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## **1. Attendance**

### Members/Alternates Present:

See Attached Sheets.

### Others Present:

D. Atchison, M. Bebon, P. Bond, H. Carrano, A. Carsten, P. Chaudhari, J. Clodius, F. Crescenzo, T. Daniels, J. D'Ascoli, M. Duke, M. Frederick, K. Geiger, A. Givens, T. Green, K. Grigoletto, J. Hall, L. Hill, S. Hoey, M. Holland, S. Johnson, S. Kumar, M. Lynch, S. Medeiros, L. Nelson, M. Parsons, J. Petry, F. Petschauer, J. Schneider, A. Rapiejko, J. Tarpinian, J. Usher, C. Vasudevan

## **2. Correspondence and Handouts**

Items one through six were mailed with a cover letter dated April 2, 2004. Items seven through 11 were placed in the folders, and items 12 and 13 were available at the meeting as handouts.

1. Draft agenda for April
2. Draft notes March 11 meeting
3. Final notes January 8 meeting
4. Report on membership
5. Copy of Peconic River Remediation presentation
6. Copy of Peconic River Restoration presentation
7. Revised Draft agenda
8. Information on Banded Sunfish caught and moved
9. Description of Banded Sunfish
10. Article on remediation at DOE Sites from Science magazine submitted by J. Heil
11. Copy of BGRR Presentation
12. Copy of Peconic River PRAP Status presentation
13. Copy of Peconic River Sampling presentation

### **3. Administrative**

The meeting began at 6:38 p.m. Reed welcomed everyone and went over the ground rules and the draft agenda. The CAC agreed to move the discussion on new members to the end of the meeting and the discussion on the Banded Sunfish was moved up. Those present introduced themselves. Dr. Chaudhari told the CAC that the Lab was recertified for ISO 14001 and safety has become a high priority. He reported that EM has gone two years without a lost work day report which is an achievement considering the work they do. He also updated the CAC on the NSLS Workshop. Pat Dehmer, Associate Director of Basic Energy Sciences, was pleased and said the workshop would help her to move the timeline by several years. That is good news because construction can start sooner.

George Proios noted that Marge Lynch had been recognized recently by the Town of Brookhaven. He also commented on a new technology that converts material dredged from the bottoms of harbors and waterways into a substance that can be made into construction-grade cement. He suggested sending a copy of the information to the Connecticut DEP as maybe the technology would be an alternative to dumping dredged material into the Sound.

Jean Mannhaupt mentioned that CAC member Helga Guthy had been highlighted in the Lab's Community News newsletter.

### **4. Discussion on Banded Sunfish, Jean Mannhaupt, Robert Conklin**

Jean Mannhaupt said that some of the CAC members had attended a meeting where the contractors went over the remediation project. She did not attend, but made some phone calls to find out about the presentations. Currently the Banded Sunfish population is very high. Some of the fish are being moved and will be reintroduced when the work is done, however, Bob had a concern about the reconstructed habitat. She said this is the first time that the Lab has been able to stop, rethink a position and look at the whole ecological system. She thinks that during the cleanup part of the process should be to occasionally stop and review and assess what is happening and reevaluate the path forward if necessary.

Bob Conklin read from a statement that he had written. He defined several terms that DEC uses including extinct, endangered species, threatened species. Regulation 182.3 ECL says that a person cannot take, import, transport, possess or sell an endangered or threatened species without a DEC permit. Tiger salamanders are endangered, the Banded Sunfish is listed as threatened. He explained that the Banded Sunfish was listed because of the limited habitat available. The areas where they are found are shallow, heavily weeded, slow moving waters where they can avoid predators. New York State is the only state where they are classified as threatened. They are found from Maine to Florida. Conklin pointed out that while the restoration called for improving the habitat of the Banded Sunfish, the four to five acres of new open water would not meet its habitat requirements.

Mannhaupt said that the PRAP has to be flexible. Member Esposito asked what the solution was, were they asking for a modification to the PRAP? Skip Medeiros said the good thing was when a concern was recognized people got together to address it and came up with a solution. During the sampling for the Banded Sunfish one of the vegetation types found was an emergent smartweed. A large planting of emergent vegetation is now planned for the river. It will be specified in the equivalency permit that talks about re-vegetation. The wetlands expert agreed that smartweed will be planted and that will supplement the emergent vegetation already planned. Conklin said after he left the meeting Tuesday night and looked at the text of the presentation he wasn't very happy about all the open water with no protection for the fish. Skip has agreed to include a lot of smartweed, and there are a few types of emergent vegetation that might also be used.

Talbot asked if there would be an opportunity to evaluate the success of moving the fish. Daniels said they'd have to talk to Tim Green as he does the wildlife monitoring onsite to see if this can be included.

Member Proios asked if smartweed was an indigenous species in the river. Skip said he'd been told it is.

## **5. Preview of Proposed Remediation Action Plans, Frank Crescenzo, DOE/BSO**

Frank Crescenzo said that he is the designated DOE member of the Core Team and has been working to bring to closure to the CERCLA process at the Lab. He reminded the CAC that the Core Team members consisted of the DOE, the EPA, and NYSDEC, with SCDHS in attendance. The Lab has provided technical support for the Team and there is a professional facilitator. Basically, the idea is to accelerate the regulatory processes that support coming to Superfund decisions. The Core Team does not supercede any requirements under CERCLA, nor is it intended to shortchange opportunities for public input. "We are all very mindful that you are all anxious to hear what we're working on with the river and the BGRR."

He said that the Team is making great progress on the major decisions for the offsite Peconic River and the BGRR. The point where DOE can propose draft cleanup plans for public comment is being approached. A preview will be provided tonight of what those proposed cleanup plans and the recommended alternatives are for both the Peconic River offsite portions and the BGRR.

Member Esposito asked about the test data.

Crescenzo said that the CAC would have a presentation on the test data later in the meeting, but the draft PRAPs are not ready to be released. They are undergoing regulatory review. No decisions have been made, what is being proposed tonight may change based on regulatory input and comment and also the ultimate decision that DOE makes on the remedies of the two projects may be affected by the public input. For the offsite portion of the Peconic River, the DOE is proposing to recommend that sediment be removed from the site boundary to Schultz Road, sediment be removed at Manor Road, and continued methyl mercury sampling of the water column, sediment, and fish between the site boundary and Connecticut Avenue.

For the BGRR, the DOE plans to propose removal of the graphite pile, the biological shield, the fuel canal external to Building 701, and reasonably accessible soils around the BGRR.

Member Schwartz said this was quite a change in the proposal from what was heard previously and wondered what led to the change.

Crescenzo said that what was presented last fall was the Risk Based End State and that was not a decision document. It was not a proposal and not a decision. It was useful that good feedback was gotten from the community and that did influence the Core Team as they moved forward. A decision still has not been made, but it is understood that the Graphite Research Reactor pile is very important to the community.

Member Mannhaupt commented, "If you'd just gotten rid of the RBES last summer it would have saved a lot of trouble." She asked if the regulators unanimously supported the DOE proposal.

Crescenzo said it's not a decision, the regulators have allowed us to make this proposal. They haven't agreed that this is the recommended alternative, they haven't made decisions about these things, a point has been reached where DOE can make these proposals for public comment. The regulators, as part of the Core Team, are supportive of DOE making the proposals.

Member Talbot asked if there was a timeline for a decision?

Crescenzo: The other presenters will address that.

Member Proios asked if the Core Team would use existing criteria for assessing health and environmental risk factors to eventually choose the pathway, or will there be a new set of criteria to assess the risk factors posed by the different scenarios?

Crescenzo: The Core Team will use the CERCLA criteria.

Schwartz: The plan that you're going to propose is going to be a lot more expensive than the previous option put on the table. What consideration is being given as to where the money for it is going to come from?

Crescenzo: What is committed to and decided will be paid for by DOE. Crescenzo was not sure exactly how the money would be added to the budget as the project will take place in the out years. DOE will be working to request and obtain the money and will fulfill their commitments.

Talbot expressed concern about the funding coming out of the research budget.

## **6. CAC's role in the upcoming decisions, Mike Bebon**

Dr. Chaudhari announced that Mike Bebon had been selected as the new Deputy Director for Operations, previously he had been serving as the Acting Deputy Director.

Mike Bebon outlined the timeline for the next few months. The PRAP documents are being reviewed by the regulators and it is anticipated that the Peconic River PRAP will be ready for issuance to the public for a 30-day comment period probably after the May CAC meeting. The Lab would like the CAC to give their individual comments but also if possible to reach a consensus recommendation on the PRAP by the end of the public comment period.

Similarly on the BGRR, the PRAP will likely follow by about a month. There has been a lot of discussion on the river and much less so on the proposal to recommend that the pile and bioshield be removed. What the Lab would like to know from the CAC is what information you'll need in order to consider the options.

Schwartz observed that the comments made at the Bishop meeting might be helpful in determining what the questions were.

## **7. Details on the Peconic River PRAP, Tom Daniels**

Tom Daniels gave a preview of the Proposed Remedial Action Plan for the Peconic River. He said that the proposed plan has been sent out to the regulators and comments have been received. Daniels went over the four alternatives. Alternative Four has changed since last year. Last year just the sediment in the depositional areas was to be removed to achieve the cleanup goal. Areas were added that are preferential for the production of methyl mercury. We've learned a lot about the river. There's not a clear-cut indication of what level of mercury is there. It's a combination of what the level of mercury is, what percentage of that is being produced into methyl mercury and then what is getting inside the fish. There are more factors involved than just what the level of mercury is.

Back in September when the Action Memo was discussed the Lab talked about the onsite areas and these are still the same. What was presented then for the onsite areas was an average of 1ppm with a goal of no sample after cleanup of greater than 2 ppm. There were CAC member's who preferred Alternative Four and member's who preferred Alternative Two. The members of

the Core Team worked hard to try to get the essential values that everybody wanted considered into that Alternative. Some additional areas were added next to the areas slated for cleanup and some areas will be left untouched. Another concern was the roads that were to be built. We've come up with a method of not destroying wetlands. Mats will be laid down temporarily so there really won't be too much secondary damage to the wetlands that won't be able to be restored right away.

Off the Laboratory property the goal is to achieve an average of less than .75 ppm with the same goal of nothing greater than 2 ppm in the areas that will be excavated. What was found in the Peconic near Schultz Road is that methyl mercury is being produced at a greater percentage than elsewhere in the river. Even though the levels of mercury in the sediment there are relatively low it is prudent to go ahead and take out those levels of mercury there because methyl mercury was being produced and that is what gets into the fish. Approximately two acres there have been added that wasn't needed to reach the .75 ppm but is producing methyl mercury.

Further down the river, when full characterization out to Connecticut Avenue was completed it was found that everything east of Schultz Road already met the cleanup goal of less than .75 ppm. But three areas right near Manor Road had some pockets of elevated levels of mercury. These areas will be relatively accessible off Manor Road so large paths to get into the river will not have to be created so they will be removed under Alternative Four.

Alternative Four also has two monitoring program components. One of the concerns was what will be done to make sure nothing gets transported down stream to contaminate other areas while the work is being done. A construction monitoring program will be implemented to ensure that the cleanup targets are reached and that no short-term affects are created by spreading contaminants further down the river. The contractor will be sampling as he goes. Water monitoring will also be done at the point where the pump around is re-entering the river. Samples will be taken to make sure the levels of suspended solids are low and that no mercury is being transported further down the river.

Daniels said that a lot has been learned about the river and it's just not levels of mercury in the sediment. Levels of mercury in the sediment, what gets into the water column, what gets into the fish. So before, during and after the cleanup, monitoring will be done to make sure the cleanup is effective. Daniels also mentioned that there would be a long-term monitoring program. He said the details would be specified in the ROD when it comes out. Fish, sediment and surface water will be included. The Lab will offer split samples with Suffolk County and the members of the IAG.

Daniels talked about the comparison between the four alternatives and the costs. He said that the Lab was confident in Alternative Four. Input was taken from the CAC, the values of all the members of the Core Team were considered and this has been an alternative that has been crafted not on any one thing but really from looking at everyone's concerns. The concerns for the levels in the sediment, concerns for what's in the fish, concerns for what can be left so we don't have to do too much damage. He said that 92% of the mass mercury, 93% of the PCB's, 91% of the cesium-137 would be removed. He said that this alternative meets community expectations to minimize impacts to the wetlands.

The PRAP has received regulatory comments and the Lab is addressing them and preparing the Final PRAP that will be submitted to the DOE. The Lab expects to be able to present it in May but it depends how fast it goes through the regulators and DOE. The public comment period could begin as early as mid-May. CAC comment will occur in June.

George Proios asked about seasonal variations and how that can reduce the environmental impact. Have you reached an agreement that you're not going to do anything in spring and summer?

Daniels said the Lab is mobilizing the work force right now.

Proios said that if you're concerned about uptakes, trying to reduce bioaccumulation if you do it in the colder months the respiration of all the fish goes down to nothing. You won't have very much uptake...

Daniels: We are going to sample seasonally.

Proios: I'm talking about trying to reduce the impact of the materials that might get dislodged being moved around and then taken up. There would be the least uptake in cold months.

Daniels: The presentation the contractor provided for us showed that they're going to be working in areas that will be isolated from the rest of the river by dams. It's not likely the sediments will have the opportunity to be transported. We think the engineering controls on the project will be satisfactory to prevent that.

Talbot: Did the County concur on the statement that indicated that Alternative Four would allow the greatest flexibility in the uses of the area as County parkland or any future development?

Daniels asked Rapiejko of the SCDHS to comment.

Rapiejko: Yes, we did get the draft PRAP and commented on it. As Crescenzo explained we agreed that this can go out to the public. None of the regulators have made decisions on it. But yes, we have commented on it and they're in the process of addressing those comments.

Daniels said the Lab has worked extensively with all the numbers to really make sure. We know the process is not going to go anywhere without all the regulatory members agreeing. So we worked very hard with them to make sure that we've included their values and the things that they need in this plan.

Esposito: I think we need to recognize that if you're finding contamination as far as three miles down the river, then it's a good thing that we worked so hard to get the best the cleanup plan for the onsite portion of the river because obviously it was being transported down the river. So all the work that we did makes it that much more important.

Reed talked about the process forward. The CAC heard from Mike Bebon what the Lab would like them to do. He encouraged the CAC to start thinking about whether a statement can be developed and consensus achieved regarding the PRAP as part of the overall public involvement process.

### **Administrative – Approval of Notes**

As a quorum of 14 had now been reached Reed asked the CAC to review the March notes.

Following discussion on a reference made in the notes to the End State consensus recommendation an amendment was made indicating that the LIA abstained from agreeing to the consensus recommendation so they could further study the document.

Amper: It would be useful to our organization and I think the CAC, to know the LIA's position.

It was agreed that the LIA would share their position when they had completed their review.

Reed asked if there were any other additions, deletions, or corrections? Being none, the notes were approved as amended, with one abstention.

## 8. Community Comment

There were no comments from the audience.

## 9. PRAP for the BGRR, Fred Petschauer, Project Manager

Fred Petschauer discussed the PRAP alternatives, institutional controls, the evaluation of the alternatives, the preferred alternative, and next steps. He described three of the alternatives that had been discussed in December and a new alternative – Alternative C. He explained the work to be done under each and the estimated cost. He said what was unique about Alternative C is that certain structures and soils would be removed including the fuel canal. Institutional controls would remain in place as long as necessary to be consistent with land use restrictions. Under alternatives B and C some residual contamination will remain more than 26 feet below the surface. It will be capped. Should the material become accessible additional remediation will be considered. He explained the total curies that would be removed and what would remain under each alternative.

Petschauer said that the preferred alternative in the PRAP is Alternative C. It removes more than 99% of the radiological inventory. The remaining radioactivity is in structures under Bldg. 701 and is no threat to groundwater. A Long Term Response Action Plan will be put in place.

Member Esposito: The monitoring will not only include groundwater monitoring, what about soil sampling at some kind of regular interval?

Petschauer: I don't believe there will be soil sampling, certainly there will be plenty of water monitoring.

Hill: The soils outside of the footprint of Bldg. 701 will be cleaned up. The only remaining contaminated soils are underneath ....

Esposito: I know but before it gets to the groundwater, it could end up in the soils on its way to groundwater. I know it's under a building so groundwater sampling should catch it if it ever ends up in the groundwater, but I'm wondering if the step before that would be soil sampling.

Petschauer showed where the components were that are to be removed under Alternative C. The next steps are regulator review and comment on the draft PRAP, to resolve and incorporate the comments and submit the final document to DOE. The final PRAP could be presented to the CAC in June with public comment starting mid-June.

Esposito: What is the estimated amount of soil that will be removed?

Petschauer didn't have the figures with him.

Bob Conklin: What is the contamination in the fuel canal? Wasn't there some cleanup done there already?

Petschauer: Yes, and that is going to help. Some of the concrete that was contaminated on the inside was removed. Because of the uncertainties associated with the canal this alternative calls for removing the entire canal. We never got to where we wanted and there were questions about the outside the canal in the soil so by pulling it out we're going to get everything.

Tom Talbot: Why are you monitoring the groundwater if there's no threat?

Petschauer: It's a precaution.

Stephen Schwartz: Could you tell us something about the plan to make sure that there's a minimization of any mobilization of material into the environment?

Petschauer: I'd like to come back possibly in May and present a conceptual overview of how the pile and bioshield will be pulled, the aspects associated with health and safety, transportation, burial, and address mobility and how we'll control contaminants.

Mike Giacomaro: Under plan C, Bldg. 701 stays? From the activity of removing the core and anything else in the area, it's assumed that the building will be left safe?

Petschauer: Safe in terms of structurally or radioactivity?

Giacomaro: Both.

Petschauer: In both cases the answer is yes. Safe.

Giacomaro: The concern of my association is that the building could be used as a museum.

Hill: Many of the engineers we have working on this job are the same people that decommissioned Shoreham. At Shoreham contamination was surgically removed. The challenge there was that most of the plant was clean. We had to go in and remove the contamination without cross-contaminating the buildings. We'll be able to describe this next month in detail.

Giacomaro: Has there been any determination as to what to do with the building?

Petschauer: No, that's up in the air. The pile and bioshield sits in a 2000 sq. ft. area. Under this proposal that's gone. There will be a large open space that has tremendous possibilities. Warehousing to office space.

Esposito: Did you say that the Stronium-90 plume will continue to be remediated?

Hill: You'll be hearing about the plan next month.

Proios: As part of the information you're going to try to bring back to us most of the history of graphite reactors hasn't been that positive. I don't think one has ever been decommissioned in this country or decontaminated one. Is there anyone who will be gathering data?

Petschauer: I believe there's some experience in England with some graphite reactors. We certainly will do a literature search, but I have to say that this reactor is standard construction methods and we'll talk about containment that refers to most demolitions. We think we know how to go about this but certainly we will look at other similar reactors.

Proios: I was thinking that Russia had the most problems and a lot of that never got published in scientific journals but now with more openness in releasing data in the last few years... (unintelligible)

Petschauer: Sure.

Mannhaupt: I was basically on the same wavelength as George. What's going on with graphite reactors worldwide because the technology we're using and what we're going after is certainly precedent-setting. France and England and Spain have a 35-year gridlock on breaking down their graphite reactors because they just can't figure how to do it. I would guess that if this is a good project that we'd be showing them how to do it. So it will be interesting to watch.



Mannhaupt: The institutional controls you have here 280 years based on OU I, but yet it's 26 feet below. Are EM standards going to change? Are we going to reevaluate them, and if it is 280 years, how are you going to plan a long-term response action plan?

Petschauer: The CERCLA process would have us perform an assessment of the remaining contaminants at the end of the remediation. Until we do that we won't have a final answer. That number is up there to try to put it in perspective with the 87,000 years as a default value for some sort of comparison. The 280 years refers to the concentrations cesium and strontium would have to get to if they sat on the surface. Twenty-six feet down it poses no hazard. It's embedded in concrete so what the science said was that if we were to bring to the surface things change. That's a change in plans and we'd have to look at doing additional remediation.

Amper: I don't have much of a reputation for saying good things about government, but on behalf of our organization, we very much appreciate the approach the DOE has taken on this. Speaking locally, I think that an example set by management at BNL makes this process real, to listen and understand the concerns of the community and then go out and do what it takes to satisfy them. And do not just the minimum you can do but the right job is something we do not often see in the environmental community and I'm impressed.

Esposito: Do you have an estimate of how long it will take to do the full remediation that you're proposing to propose?

Petschauer: Ballpark, from planning to completion maybe three years. The key is to plan it and practice it. The physical work will not take three years. A lot of it depends if there are two shifts working.

Information needed for May BGRR discussion:

- Conceptual overview
- Site some previous industry methods
- Address health and safety concerns
- Transportation mode and issues
- Waste disposal options
- Disruption of Lab operations
- Funding

Reed said if CAC members think of additional items during the month they should call Jeanne D'Ascoli.

## **10. Peconic River Sampling, Skip Medeiros, OU V Project Manager**

Skip Medeiros summarized the data that has been collected since last September. He said that he was giving the CAC background for understanding the proposed plan, which Tom outlined and that the Lab expects to deliver it to the CAC in the mid-May time frame and it goes with the Administrative Record.

Skip said the water column sampling was for both methyl mercury and total mercury. He showed maps with the distribution points of the samples. Four rounds of samples were taken last year. The first three rounds went out to Schultz Road, the fourth round went from Schultz Road to Connecticut Avenue. He said the other thing to remember is the time of the year that the samples were collected. Medeiros told the CAC that for each round one sample was collected from the Connetquot River, which is about 12 miles to the southwest, to be used as a reference.

Esposito: How far is it from Schultz Road to Connecticut Avenue?

Medeiros: Schultz Road is at about mile three and Connecticut Avenue is about seven miles out.

Medeiros also displayed a graph with the spatial distributions of mercury in the four rounds of sampling. The graph showed the total mercury, methyl mercury, the percentage of total mercury that is present as methyl mercury, and the total suspended solids. He said there were several lessons learned from the distributions. The first is that there is a seasonal effect in the amount of methyl mercury that is found in the water column. That's a function of the temperature. Also the latest collection is similar to the earliest collection of the year. The water temperature in the spring and fall is about the same. In general there is a decrease in mercury as you go further down stream. Round four shows lower levels and gets down into the background range by the time Donahue's Pond and Connecticut Avenue are reached.

Proios asked the dates of the sampling rounds.

The dates were listed on the fourth slide. Skip went back and read them off.

Lower concentrations of total mercury are seen downstream. The methyl mercury in August is markedly higher. That's the seasonal effect based on temperature. It also shows that as we approach Schultz Road there is an increase in the amount of methyl mercury in the water. There is suspicion that there maybe additional methylation going on in that area. It's a characteristic of temperature and a characteristic of the type of habitat.

Giacomaro: What type of mercury is consumed by the fish?

Medeiros: The fish consume methyl mercury by eating smaller organisms that have methyl mercury in them. It goes down until you get to the organisms that actually eat the bacteria that produce it. A small amount of methyl mercury also can pass in from the water column across the gills, but that's a small portion of it.

Medeiros and Daniels explained the chart in the presentation and what the sampling results in each column were from. Medeiros said there was an elevated area of methylation, creation of methyl mercury. This is what prompted them to look further downstream and sample as far as eight miles out to Connecticut Avenue. The values on the chart are parts per trillion. They are extremely small numbers. For that reason the analyses have to be done in specialized laboratories under clean room conditions. There are very few laboratories in the country that can do this successfully.

Near Schultz Road there is an indication that there's additional methylation going on. In discussion with Suffolk County, on whose property this is and with the regulators, caused us to add those cleanup areas that are directly upstream of Schultz Road.

The total suspended solids are the amount of particles that are in the water. When the total suspended solids are high, since mercury is often bound to solids in water, there's a potential for there to be high mercury content also. In a couple of locations it's off the scale. It's elevated substantially and when we looked further into this we found that this is an area onsite that circumstantially already had been included in the cleanup in which there was suspension of sediment brought up from the bottom particles that had mercury attached to it and in this one location it was quite elevated and then at the very next location it's back into the normal range indicating that it's not being transported, it's just a suspension and re-suspension type of thing.

Giacomaro: Round 3, what time period is that?

Medeiros: August.

Giacomaro: Did you not say the amount of mercury can be produced by micro-organisms? Is it an indication that the micro-organisms are producing a lot in August?

Medeiros: That's right, the highest levels of methyl mercury are seen in Round 3 in the area by Schultz Road.

Biss: Is the third line a separate measurement?

Medeiros: No, it's just a ratio of the second to the first results.

Another way to better detect whether or not there are changes as you go through time or go through space, in other words down river versus season, is to look at the flux of the mercury. Flux is a measure of the total mass of the mercury that is in the water column at a point in the river. You take a cross section and anything that flows through that section is what flux is. It's measured in terms of grams of mercury per day.

Schwartz: You had mentioned controls. Do they show up in these charts?

Medeiros: I don't have the Connetquot River information on these slides, but I do have it in terms of their measurements. I can let you know what they were in comparison.

**ACTION ITEM:** Provide the Connetquot information.

Schwartz: Explain what the open circles are on the charts.

Medeiros: Those are down in the non-detect range.

The background for the total mercury is approximately 2 to 3 parts per trillion for total mercury and about .2 to .5 or .6 for methyl mercury and that's from a collection of several studies that were done throughout the northeast.

Reed: Skip, you could go to slide 8 and show where the background levels are visually on the chart.

Conklin: Is the ratio holding at approximately one percent between the methyl and the total mercury?

Medeiros: No, it changes.

Conklin: I'm thinking of the August rounds?

Medeiros: It's location specific that its changes are important.

Conklin: How much over one percent does it go up?

Medeiros: Substantially.

In the range of this section of the study the Sportsmen's Club and Connecticut Avenue, which are seven to eight miles or so downstream, concentrations that are typical of background waters are reached. This is based on one round of sampling. The next round of sampling is taking place on the 12<sup>th</sup> and that will continue throughout the summer. We strongly believe that we have reached samples that are very close to background by the time we reach the Sportsmen's Club. Our additional samples will confirm that.

The flux of total mercury, the mass of mercury that's in the water column is elevated. It's important to point out that one of the very important interpretations of flux data is that it does away with dilution affects. Downstream there are more tributaries adding more water. And

consequently just looking at the concentration of the contamination in the water is misleading unless you actually measure the flux.

Giacomaro: Isn't that assuming that none of the tributaries are adding to the....

Medeiros: That's what it shows. It shows that there are no significant sources of additional mercury from any of the tributaries that are entering the stretch of the river from Schultz Road downstream.

Proios: Do you have data from your own work or someone else's that has some sort of an association between particle size and mercury concentration?

Medeiros: Flux is a measurement. The velocity of the water is measured. You measure the height of the water, the width of the river and multiply those all together to get the flux of whatever contaminant you're talking about. If you're talking about total mercury you multiply that times the total mercury concentration. If you're talking about methyl mercury, you multiply it times the methyl mercury calculation.

Proios: You're assuming that mercury attaches itself equally to all particles?

Medeiros: I don't have specific information on that.

Schwartz: If you look at the second graph in the top row, it appears like it's increasing to the right. Would you comment on that?

Medeiros: Yes, that's the point that I tried to make. In the second round and in basically every round there is an indication of elevated mercury be it total mercury or methyl mercury as you approach Schultz Road. The wetlands near Schultz Road have a substantial amount of mercury in them and it's getting into the water column as total mercury and methyl mercury and for that reason it was added to the cleanup.

There are very dense wetlands there. We went on a hike up the river there and you could see bubbles indicating that there's decay, fermentation exactly the conditions that you need for methylation.

Medeiros said that the strategy for cleaning up the river is to collect all the sediment that they can for analyses. Nearly 1000 samples have been collected. He showed the locations of the transects where samples were collected in a line across the river. Up to ten samples were taken at each location. He said the river has been sampled very intensely. Several of the samples have been split with the County and are in close agreement with the analytical results. The Lab feels that the river has been adequately characterized with the exception of the one area just before Donahue's Pond that could not be reached because of ice. The sediment sampling results were depicted on a chart in the presentation.

Medeiros said the next steps were to complete the sediment sampling in the area of the cranberry bogs to Connecticut Avenue. There would be some additional methyl mercury water column sampling done in April, May, and June. And there would be some additional fish sampling done in April from Manor Road to Connecticut Avenue.

Proios: Since you pretty well identified these spots where you see methylation occurring are you or is anyone else at the Lab trying to do an additional comparison or analysis to try to figure out what's going on here? Maybe you can identify the species of bacteria or the conditions propelling methylation to go on. It seems that this would be a very clear project to determine how in the future this type of activity could be controlled.

Medeiros: It would be a wonderful project that I would love to be involved in but in our program we're doing it exclusively for cleanup. I'd be happy to cooperate with anyone with a professional interest or research interest in it.

Biss: The distribution of flux and distribution of mercury confuses me. Wouldn't you expect them to follow each other? The one in June has the highest concentration of flux, but then in August the distribution of mercury is up.

Medeiros: It's a function of where the measurement is taken and the depth of water at that time. There are several things that...

Biss: It looks like an anomaly.

Medeiros: It does.

Heil: Did the county do splits with you on this last run?

Medeiros: On the sediment they did extensive splits with us. We have gotten similar results.

Heil: How about the water column sampling?

Medeiros: No, they worked only with us on the sediment.

Esposito: The water column testing for total mercury and methyl mercury were done in parts per trillion, but the sediment testing was done in parts per million.

Medeiros: That's correct.

Esposito: It was worth waiting five months for the results.

Medeiros: We wanted to be sure that both the Lab and DOE and the regulators were all in agreement on the implications of the data. I think we've reached that point.

## **11. Update on the P2 Workshop**

Jim Heil said that the P2 brochures have been printed and are being distributed through various organizations. If anyone can get mailings out please let him know or Jeanne D'Ascoli. At least two organizations have agreed to sponsor the cost of refreshments for coffee breaks. D'Ascoli added that Member Heil has done a phenomenal job in distributing more than 450 brochures.

## **12. Membership Discussion**

Reed said that a quorum was needed to discuss membership and there was not one present. Member Mannhaupt suggested that because Member Sprintzen voiced his support for both proposed new members at last months' meeting he should be counted for the purpose of obtaining quorum. Reed asked the CAC if they agreed with this. They did. The proposed new members that were present were asked to step out of the room and discussion ensued.

The two individuals under consideration are John Hall representing the Peconic River Sportsmen's Club and Sarah Anker, from CHEC.

Member Talbot said that he has gotten to know John Hall through the Peconic River Working Group and he represents an organization that qualifies as being a stakeholder in the water quality of the Peconic River. John was an active participant in the Working Group and would make a good addition to the CAC.

Giacomaro asked what category the applicants would be placed under. There was some discussion on this with the suggestion being that the Sportsmen's Club would be put under Other and Sarah Anker would be put under Health.

There was discussion on how quorum would be affected and about sending letters to the two member organizations, the Yaphank Taxpayers & Civic Association and PACE Union, who have not attended meetings during the past twelve months.

**ACTION ITEM:** Send letters to Yaphank Taxpayers & Civic Association and PACE.

There was a motion made and seconded to accept John Hall and the Sportsmen's Club as members of the Community Advisory Council. All present voted unanimously and the new member was brought in to make quorum.

The CAC next considered Sarah Anker. Member Talbot said he had also worked with Ms. Anker on numerous issues.

There was a discussion on who Ms. Anker would be presenting and her organization. Member Schwartz suggested she be asked to attend several meetings as an apprentice. She would be encouraged to participate as a visitor.

Reed said that the CAC had the option of voting on her or inviting her to come in as a visitor for a while and after she's integrated into the process and understands it she could be asked to apply again. The members thought that would be a good way for her to demonstrate her commitment. It was agreed that the CAC was impressed with her request. They like her background, but they'd like her to have more experience with the group. They agreed she should be invited to attend as a visitor for several months and then resubmit her application.

### **13. Agenda Setting**

#### **May Agenda**

Membership Decisions

Peconic PRAP

Strontium-90 and Magothy Aquifer

Overview of BGRR Remediation Conceptual Plan

Update on PRAP process

P2 Workshop Report

The meeting adjourned at approximately 9:59 p.m.

2004	Affiliation		First Name	Last Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<b>Chart Key X = Present O = Absent</b>						No Mtg.										
ABCO	(Garber added on 4/10/02)	Member	Don	Garber	X		X	O								
ABCO		Alternate	Richard	Johannesen	O		O	O								
Brookhaven Retired Employees Association		Member	Graham	Campbell	O		O	X								
Brookhaven Retired Employees Association (L. Jacobson new alternate as of 4/99)		Alternate	Lou	Jacobson	O		O	O								
Citizens Campaign for the Environment		Member	Adrienne	Esposito	X		X	X								
Citizens Campaign for the Environment (Ottney added 4/02)		Alternate	Jessica	Ottney	O		O	O								
E. Yaphank Civic Association		Member	Michael	Giacomaro	X		X	X								
E. Yaphank Civic Association (J. Minasi new alternate as of 3/99)		Alternate	Jerry	Minasi	O		O	O								
Educator		Member	Audrey	Capozzi	O		O	O								
Educator (began as alternate in 3/99) (A. Martin new alternate 2/00) (Adam to college 8/01)(Bruce 9/01)		Alternate	Bruce	Martin	O		X	O								
Educator		Alternate	Adam	Martin	O		O	O								
Environmental Economic Roundtable (Berger resigned, Proios became member 1/01)		Member	George	Proios	X		O	X								
Environmental Economic Roundtable (3/99, L. Snead changed to be alternate for EDF)		Alternate	None	None												
Fire Rescue and Emergency Services		Member	David	Fischler	O		O	O								
Fire Rescue and Emergency Services		Alternate	James	McLoughlin	O		O	O								
Friends of Brookhaven (E. Kaplan changed to become member 7/1/01)		Member	Ed	Kaplan	X		O	O								
Friends of Brookhaven (E. Kaplan changed to become member 7/1/01)(schwartz added 11/18/02)		Alternate	Steve	Schwartz	O		X	X								
Health Care		Member	Jane	Corrarino	X		O	O								
Health Care (as of 10/02 per JD)		Alternate	Mina	Barrett	O		O	O								
Huntington Breast Cancer Coalition		Member	Mary Joan	Shea	X		X	O								
Huntington Breast Cancer Coalition		Alternate	Scott	Carlin	X		O	O								
Intl. Brotherhood of Electrical Workers/Local 2230		Member	Mark	Walker	X		X	X								
IBEW/Local 2230		Alternate	Philip	Pizzo	O		O	O								
L.I. Pine Barrens Society		Member	Richard	Amper	O		O	X								
L.I. Pine Barrens Society		Alternate	Katherine	Timmins	O		O	O								
L.I. Pine Barrens Society		Alternate	Jane	Geary	X		X	O								
L.I. Progressive Coalition		Member	David	Sprintzen	X		X	O								
L.I. Progressive Coalition		Alternate	None	None												

2004	Affiliation		First Name	Last Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Lake Panamoka Civic Association (Biss as of 4/02)	Member	Rita	Biss	X		X	X								
	Lake Panamoka Civic Association (Rita Biss new alternate as of 3/99)	Alternate	Joe	Gibbons	O		O	O								
	Long Island Association	Member	Matthew	Groneman	O		O	O								
	Long Island Association	Alternate	William	Evanzia	X		O	X								
	Longwood Alliance	Member	Tom	Talbot	X		O	X								
	Longwood Alliance	Alternate	Kevin	Crowley	O		O	O								
	Longwood Central School Dist. (switched 11/02)	Member	Barbara	Henigin	X		X	O								
	Longwood Central School Dist.	Alternate	Candee	Swenson	O		O	O								
	NEAR	Member	Jean	Mannhaupt	X		X	X								
	NEAR	Alternate	Wayne	Prospect	O		O	O								
	NSLS User	Member	Jean	Jordan-Sweet	X		X	O								
	NSLS User	Alternate	Peter	Stephens	O		O	O								
	PACE Union	Member	Allen	Jones	O		O	O								
	PACE Union	Alternate	Philip	Plunkett	O		O	O								
	Peconic River Sportsmen's Club (added 4/8/04)	Member	John	Hall				X								
	Peconic River Sportsmen's Club	Alternate	Jeff	Schneider				X								
	Ridge Civic Association (resigned in 03)	Member	Ron	Clipperton												
	Ridge Civic Association	Alternate	None	None												
	Town of Brookhaven	Member	Jeffrey	Kassner	O		O	O								
	Town of Brookhaven	Alternate	Anthony	Graves	X		X	O								
	Town of Brookhaven, Senior Citizens	Member	James	Heil	X		X	X								
	Town of Brookhaven, Senior Citizens (open slot as of 4/99)	Alternate	None	None												
	Town of Riverhead	Member	Robert	Conklin	X		X	X								
	Town of Riverhead (K. Skinner alternate as of 4/99)	Alternate	Kim	Skinner	O		O	O								
	Wading River Civic Association	Member	Helga	Guthy	X		X	X								
	Wading River Civic Association	Alternate	Sid	Bail	O		O	O								
	Yaphank Taxpayers & Civic Association	Member	Nanette	Essel	O		O	O								
	Yaphank Taxpayers & Civic Association	Alternate	None	None				O								