Community Advisory Council
March 12, 2009
Action Items/Notes

Final

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items, Budget Update,
4. Update on the HFBR & BGRR, Chuck Armitage, Director, ERP
5. SPDES Permit – Part I, Robert Lee, EWMS
6. Agenda Setting
7. Community Comment
8. SPDES Permit – Part II, George Goode, EWMS
9. Letters drafted by CAC; Adrienne Esposito, Anthony Graves

1. Attendance

Members/Alternates Present:
See Attached Sheets.

Others Present:
S. Aronson, L. Bates, M. Bebon, C. Birben, P. Bond, F. Carlson, J. Carter, M. Cowell, J. D'Ascoli, M. Davis, K. Geiger, D. Gibbs, D. Hensen, B. Howe, S. Johnson, S. Kumar, R. Lee, M. Lynch, R. McKay, S. Medeiros, C. Parnell, J. Remien, C. Wirick

2. Correspondence and Handouts

Items one through three were mailed with a cover letter dated March 6, 2009. Items four and five were included in the folders and items six through nine were available as handouts at the meeting.

1. March 12, 2009 draft agenda
2. Final notes for January 2009
3. Copy of CAC letter regarding DOE Contract Competition
4. Draft notes for February 12, 2009
5. Copy of HFBR & BGRR Decommissioning presentation
6. Copy of SPDES Permit Modification presentation
7. Copy of the SPDES permit and NYSDEC granting comment period extension
8. Copy of March 6, 2009 Bulletin w/Gov. Paterson's visit
9. Copy of *Research for Our Energy Future* booklet

3. Administrative Items

The meeting began at 6:32 p.m. Reed Hodgin reviewed the ground rules and the draft agenda. Those in attendance introduced themselves.

Approval of Minutes

Reed asked for corrections, additions or deletions to the February 12, 2009 draft notes. Member Kaplan noted that on page five he said; “Other national laboratories allow hunters to cull the deer herds under very restricted conditions and this is an option he feels Brookhaven Lab should look into”, not; “He asked if the permit could state the use of high powered rifles”. Member Shea said that on page six she said; “She feels that testing and registry should be mandatory at all labs so there will be sufficient data for a meaningful study”, not; “It is important to do it in a safe way”. The notes were approved as amended with two abstentions.

4. Updates on the HFBR & BGRR, Chuck Armitage, Director, Environmental Restoration Projects

Chuck Armitage told the CAC that the eight main control rod blades from the HFBR have been removed from the reactor vessel, loaded into shipping casks and shipped to Nevada Test Site (NTS). All eight auxiliary blades have also been removed from the reactor vessel. Six have been loaded into shipping casks and shipped to NTS, and the other two have been loaded into shipping casks awaiting shipment along with rod followers. The measured dose rates were in very close agreement with the values predicted by activation analysis. He showed pictures of the control rod blades (CRBs) being removed and placed into the shipping casks in the fuel pool and then being moved onto the transport trailer. He also showed pictures of the HFBR after the control rod blades were removed. He said that the beam plug with the highest radiological inventory has been removed from the HFBR, loaded into a shipping cask and has been shipped to NTS for disposal. It arrived safely on February 23. The eight remaining beam plugs will be removed and shipped out to NTS. He explained that the next steps are to remove the contaminated water from the reactor vessel and fuel canal. They will then be solidified using polymer and shipped to Energy Solutions in Utah for disposal.

Member Esposito asked how long the control rod blades are.

Armitage said the main blades are about 24 inches long. The auxiliary blades are shorter, but the followers are several feet long.

Member Kaplan asked how long it takes to load a cask.

Armitage replied that bringing the CRBs down into the fuel canal took a couple of weeks, but once they are there, it takes only a day or day and a half to load them into the casks.

Member Heil asked if there is still water in the casks.

Armitage said no, the CRBs are removed and placed in the casks under water. The casks have a drain plug in them, so when they are lifted out of the fuel canal, the water drains out back into the fuel canal. He said the radiation level is < 100 mrem in the casks.

Member Henigin asked if the water that is drained out of the casks is activated.

Armitage said the contamination levels are very low.

Member Chaudhry asked what the casks are made of.

Armitage said they are steel supported and lined with lead.

Member Biss asked if the control rod blades are stuck into something in the casks or if they have free movement where they can rub against each other.

Armitage said there are slots in the casks to separate them, so they cannot move around much. Sometimes two CRBs might be placed in the same section, so they can have contact with each other, but there is no negative effect. The activity is measured in each of the CRBs to ensure that there is a uniform distribution level around the cask. Everything went extremely well with the first shipment, which went out on February 15, 2009. The next shipment is scheduled for March 13, 2009.

Member Andrejkovics asked if there is any danger while in transit.

Armitage said the drivers have been Federally Certified, have armed escorts, and are escorted through the various counties at night. The casks have been accident tested and there is no dispersible contamination.

Carol Parnell, Assistant Director for Environment, Safety and Health, said the clearance level for the drivers is higher than hers.

An audience member asked how often radioactive casks are shipped.

Armitage said not very often for this type of material.

Member Blumer asked if the rods would be of interest to terrorists.

Armitage said it would be dangerous for terrorists to try to handle them and they would have no use for them anyway. They are pieces of metal that are radioactive, but the radiation cannot be dispersed.

Armitage told the CAC that the most activated beam plug is H9, which has been shipped out incident free.

Member Biss asked if all the radiation is internal.

Armitage said all the activity is sealed up. There is very low dose exposure to everyone.

Member Esposito asked what the tritium level is in the water.

Armitage said it is slightly above drinking water standards. The water will be solidified so there will be no chance of leakage. It will then be shipped out in solid form by truck to Energy Solutions in Utah.

Member Garber asked if originally the tritium was supposed to be recovered.

Armitage said most of the tritium in the water will be gone by the time it is solidified because it will evaporate. These are very low levels.

Member Esposito said there was some discussion about leaving it onsite until half-life occurs to bring levels down. Was a decision ever made?

Armitage said these are very low levels.

Member Blumer asked what Energy Solutions does with the radioactive material.

Armitage said there is a different process for different types of waste, but eventually it will all be buried.

Member Esposito asked where BNL stands on the projected time line.

Armitage said the Lab is one month ahead of schedule.

Armitage told the CAC that preparations are continuing for graphite pile and bioshield removal. Floor tiles that contained asbestos were removed from all elevations in contact with the graphite pile and elevator demolition was completed in December 2008. The three balconies that were attached to the pile had to be removed, as well as numerous conduits and service piping to install the cranes and the contamination control envelope (CCE). New steel was installed in the elevator shaft and columns were erected to support the new cranes. Four HEPA ventilation units were installed to provide filtration of radioactive airborne particulates during the graphite pile removal. The excavator and gantry crane will be operated remotely from the graphite pile removal control room.

Armitage said the next steps will be to install crane girders and trusses, set up the excavator crane and gantry crane and install CCE. The ventilation system will be installed and then the whole system will be tested and approved for graphite and bioshield removal. The actual removal is scheduled to begin in October 2009. The total cost of this project, including taking down the bioshield and putting a cap around the building is estimated at $40 million.

Member Shea asked about the high level waste.

Armitage said there is no high level waste.

5. SPDES Permit – Part I, Robert Lee, Environmental Protection Division

Reed explained that the Lab's State Pollutant Discharge Elimination System (SPDES) permit is being renewed by the State and the public comment period has been extended until May 26. He explained that tonight's' presentation is for educational purposes and information gathering. Next month will be for discussion amongst CAC members so they can develop a consensus recommendation and/or provide input and comments.

Bob Lee gave an overview of the history and background of the SPDES permit. He explained that the permit has been in effect since 1978 and the last comprehensive renewal occurred in 1995. The current permit expires in March 2010. New York State DEC initiated this permit revision process in 2007 and a revised draft SPDES permit was issued on 2/9/09. He explained that the SPDES permit authorizes discharges of wastewater to surface water and groundwater. It establishes limits on certain contaminants and specifies monitoring requirements. Brookhaven has 12 SPDES permitted outfalls and is in compliance with regulations 99.99% of the time. He showed the CAC a map indicating the outfall locations.

Member Kaplan asked for clarification of the 99.99%.

Lee said BNL monitors releases to recharge basins and the Peconic River on a continual basis. Hundreds of data points are collected. Typically the Lab's SPDES permit is in compliance 99.99% of the time. In 2008, there were four minor permit exceedances. The Lab took corrective action and there haven't been any violations since then. For each violation the Lab fills out a non-compliance report which is filed with the monthly report.

Lee said this permit system was established by the Federal Clean Water Act (1972) and Oil Pollution Control Act (1990). He said the two high-level goals are to achieve water quality which provides for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water, and to eliminate the discharge of pollutants into waters of the U.S. All states were required to establish water quality standards and a national permitting program where standards

are translated into effluent standards under the National Pollutant Discharge Elimination System Program (NPDES). New York State has extended this regulation to groundwater.

Lee explained that BNL has two types of discharges onsite. The first one is surface water discharge which comes from the Sewage Treatment Plant (STP) and discharges about 300,000 gallons per day to the Peconic River. This discharge is subject to ambient water quality standards (Class C) and groundwater effluent standards (Class GA). Some BNL limits are set higher than the standards due to recognized system characteristics (e.g., copper limits are not achievable if you have copper pipes). The second one is groundwater discharge and consists of seven recharge basins, three ground surface releases and small individual cesspools, all of which must meet groundwater effluent standards.

Member Esposito asked if the quantity of discharge has remained stable over the last few years.

Lee said it has dropped due to water conservation measures on the part of the Lab.

Lee explained that there are two water quality standards for BNL. The ambient water quality standard (Class C) which has been established to protect freshwater organisms and to ensure water is suitable for fishing and recreation. The limits for metals are very low due to impacts on aquatic organisms. This is applicable only to BNL's STP. The groundwater effluent standard (Class GA) which has been established to protect groundwater sources of potable water. The limits for organic chemicals are very low due to mobility and are applicable to all BNL discharges.

Lee said that BNL routinely monitors discharges to ensure discharges are below established limits, to ensure the limits are protective of fresh water organisms, and to submit a monthly Discharge Monitoring Report (DMR) to NYSDEC. The monthly monitoring requirements for the Sewage Treatment Plant are for metals, organics, and conventional pollutants. The quarterly monitoring requirements are for pesticides/PCBs, semi-volatiles, and whole effluent toxicity – to determine effects on freshwater organisms. Lee said there are seven outfalls that are monitored monthly for metals, organics, oil and grease, pH, flow, and cooling tower treatment residuals. There are four outfalls for storm water and non-contact cooling water that do not require monitoring.

Member Blumer asked if pharmaceuticals are monitored.

Lee said the Lab does not monitor pharmaceuticals, it is not a requirement.

Member Garber said that decreasing the amount of output could be increasing the concentration of contaminants, so the water conservation efforts could actually be causing the levels to appear higher.

Member Feinman asked how the monitoring is done.

Lee said it depends on the type of testing being done. Some things are monitored in real time, others are monitored over a 24-hour period, and other times pulse samples are taken. It depends on what you are looking for.

Member Esposito asked if those monitoring frequencies are spelled out in the SPDES permit.

Lee said yes.

Member Blumer asked if the STP is being monitored more than the other outfalls.

Lee said all the outfalls are monitored and all of the data is published in the annual Site Environmental Report. Contaminated waste water is only sent to the STP. Clean water is sent to the recharge basins. The STP consistently meets discharge limits for all contaminants except nitrogen. However, recent changes seem to have improved performance on nitrogen removal. Whole effluent toxicity testing shows no significant effect on survival or reproduction of aquatic species tested. The other outfalls consistently meet discharge limits. BNL continually seeks pollution prevention opportunities to drive contaminant levels in discharges as low as possible.

Member Esposito asked if the test organisms are selected by DEC and have they remained the same over the last several years. Do they look at behavioral anomalies?

Lee said DEC selects the test organisms. They take five different concentrations of effluent and expose the organisms to those concentrations and watch for survival, growth rates, and reproduction. They don't look at behavioral differences.

Member Garber said that as you expose the creatures to pollutants, they could have gradually adapted to their environment and you may not be getting accurate results.

Lee said that for each test, lab-raised organisms are used that are raised in clean water, so there is not the possibility for adaptation to the environment.

Lee explained that the SPDES permit renewal application requires a description of all discharges and a full suite of chemical analysis for all outfalls. The Lab completed the application and sampling in August 2007 and a draft permit was issued on February 9, 2009. BNL then requested an extension of the public comment period on behalf of the CAC, so it has been extended until May 26, 2009. NYSDEC will consider comments and then issue the final permit. The Lab then has one year to complete any special studies that are required.

NYSDEC considers the results of the special studies and may reopen the permit depending on the results. If the permit is not reopened, the public may not have the opportunity to comment on potentially significant changes to operations.

Lee said significant changes to the SPDES permit focused on discharges from the Sewage Treatment Plant to the Peconic River. The interim limits for six elements have been changed. He explained that the State has target limits, which are close to ambient water quality standard for the Peconic River and are extremely low for certain elements. For copper, the target limit is 3.7 parts per billion (ppb). The current discharge is around 100 ppb. To get to the target limit is extremely difficult and may be impossible. The target limit for mercury is .7 parts per trillion (ppt), rainwater is 9 ppt. So there are interim limits for the transition period. The second significant change is the Quantification and Removal Study, which is a comprehensive look at processes used to reduce the concentration of certain minerals. The last significant change is the Mercury Minimization Program. BNL has already significantly reduced its inventory of mercury, but the State is looking for the Lab to reduce the effluent quality.

Member Kaplan said if rainwater is 9 ppt, isn't that a basis to say the target of .7 ppt is impossible.

Lee said yes, it needs to be practical. He said there are several less significant changes in the permit which include short-term monitoring for effluents, Updates on Best Management Practices and Water Treatment Chemical Notification, and Whole Effluent Toxicity Testing.

Member Kaplan asked if all routine water quality measurements are done by BNL or if they are done by an outside lab.

Lee said most are done by outside labs.

Member Corrarino asked if the County has any role.

Lee said the County provides oversight; there is an annual inspection of all discharges. The State also oversees and comes in once a year.

Member Kaplan asked if any of the samples are split and sent to the County or other labs.

Lee said up until this year, the State did a round of sampling. The County comes in and does some conventional testing on the discharges on a quarterly basis.

Member Graves asked if the paperwork is submitted to the County because they administer the State program.

Lee said the County gets a copy, but the official documents are sent to the State.

Member Graves asked if any violation would come from the State.

Lee said yes. The County maintains oversight of the STP.

Lee explained that interim limits have been established for copper, iron, lead, mercury, nickel and zinc. All interim limits are consistent with current discharges and will apply until all studies are completed. The target limits for those six metals are based on ambient water quality standards because the STP discharges to the Peconic River. These limits are significantly less than the interim limits for copper, lead, mercury, nickel and zinc because freshwater organisms are very susceptible to low-level concentrations of those metals. The final limits will be developed pending the results of the Quantification Removal Study and the Mercury Minimization Program.

Member Graves asked if the ambient water quality standards are developed on a state by state or regional basis.

Lee said it depends on the quality or class of the receiving water.

Member Graves asked if the water is more polluted, are the standards more or less stringent.

Lee said, the more polluted the water is, the less stringent the standard is.

Member Garber said that if the Lab continues reducing its water discharge, but concentrations remain the same, could it appear that there is more or less contamination?

Lee responded that it is the concentration that has to approach target limits.

Member Feinman asked about the impact of rain or snow.

Lee said the river is monitored upstream where there is a large contribution of rain and snow.

6. Agenda Setting

Jeanne D'Ascoli, liaison to the CAC, told the CAC that next month there will be a continuation of the SPDES Permit presentation and development of a recommendation. Skip Medeiros will give an update on the latest findings for the Peconic River. If the Peconic River presentation is not ready, we will substitute something else on next month's agenda. In May, Vicki Colvin from Rice

University, Texas, will be here to give a presentation on the Environment, Safety, and Health aspects of nano. She will give a presentation to employees and the general public at 4 p.m. and then to the CAC at 6:30 p.m. Beyond May, we are planning a table top drill at the Emergency Operations Center.

Member Blumer asked for an overview on any stimulus money and the efforts at the Lab on green and solar energy. She suggested that when the weather is warmer, the CAC should go out to look at the restoration of the Peconic River.

D'Ascoli said those are good suggestions.

7. Community Comment

Michael Giacomaro, CAC member, asked how you can reach target limits when the rain or snow that is contributing to the river is already over those limits.

George Goode said the purpose of the Quantification and Removal study is to do just that. The State recognizes that some of those targets are unachievable given the concentrations in rainwater. The Lab will try to get as close as possible to the target limits using available technology. The State will review that data and then we will agree to a final limit which may be at the interim level or may be closer to the target or even at the target. The intent is for us to look at our processes.

8. SPDES Permit – Part II, George Goode, Environmental & Waste Management Services Division

George Goode, E&WMS, explained the proposed limit chart for the Sewage Treatment Plant. He explained the current limits, interim limits, target limits, the typical range of discharge, and the groundwater effluent limits for several contaminants.

Member Esposito said that it appears that BNL is already achieving the interim limit.

Goode said, yes that is the temporary limit. If it were something we could not achieve, we would be in violation before we started. The goal is to get to the target limits.

Member Blumer asked if the limits are for the river or for drinking water.

Goode said they are the limits for discharge from the STP as it enters the Peconic River.

Member Blumer asked if it is based on drinking water standards or biological standards.

Goode said those limits are based on survivability and reproduction of organisms in the receiving water. That is why the numbers are so low. The limits for groundwater are significantly higher for metals. The reverse is true for organics.

Member Campbell asked why the target for silver was so high.

Goode said the target for silver is much higher, but the interim limit is based on the technological effluent or what you can achieve in a conventional treatment process.

Member Graves asked if this means that above the target limits there would be ecological impacts from the discharge. He also asked if the 10 mg/L of nitrogen is the human health standard.

Lee said the total nitrogen limit of 10 mg/L is based on human health standards.

Member Garber noted that the County's Sewage Treatment Plant discharges into Port Jefferson harbor and they are running into problems with discharge limits. The solution there is that they will have in-ground discharge and a large array of reverse wells.

Goode said that is one of the main differences between the ambient water quality Class C discharge limits and groundwater effluent standard limits. As we look at various process waste streams we try to identify opportunities to reduce them. If there's a significant contributor and we don't find a technological mechanism or filter that could remove that contaminant, one option would be to divert that discharge to a recharge basin. That would remove it from the Peconic River and it wouldn't be subject to ambient water quality standards. It would still be subject to discharge limits, but they would be different limits depending on where the recharge basin is. If it is near the water shed for the Peconic River, it could still be subject to ambient water quality standards because it would be still contributing to the river.

Member Heil asked how this all compares to Riverhead's STP discharges and limits.

Goode said the major difference is that the Peconic River is three or four feet wide in the area of the discharge. Riverhead's STP discharges in a river that is 300 feet across and 10 feet deep, and they have a mixing zone. Their concentration is measured as a result of a sample taken in a large body of water. When we take a sample, we are getting pure effluent. Our samples are not nearly as diluted.

Goode explained the Quantification and Removal study. He said its purpose is to identify and minimize releases from sources in pursuit of target limits, specifically for copper, iron, lead, nickel, and zinc. Mercury is not included because it has its own program. The elements of the study are to identify and quantify sources of contaminants, sample process discharges for those contaminants, evaluate feasibility to achieve target limits based on AWQS, then to identify and provide treatment or alternate disposal actions. The study is to be completed one year after issuance of the final permit. NYSDEC will review results and determine the final effluent limits, and what pollution prevention, treatment, or disposal options should be implemented. BNL will have until January 1, 2012 for implementation of options to achieve revised limits.

Member Chaudhry asked how long it will take BNL to achieve these goals. He asked about the feasibility study.

Goode said the Lab has one year from the issuance of the permit to conduct the study. Then it will take about another year and a half to implement. The feasibility study is done to make sure they are using proven technology that is effective for the contaminant that is being reduced and is cost effective.

Member Garber asked if there was any sense of where the sources are for these metals. Could the copper be coming from the copper plumbing on-site? Can the iron be coming from well water?

Goode said that is a big piece of it. The average concentration in our distribution system is 10 – 15 ppb, which is way above the target. Some of the iron is from the well water and is a well known problem at the Lab. Some of the lead is coming from the copper pipes which have been soldered in many cases. However, this is not all from the plumbing. There are metal cleaning operations on site, cooling tower processes, which cause the levels to become concentrated, and there is a printed circuit manufacturing facility on site that does copper plating.

Member Blumer asked if this study would pinpoint the source areas and are you looking to reduce this at the source.

Goode said the Lab has a very good idea of where the sources are. We think the majority is process related, with a smaller portion attributed to the plumbing system. What hasn't been looked at in detail is what commercial treatment technology is available and how effective it would be. The primary focus of our water conservation program is to help reduce contamination at its source.

Goode explained that BNL has already implemented many pollution prevention opportunities to reduce contaminant discharges. Metal discharges related to wet film processing have been reduced through the conversion to digital photography. Lead has been eliminated from the plating bath and discharges through the redesign of printed circuit board manufacturing. Strong acids have been eliminated and metals have been reduced in wastewater through the redesign of the metal cleaning facility. Stringent controls for sink discharges have been established and process maps for all industrial processes have been developed. He gave the CAC some examples of treatment technologies and alternative disposal options that will be considered as well as some possible outcomes of the study. He explained that some target limits will be unattainable even with treatment for some metals.

Member Biss asked where the waste would go if it was disposed of off-site.

Goode said if the Lab had to collect a process waste stream and dispose of it off-site, it would probably be disposed of with hazardous industrial waste. It would be wrapped and sent to an industrial waste treatment facility.

Member Andrejkovics asked what the budget for this is and where the money comes from.

Goode said the full cost is unknown because the study has not been done yet. The study itself will cost about $250,000 and the Department of Energy will pay for it.

Member Blumer said in upgrading the STP, she feels the technology that has been developed at BNL should be used. She encouraged the Lab to think on the cutting edge. This may be cost effective. It appears you are going outside to technology developed elsewhere that is very costly when you have some good resources right here.

Goode said that has been considered, but not thought through yet.

Member Chaudhry asked who will be doing the study.

Goode said an outside contractor will probably be used, but a lot of the work will be done internally. We have a lot of the data already. We know where most of the sources are. We will have to do additional monitoring, but the State is not forcing only BNL to do this. This is a common element now in the upgrade of SPDES permits. The regulated entities are being asked to look for opportunities to reduce their discharges. There are consultants that do this sort of thing and have experience in this.

Goode explained that the purpose of the Mercury Minimization Program is to identify and minimize releases of mercury from sources in pursuit of target limits. This is similar to the Quantification and Removal, but it is ongoing, it does not stop after the one year period. The Program is to monitor STP influent and effluent at key locations in the collection system and known or potential sources. It is meant to reduce mercury discharges via cost effective measures, including control or process waste streams, remediation, and/or installation of new or improved treatment facilities and submit an Annual Status Report which summarizes the

monitoring, sources, actions taken, actions planned, and progress toward the goal. The goal of the Mercury Minimization Program will be to implement pollution prevention and treatment/disposal options to achieve the 50ng/L target. He said that BNL has a long history of mercury minimization. The inventory of mercury on-site has been reduced 65% since 1999 by replacing over 450 thermometers, retiring mercury containing equipment, replacing mercury bearing switches and removing ~ 370 lbs of mercury. Mercury is periodical removed from the plumbing systems by replacing or relining the sanitary main and the cleaning of lines, manholes and sink traps. Sediment contaminated by STP discharges has been removed from the Peconic River. Some of the examples of treatment technologies and alternative disposal options that will be considered are: continued piping system replacement and clean out, experimental mercury filtration technology, redirection of process water to recharge, and collection of waste water from specific processes and disposal of off-site. Some possible outcomes of the program are: increased resources for installation and operation of treatment systems and reduced or eliminated flow from the STP to the Peconic River due to collection of waste streams or redirection of discharges. Additional factors to consider regarding mercury are the effluent trends of the STP and the monitoring program of the water and fish in the Peconic River. Goode showed the CAC a trend line of the mercury concentration for the last 10 years, which showed the interim limit and the 2012 limit. He said it is important to remember that through water conservation efforts the flow has been cut in half, yet the Lab has still been able to decrease the concentration levels.

Goode then explained a chart which showed the concentrations of mercury in the Peconic at various locations, upstream and downstream of the STP. Concentrations in the river, at the point of discharge, are reflective of concentrations in the STP because they have not been diluted yet. As you travel downstream, the concentrations decrease because they are being watered down. He then showed a chart depicting the average mercury levels in fish tissue in various collection areas from the STP downstream. He explained that the average is below the EPA criteria. The two areas of highest concentration are the ones closest to the STP.

Member Henagan asked what the sample size is.

Skip Medeiros said they sample 20 – 40 fish.

Goode said that the target effluents are much lower for the STP and will be a challenge to meet.

Member Graves asked what made the State choose the mercury standard that they did. Are there any health, ecological effects or new research that caused them to reduce the limit?

Goode said the limit of 50ng/L was selected in pursuit of water quality limits. He thought it was based on the reasonable ability to meet.

Reed asked Goode to come back with that information.

ACTION ITEM: Find out why the State selected the mercury standard.

Member Kaplan asked what motivated the water conservation efforts. It seems the whole concept is working against you in meeting these goals.

Goode said it was not required by the permit, but done to conserve energy and money. There are now DOE goals to further water conservation efforts. It can have that effect, but if you look at the ten year trend, we are still reducing our limits.

Michael Bebon, Deputy Director for Operations, said there is also the biological effect.

Goode said BOD (biological oxygen demand) is a big problem and is the main cause of the Lab's nitrogen exceedances. Our waste stream is so dilute that the bugs don't have enough food to treat the waste water so we add cafeteria waste and that seems to be working.

Member Corrarino said usually 20% of the sources are causing 80% of your problem. What are the sources that are causing most of the problem with mercury?

Goode said the biggest sources of mercury come from residue from the sanitary systems, sand filter beds, rainwater, and what people eat.

Reed asked the CAC to digest the information from tonight. At next month's meeting there will be opportunity to ask any technical questions. Most likely a poll will be conducted by going around the room to see if there are any key issues or comments. After that, we will see if there is anything the CAC would like to bring forward as a consensus recommendation.

Additional Topics

Tim Green, Natural & Cultural Resource Manager, told the CAC that there will be an aerial survey conducted to count the deer. There will be low flying helicopters conducting the flyover beginning the week of March 23, in the evening hours.

Member Esposito told the CAC that a letter was circulated and compiled by CAC members to be sent to DOE requesting continuation of the CAC be included in the Request for Proposals (RFP) for a new contractor for the Lab.

D'Ascoli said the letter has been forwarded to Lou Sadler, Chief Counsel for the U.S. Department of Energy site office.

John Carter, Department Of Energy, asked if the intent was to post the letter on BNL's competition webpage along with the Department of Energy's response.

Member Esposito said yes.

Carter said the dialogue section from last month's CAC presentation by Lou Sadler has been placed on the webpage already.

Reed said the remaining action is to have the CAC written into the RFP itself.

Member Esposito asked how long it will take for a response.

Carter said next month the CAC will be told how long it will take to get an answer; we will not have the answer, but should know how long it will take to get one.

Member Graves said it appears funding is secured for the foreseeable future for medical imaging, so the letter he had agreed to write is not necessary. A member expressed concern about endorsing one particular program and not others. Graves requested that the CAC be informed if any research programs at BNL become threatened or in jeopardy so they can discuss writing a letter.

Reed asked the CAC if that was okay.

The CAC agreed.

The meeting adjourned at 9:22 p.m.

Agenda Topics	Votes
~~Global Warming, Stony Brook, Pine Barrens~~ (1-10-08)	15
~~CAC as a conduit/resource to the community~~ (11-08-07)	13
~~Emergency Operations Center tour and drill~~ (6-12-08)	12
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~~CERN – problems and implications~~ (4-10-08)	11
~~Site Environment Report – good and bad~~ (11-8-07)(10-2-08)	11
~~Nano safety~~ (3-13-08)	10
Regulator presentations on areas they oversee	10
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Overview of programs	9
~~Deer Managemen~~t (4-10-08)	8
Anti-terrorism update	7
NSLS-II briefing	7
Nuclear power plant safety	6
~~Education Programs~~ (10-2-08)	6
~~Energy efficiencies~~ (9-13-07)	6
Sustainable transportation	4
Natural Resources management	4
~~Nano ES & H~~ (10-11-07)	3
Safety and Security	3
Experimental Review Process	3
Latest RHIC findings	2
How the Lab supports nuclear facilities in the N/E region	2
Status of P-2 road show	2
Heating plant and efficiency research	2
Lyme Disease	2
CAC process	2
Alternative fuels	2
Update on phyto/bacterial contamination remediation research	1
Deforestation	0
Work planning process	0

New Topics Added After September 2007 Vote

~~Global warming – BNL research~~ (5-8-08)
Nano toxicology
~~Nano ES&H issues at BNL and beyond~~ (5-8-08)
Nanotechnology/science at BNL
Nano management policy issues
Nano panel discussion with the DOE, EPA, and FDA
Renewable energy research at the Lab
BNL/CSHarbor/Stony Brook collaboration

P = Present 2009 Affiliation		First Name	Last Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
ABCO (Garber added on 4/10/02)	Member	Don	Garber	P	P	P									
ABCO	Alternate														
Brookhaven Retired Employees Association	Member	Graham	Campbell	P	P	P									
Brookhaven Retired Employees Association (L. Jacobson new alternate as of 4/99)(A. Peskin 5/04)	Alternate	Arnie	Peskin	P											
CHEC (Community Health & Environment Coalition (added 10/04)	Member	Sarah	Anker												
(added 12/08)		Robert	Andrejkovics	P		P									
Citizens Campaign for the Environment	Member	Adrienne	Esposito	P	P	P									
Citizens Campaign for the Environment (Ottney added 4/02-takenoff 1/05 Mahoney put on)(7/06 add Kasey Jacobs)(K. Jacobs off 1/08)	Alternate														
E. Yaphank Civic Association	Member	Michael	Giacomaro			P									
E. Yaphank Civic Association (J. Minasi new alternate as of 3/99) (M. Triber 11/05) (Munson 6/06) (Feinman 2/09)	Alternate	Bob	Feinman		P	P									
Educator (changed 7/2006)	Member	Adam	Martin												
Educator (B. Martin - 9/01)	Alternate	Bruce	Martin												
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												
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									
Fire Rescue and Emergency Services	Alternate	James	McLoughlin												
Friends of Brookhaven (E.Kaplan changed to become member 7/1/01)	Member	Ed	Kaplan		P	P									
Friends of Brookhaven (E.Kaplan changed to become member 7/1/01)(Schwartz added 11/18/02)	Alternate	Steve	Schwartz	P											
Health Care	Member	Jane	Corrarino			P									
Health Care	Alternate														
Huntington Breast Cancer Coalition	Member	Mary Joan	Shea	P	P	P									
Huntington Breast Cancer Coalition	Alternate	Scott	Carlin			P									

P = Present 2009 Affiliation		First Name	Last Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Intl. Brotherhood of Electrical Workers/Local 2230 (S.Krsnak replaced M. Walker 1/11/07)	Member	Scott	Krsnak	P		P									
IBEW/Local 2230	Alternate	Philip	Pizzo												
L.I. Pine Barrens Society	Member	Richard	Amper	P											
L.I. Pine Barrens Society (added P. Loris 6/05)(Alayeva off 6/08) (Itriyeva 02/09)	Alternate	Irina	Itriyeva		P	P									
L.I. Pine Barrens Society	Alternate	Susie	Husted												
L.I. Progressive Coalition	Member	David	Sprintzen	P	P										
L.I. Progressive Coalition	Alternate	None	None												
Lake Panamoka Civic Association (Biss as of 4/02)	Member	Rita	Biss	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														
Long Island Association	Alternate	William	Evanzia												
Longwood Alliance	Member	Tom	Talbot	P	P										
Longwood Alliance	Alternate	Kevin	Crowley												
Longwood Central School Dist. (switched 11/02)	Member	Barbara	Henigin			P									
Longwood Central School Dist.	Alternate	Allan	Gerstenlauer												
NEAR	Member	Jean	Mannhaupt	P											
NEAR (prospect taken off ¾) (Blumer added 10/04)	Alternate	Karen	Blumer			P									
NSLS User	Member	Jean	Jordan-Sweet	P	P	P									
NSLS User	Alternate	Peter	Stephens												
Peconic River Sportsman's Club (added 4/8/04)	Member	John	Hall	P											
Peconic River Sportsman's Club	Alternate	Jeff	Schneider												
Ridge Civic Association	Member	Pat	Henagan			P									
Science & Technology (added 1/13/05)	Member	Iqbal	Chaudhry		P	P									
Town of Brookhaven (Graves made member 6/06)	Member	Anthony	Graves	P	P	P									
Town of Brookhaven	Alternate	None	None												
Town of Brookhaven, Senior Citizens	Member	James	Heil	P	P	P									
Town of Brookhaven, Senior Citizens (open slot as of 4/99)	Alternate	None	None												
Town of Riverhead	Member	Robert	Conklin												
Town of Riverhead (K. Skinner alternate as of 4/99)	Alternate	Kim	Skinner												
Wading River Civic Association	Member	Helga	Guthy		P	P									
Wading River Civic Association	Alternate	Sid	Bail												