esposito	P			P		P	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				P	
E. Yaphank Civic Association	Member	Michael	Giacomaro	P	P	P				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 (changed on 7/2006)	Member	Adam	Martin							P					
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)(changed 7/2006)	Alternate	Audrey	Capozzi												
Environmental Economic Roundtable (Berger resigned, Proios became member 1/01)	Member	George	Proios	P			P		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		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		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			P			
Health Care	Member	Jane	Corrarino	P		P	P			P					
Health Care	Alternate														
Huntington Breast Cancer Coalition	Member	Mary Joan	Shea	P		P	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		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)	Alternate	Elina	Alayeva			P	P		P	P		P	P		
L.I. Pine Barrens Society	Alternate	Susie	Husted											P	
L.I. Progressive Coalition	Member	David	Sprintzen	P	P	P	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		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			P			
Longwood Alliance	Member	Tom	Talbot	P	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		P		P	
Longwood Central School Dist.	Alternate	Allan	Gerstenlauer												
NEAR	Member	Jean	Mannhaupt				P		P			P			
NEAR (prospect taken off ¾)(Blumer added 10/04	Alternate	Liz	Bowman									P			
NSLS User	Member	Jean	Jordan-Sweet	P	P	P	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			P			
Peconic River Sportsmen's Club	Alternate	Jeff	Schneider												
Ridge Civic Association	Member	Pat	Henagan	P	P	P	P			P		P	P	P	
Science & Technology (added 1/13/05)	Member	Iqbal	Chaudhry		P	P	P		P	P		P		P	
Town of Brookhaven (Graves made member 6/06)	Member	Anthony	Graves	P			P			P		P	P		
Town of Brookhaven	Alternate	None	None												
Town of Brookhaven, Senior Citizens	Member	James	Heil	P	P	P				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		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		P	P	P	
Wading River Civic Association	Alternate	Sid	Bail						P						