Community Advisory Council
October 20, 2005
Action Items/Notes

Final

These notes are in the following order:

1. Attendance
2. Correspondence and handouts
3. Administrative Items
4. BGRR & HFBR Comparison, Les Hill
5. Overview of Historical Release, George Goode
6. Community Comment
7. Peconic River Update, Tim Green
8. Agenda Setting

1. Attendance

Members/Alternates Present:
See Attached Sheets.

Others Present:
C. Adey, M. Bebon, P. Bond, H. Carrano, A. Carsten, J. Carter, P. Chaudhari, J. D'Ascoli, B. Dorsch, K. Geiger, T. Green, L. Hill, M. Holland, S. Johnson, T. Kneitel, S. Kumar, R. Lee, B. Lein, M. Lynch, A. McNerney, L. Nelson, D. Paquette, G. Penny, F. Petschauer, D. Quinn, A. Rapiejko, S. Robbins, J. Tarpinian

2. Correspondence and Handouts

Items one through three were mailed with a cover letter dated September 21, 2005. Items four, five and six were available at the meeting as handouts.

1. Draft agenda for October 20, 2005
2. Draft notes for July 14, 2005
3. Draft notes for June 9, 2005
4. Copy of presentation on the BGRR and HFBR Comparison
5. Copy of presentation on Historical Releases
6. Copy of the Peconic River Update presentation.

3. Administrative

The meeting began at 6:39 p.m. Reed Hodgin went over the ground rules and the draft agenda. As a quorum was not present, the draft notes from June and July were not reviewed. Those present introduced themselves.

Jeanne D'Ascoli thanked the CAC members who were able to attend the recent Peconic and EM celebrations. She said that the announcement from the ATSDR on the draft final report had been sent to the CAC, however, the Agency will not be making a presentation. Any comments will have to be made directly to the ATSDR.

Member Mannhaupt asked why the ATSDR would not be presenting the findings to the CAC. D'Ascoli said it was a budget issue. Gail Penny, DOE, said ATSDR funding was reduced and they do not have staff. There was concern over the ATSDR's ability to address any concerns that might be raised. Penny said that money had been put in last year for the contractor to address any concerns.

D'Ascoli acknowledged Don Lynch of the Suffolk County Fire, Rescue, and Emergency Services who was attending his first meeting.

Les Hill addressed the landfill question from the June meeting. The question was: *Is there a chance that some radioactive waste could have been disposed of at the Brookhaven Town Landfill that the Lab needed to go exhume and otherwise deal with*. Les reported that some research was done on the history of the landfill operations. The Lab disposed of its municipal waste at the landfills on the Lab site until the late 1980's. Subsequent to the landfills closing, municipal waste and some construction debris were disposed of at the Brookhaven Town Landfill. There were a lot of controls in place to make sure that radioactive waste was not co-mingled with clean municipal waste. In addition, all trucks departing the BNL site went past a radiation monitor to make sure that there was no radioactive contraband in the loads that went out to the Brookhaven Town Landfill. There is no reason to believe that any contraband made it from Brookhaven to the town landfill after the landfills at the Lab were closed.

Sy Robbins, SCDHS, asked if anything that might have gotten past the security measures and into the landfill would have been picked up by any of the radiological flyovers that were done? Les said that the flyovers were done at the Brookhaven site. There were no flyovers of the Brookhaven landfill that he was aware of.

Robbins said he thought some general flyover surveys were done in this part of town. Les said he was only aware of the surveys that were done of the Lab.

Member Mannhaupt said that Jim Hurst, a former CAC member, sat on the Brookhaven Landfill Committee for years. He did research on that problem and he never came up with anything.

Member Shea asked for a written piece on historical background of this question…(can't understand tape)

Les said he could provide that.

4. BGRR and HFBR Comparisons, Les Hill, Director, EM

At the request of CAC members, Les Hill gave a presentation on the comparison of the BGRR and the HFBR from a decontamination and decommissioning perspective. He said that there are very few similarities between the two reactors. There are significant differences in facility design, operation history, size, isotopic distribution, form and location of radiological inventory, and the structural configuration of reactor facilities. Hill said that he would focus on the amount of residual contamination and its form.

The amount of radioactive material will drive the radiation levels in a reactor facility. This is important to the workers, to the Lab employees in the immediate vicinity of the reactor, and can become important to the general public. The composition of specific isotopes present is also very important to the development of the decommissioning strategies. The type of isotopes is a driver on the half-life of the material that's left behind. The half-life is important because it indicates how long the radiation hazard will exist.

The inventory size of the BGRR is between five and six thousand curies for everything that remains at present. In the case of the HFBR, in excess of 400,000 curies remain inside the

facility. Hill said that side by side comparisons – 99.999% of the remaining inventories in both reactor facilities resides inside of the graphite pile for the BGRR, and for the HFBR, it's located within the reactor itself and in the biological shield in the heart of the containment dome.

Hill explained the isotopic distribution differences between the reactors. There are differences in reactor design, fuel performance, and time since the last period of operation. He pointed to the .25 curies of alpha transuranics in the BGRR as a huge factor in decommissioning the pile. There are no transuranics in the HFBR but there is 56,654 curies of Cobalt-60, which drives the extremely high radiation dose rates in the reactor and around the reactor compartment.

Radioactive materials decay. Half-life describes the amount of time it takes radioactive material to decay by a factor of two. The distribution of the BGRR is weighted toward isotopes that have longer half-lives, over time the material will not decay very rapidly at all. In the case of the High Flux Beam Reactor, the vast majority of the isotopes are short-lived and there is a steep decline in the radiological inventory.

Hill also compared the types of radiation found in the BGRR and HFBR. The BGRR inventory is dominated by beta emitters, while the inventory in the HFBR is dominated by gamma emitters. The BGRR does contain some gamma emitters and the dose rates inside the graphite cube are anywhere from two to five rem per hour in the pile. Work there would be done by robotics. The transuranics in the BGRR pose a significant risk. The alpha emitters will drive how the workers will be protected when the pile is taken apart. They are long-lived isotopes and radioactive decay provides essentially no reduction in the risk over time.

The HFBR has an enormous quantity of Cobalt-60. The dose rate in and around the reactor is anywhere from two rem to 50,000 rem per hour. Robotics would definitely have to be used and the work would likely have to be done under 20 to 30 feet of water to protect workers. Special shipping casks would be needed to protect the workers and the public during transportation. This is a completely different problem with completely different challenges. Cobalt-60 is a short-lived isotope and has a sharp decrease in total radiological inventory and dose rate over time.

The physical form of the inventory is also important, it can be activated construction materials, loose debris, loose solids, or it can be water borne. In the BGRR the majority of the inventory is activated graphite, concrete, and steel - the pile and the biological shield. There is some loose solids and debris remaining in the pile and bioshield. There is no inventory in the aqueous form.

In the HFBR almost all the inventory is in the form of activated concrete and steel, there are inconsequential quantities of loose solids and debris, and there is some tritium, possibly as much as five gallons. It's estimated there is about 40 curies of tritium in the aqueous condition in the enclosed piping systems.

The reactor facilities are a lot different. They're different in many respects that are important to decommissioning. The size of the radiological inventories, the dose rates are different, the isotopic composition is different, the rate of inventory reduction and radiation hazard reduction are different. The physical form of the inventory is similar in that both are locked up in activated components but while there are some loose solids at the BGRR there is none at the HFBR. And while there is some residual aqueous inventory at the HFBR, there is none at the BGRR.

Member Sprintzen asked what it was about the way the two reactors operated that led to such significant differences.

Hill: It isn't so much the way they operated as much as the basic design. The different materials used in construction that were bombarded with neutrons resulted in different radioisotopes. The amount of neutrons in the HFBR was much greater than the earlier designed BGRR. The shear intensity of the neutron exposure that led to the activation of the materials was different. And a big factor was the fuel design.

Member Mannhaupt asked if the fuel source was also different.

Hill: Absolutely.

Member Mannhaupt asked if the BGRR was under CERCLA, and if the HFBR was too, or not?

Hill: The BGRR is being addressed under CERCLA and the procedural pathway for the HFBR is being reviewed by DOE and the regulators.

Member Shea asked how the public was going to be protected from the plutonium and americium?

Hill: The Lab will install special barriers in and around the biological shield and there will be many controls. The amount of material that can become airborne inside the biological shield will be limited by using fixative coatings so that dust is not created. A ventilation system will be installed so that there will be no air leaking out. Extreme precautions will be taken.

Member Shea: Will you be monitoring a wider area?

Hill: Monitoring will take place close to the source so the minute there is any kind of problem right at the work area, operations will be ceased.

Member Guthy asked how you would know if there's a problem?

Hill: Continuous air monitors will be used. There will be frequent radiological surveys in the surrounding areas. There's a series of procedural steps and instrumentation that will be used. The monitoring will start inside the cube. There will be a robot down in the biological shield. The whole idea is to not create dust. The same techniques used to control dust in the below ground ducts will be used. He said that he would come back to the CAC to report on the planned controls.

Reed added that the continuous air monitoring systems do in fact have alarms.

Member Graves asked if any of the material that will be removed can be reused at another reactor facility?

Hill: No, the material will be loaded into waste containers and buried at licensed burial facilities.

Member Shea asked what the cutoff point was to decide if robots will be used. What is the level of radiation?

Hill: In the case of both reactors, people can't be used with the americium and plutonium so robots will be used in the BGRR. In the HFBR, with dose rates 30, 40 50,000 rem per hour, robotics will be used and it's all underwater work. The dose rates, in both reactors, are sufficiently high where people couldn't be put in there.

Member Biss asked about using gantries to move pieces of the pile and if robots would operate the gantries?

Hill: Robots will be inside the biological shield taking apart the graphite cube. That will be lowered into waste containers and the waste containers will be lifted out of the cube. He said that the Lab was just starting to get into detail and design and will come back to the CAC when they know how they are going to handle the materials.

Member Mannhaupt asked how far away serious D&D core work on the HFBR was?

Hill: We're still looking at various decommissioning alternatives. It's still under study at this point.

5. Overview of Historical Releases, George Goode, Environment & Waste Mgmt.

George Goode gave an overview of historical releases in response to a question about contamination in the stack that was raised during the HFBR characterization presentation given in July. The primary sources of radiological emissions at the Lab are the BGRR (1950-1968), the Medical Reactor (1959-2000), the Cosmotron (1953-1966), the HFBR (1968-1996), the Alternating Gradient Synchrotron (1960 – present), and the Hot Laboratory (1951 – present). Goode focused on the emissions from the BGRR because they dwarf the releases from the other facilities. He described the construction of the BGRR and discussed its operation. He noted that the reactor was fueled by natural uranium from 1950 to 1957 and then by enriched uranium from 1958 to 1968. The fuel change resulted in changes to the air emissions from the facility. A significant feature of the BGRR was that it was air- cooled. Goode described the air-cooling system path and filter efficiency, and said that he drew information from a report that the Lab commissioned to go back and characterize the releases.

Goode described the air emissions from routine operations. Argon-41 was the dominant radionuclide, others were Idodine-13, Carbon-14, and particulates. There was perimeter and off-site monitoring in place when the BGRR was commissioned in 1947. Goode said that the stack became contaminated from the particulate matter that included various short-lived radionuclides and Cesium-137 and Strontium-90. The report showed that greater than 99% of the particulate activity resulted from short-lived radionuclides and that the monitoring that they did for particulates was obscured by the above ground and atmospheric weapons testing program that was going on during this time period.

Member Esposito asked for clarification that the Cesium-137 and Strontium-90 was 1%.

Goode said that the stack was contaminated with a very small quantity of material. The estimate was .03 curies.

The non-routine emissions were the result of fuel element failures. There were 28 failures during a six-year period (1952-1957). A fuel cartridge would be breached with a small pinhole leak that developed into a larger opening releasing fission products. There was a monitoring system in place in the air stream that was there to detect fission products so they knew when this happened and the reactor was immediately shut down and corrective actions were taken. Particulates including cesium and strontium, noble gases – argon and xenon, and Iodine-131 were released in the fuel failure events. These events were difficult to characterize because the monitoring network that was in place was there to monitor the ongoing operations of the facility not an event that occurred over one minute. The data presented is based on calculations, use of models, and experience at other facilities.

Goode explained what is known about the releases. He discussed the exposure limits, which were within the limits at the time. He said there is a fairly extensive data set of environmental monitoring from years past to the present day.

Member Shea ask how far away the soil samples were taken.

Goode: Soil samples were taken in many locations on and offsite. There were a series of farms that were sampled routinely for a period of years. There was also a joint program with Suffolk County going back into the early '90's.

Member Shea asked if they were taken close to the Lab and if the wind direction affected where the samples were taken?

Bob Lee: A lot of the farm locations are confidential in the report. They were in the north, northwest, down wind of the Lab site. We can get more information on the distances.

Member Mannhaupt said there was a pattern. And asked if the results were being used to back up the historical data?

Goode: I'm trying to make a connection with data points that tells that the measured emissions were within the acceptable ranges of the day. The environmental sampling data doesn't show any extensive contamination out there. I was trying to put it into context with what we know today.

Member Sprintzen questioned the rationale of the varying exposure limits.

Goode did not know why the limit varied.

Member Henagan asked if there was any animal thyroid sampling done on indigenous wildlife then and if any sampling has been done subsequently.

Goode said not to his knowledge, the sampling now focuses primarily on deer meat, which might be consumed.

Member Anker asked what the standard was back in 1950. And who sets the standards now.

Goode: The Atomic Energy Commission set the standards then, currently the EPA sets the exposure standards.

Anker asked how have they changed. What's the difference between the standard from the AEC and the EPA?

Goode: The biggest change in EPA regulation, especially with radioactive air emissions, is through the Clean Air Act and the monitoring required through the NESHAPS program. They require the emission be monitored right at the point, at the stack, if it exceeds a dose of 10 m/rem to a member of the public.

Anker: The current one is 10 mrem, what was the old standard?

Goode: That's at the stack. The 100 mrem standard is still in affect today.

Lee: The 100 mrem dose is a whole pathway dose. The 10 mrem is the air pathway dose. There are specific sublimits within that 100.

Anker: My concern is that you're using old, in 1950 radiation was considered much safer than it is now. Now it's…so are you using today's standards for measuring the 1950…

Goode: No. The doses were not characterized by this report because there was not enough data to do so. The releases were characterized. These are the only pieces of data that we have from the analysis of the data, that they met the dose limits of the time. I believe that the doses were not calculated because there was not enough information to do so.

Reed: This slide is not estimating what the doses were, this is showing what the regulatory limits that were placed on the Laboratory were in those years.

Goode: And then based on the releases, they determined that those releases would not have exceeded the limits. The actual doses were not gotten

Member Walker asked how confident the Lab was in the numbers from fifty years ago? Were the instruments as good as what we have today? Have things changed, or are we doing things the same way?

Goode: Things have changed a lot. The monitoring program is much more sophisticated then it was in those days. Throughout the analysis on this report there are caveats upon caveats about the quality of the data. They used the best data they could. They used very conservative assumptions. They did the best that they could do given the data that they had.

Member Esposito: I believe the ATSDR report said that they couldn't estimate the doses released from the stack for the BGRR and therefore couldn't really do much more assessment other then what was based on some of the testing that was done.

Goode: The last bullet is that the ATSDR report found that there was "Not a public health hazard."

Esposito: I found it a little contradictory in that they don't really know how much was released but we kind of believe it's okay.

Goode: The environmental monitoring data does support the conclusion that they've drawn.

Goode described the documents that he used for his information. They included the annual environmental reports and the special reports that filled in the gaps for the years that annual reports were not completed.

Member Mannhaupt asked for more clarification on the earlier discussion on dose rates and mrem.

Anker said that she would like to have what's safe and what's not safe clarified a little further, but she was more concerned that the data did not exist to say whether it is was safe or not in 1950, 1960, and until 1971. If things were classified and the farms aren't being released what was….

Bob Lee: The data was produced, just the names of the farms…

Goode: The information is there.

Bob Lee: And all that data is in the site environmental reports, we've published farm data every year since 1971 when they collected soils.

Anker: My concern is if you don't have the data, you are guessing at what was put out there…

Mannhaupt: I don't think it was so much guessing as trying to fill the data gaps to get as much information as possible to try to get a picture. Not a precise picture, but as quantitative a picture as we're all going to get.

Goode: There was an environmental monitoring network in place during the operations of the reactors that did measure the routine emissions. A lot of the analysis calculation estimates are related to the short-term fuel failures. That's the issue that we have a hard time nailing down.

Unidentified speaker: Those were estimated at the worse case scenario correct?

Lee: Yes.

Reed: Given that the information in the early periods was not as complete as the information for the later periods and the releases were higher in the earlier periods what kind of confidence can

the CAC have that you have a good enough handle on those releases so that you can be confident in the projections of the doses and the impacts associated with that.

Mannhaupt: They're relying on the environmental monitoring data that has been taken since then and compiled.

Esposito: We have nothing else to go by.

Tarpinian: By far the dose that an individual would have gotten at the site perimeter would have been dominated by the Argon releases versus the particulates of the Iodine. Argon is a noble gas, it passes like a cloud. But even in the very early days it was easy to measure. The estimates of the Argon that went out the stack are reasonably accurate and they're easily modeled. On that basis the folks that did the report felt reasonably confident that those exposure limits that they are talking about and cited were not exceeded. It's not exact and it's not precise but it is a pretty good ballpark.

On the particulates, the fact that the environmental monitoring for the longer-lived radionuclides like cesium and strontium are not showing up gives us a lot more confidence that whatever did go out the stack, the numbers that have been estimated is reasonably accurate. Gross contamination has not been found, so it doesn't seem likely that there was anything undetected that we wouldn't be able to find today. While they don't have exact numbers, those ballpark numbers are probably pretty good estimates.

Shea: …. the fallout from weapons testing obscured the BNL routine monitoring for particulates?

Goode: Yes.

Do you have any idea what the natural background level was before the above the ground testing compared to after in mrem per year?

Goode: I don't have that information but it is available.

Tarpinian: Normally, and I don't know exactly what it is for this location, but that 170 mrem number that was used as the self-imposed limit, was actually modeled based on actual background. The background radiation levels absent the fallout, is normally in the range of about 100 to 200.

Shea: That includes the fallout?

Tarpinian: No, it excludes it.

Shea: It excludes the fallout from above ground testing?

Tarpinian: Yes.

Shea: I'm talking about the normal background level, doesn't that include the releases from…

Tarpinian: Measured today, it does. But there's very, very little contribution from fallout now. Even prior to fallout though, we have a pretty good idea what the radiation levels were on average.

Shea: Compared to today?

Tarpinian: Compared to today.

Shea: There isn't that much difference?

Tarpinian: Not compared to today.

Shea: But when we were testing the background levels were higher?

Member Biss: You talk about the fuel cartridge being breached and there's a small pinhole and they would remove that fuel cartridge. How did they know which one it was?

Petschauer: The construction of the fuel assembly was pressurized with helium, and if the helium pressure dropped they knew there was a leak.

Biss: The estimated releases from fuel element failures has big spikes, why?

Goode: It was the duration of the event. Some were minutes and some were longer.

Unidentified Speaker: It was not only the difference in time, but also the size of the hole.

Sy Robbins: Les mentioned a couple of times about americium and plutonium releases related to failures of the fuel, do you have any idea how much americium and plutonium might have gotten past the filters and up into the stack and out?

Goode: I don't. We don't find it in the stack where the other contamination is, the cesium and strontium.

Robbins: Given what was found on the filters in the below ground ducts is it accounted for?

Petschauer: A rough estimate was done, I believe it was about 4 curies of transuranics. The filters contained 3.75 curies. A lot of that material went into the spent fuel pool and the spent fuel pool was processed. We estimated about 4 curies and we think we got it on the filters and it also got processed through the spent fuel pool, that's the best answer.

Anker asked how far away the farms were that were monitored?

Bob Lee: I can't remember off the top of my head, we'll get you the locations, directions and distances.

Goode: Some were on the North Fork and some were west of here as well.

Anker: How dangerous is argon as far as breathing it. It's short-lived?

Tarpinian: Because it's a noble gas you actually breathe it in and out. It doesn't really stick very much.

Anker: How is it a danger?

Tarpinian: Normally the exposure to argon is external, from external radiation. A person would be enveloped in a cloud of gas.

Anker: How far could it go?

Tarpinian: As far as gas could go in the wind. The distance it will travel depends on the meteorological conditions. It dissipates and dilutes as it goes up.

Prior to the break Michael Holland presented the CAC with an Appreciation Award from the Department of Energy. He said the CAC's diligence is "testament to the impact that they've had at the Laboratory." The award, a framed emblem and plaque, is signed by Secretary Samuel Bodman.

Reed commented on the significance of the award and Member Mannhaupt suggested sending a thank you letter.

CAC ACTION ITEM: Member Mannhaupt to coordinate with Jeanne D'Ascoli to write thank you letters to the DOE Site Office and Headquarters.

6. Community Comment

There were no comments.

7. Peconic River Update, Tim Green, Cultural & Natural Resources

Tim Green gave an update on the Peconic River. He discussed the status of the revegetation, invasive species, and the Banded Sunfish. Roux Associates is the contractor that the Lab is working with to assess the revegetation of the river. They conducted vegetation surveys from the Sewage Treatment Plant to Manor Road between July and September, 2005. Some 65 transects were delineated and virtually every plant was counted within each transect. The species, coverage, and presence of invasive species were documented.

Green described the habitats surveyed and showed before and after photos of the different cleanup areas. He indicated that replanting will be necessary in some sections of Area D because of high water and flooding. Reed Canary Grass was the prevalent invasive plant, it was found in 19 of the 65 transects. Phragmites were found in 10 of the 65 transects with the highest count in county parkland in Area E.

The treatment of the phragmites onsite last fall was fairly successful. If they comeback really heavy next spring, a plan for controlling them will be designed, but no decisions have been made at this point.

Member Esposito asked if the treated areas were coming back?

Green said the glyphosate is not 100% successful.

The options and process that would be needed if removal is needed in the county parkland were described. One option that might be considered to slow the growth is to mow the phragmites at ground level.

One hundred and ninety-five Banded Sunfish were rescued prior to the cleanup. A summer student conducted a population assessment over the summer and it was estimated that over 100,000 fish were in the pond. The drought reduced the size of the pond and birds ate some of them. After discussions with DEC, 269 fish were taken out of the pond and released to the river. The recent rains have refilled the pond.

Green updated the CAC on last year's prescribed fire and told them about the plan for this year's burn which is planned for the week the Fire Academy is onsite – October 23 through the 30th. The fire will clear understory and reduce fine woody debris. The site is along the north and east fire breaks and is about 14.8 acres. The burn will occur only if the conditions are correct.

8. Agenda Setting

Nov. Agenda
ATSDR discussion
Update on Dr. Dewey – possible presentation on the BNL Smoker Study
HFBR Alternatives
Regulator perspective on the CERCLA Five-Year Report
Peter Steinberg, BLOG on RHIC
December anniversary/holiday

The meeting adjourned at 9:16 p.m.

2005 Affiliation		First Name	Last Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Chart Key - P = Present															
ABCO (Garber added on 4/10/02)	Member	Don	Garber		P	P	P	P	P	P					
ABCO	Alternate	Doug	Dittko												
Brookhaven Retired Employees Association	Member	Graham	Campbell	P		P	P	P	P				P		
Brookhaven Retired Employees Association (L. Jacobson new alternate as of 4/99)(A. Peskin 5/04)	Alternate	Arnie	Peskin		P		P	P							
CHEC (Community Health & Environment Coalition (added 10/04)	Member	Sarah	Anker	P	P		P	P	P	P			P		
	Member	Adrienne	Esposito	P						P			P		
Citizens Campaign for the Environment (Ottney added 4/02-takenoff 1/05 Mahoney put on)	Alternate	Brendan	Mahoney		P		P	P	P	P			P		
E. Yaphank Civic Association	Member	Michael	Giacomaro	P	P		P	P	P	P					
E. Yaphank Civic Association (J. Minasi new alternate as of 3/99)	Alternate	Jerry	Minasi												
Educator	Member	Audrey	Capozzi			P									
Educator (B. Martin - 9/01)	Alternate	Bruce	Martin												
Educator (A. Martin new alternate 2/00) (Adam to college 8/01)(add. alternate 9/02)	Alternate	Adam	Martin				P								
Environmental Economic Roundtable (Berger resigned, Proios became member 1/01)	Member	George	Proios	P											
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		
Fire Rescue and Emergency Services	Alternate	James	McLoughlin	P	P	P		P	P						
Friends of Brookhaven (E.Kaplan changed to become member 7/1/01)	Member	Ed	Kaplan	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												
Health Care	Member	Jane	Corrarino												
Health Care (as of 10/02 per JD)	Alternate	Mina	Barrett												
Huntington Breast Cancer Coalition	Member	Mary Joan	Shea	P		P	P		P				P		

2005 Affiliation		First Name	Last Name	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Huntington Breast Cancer Coalition	Alternate	Scott	Carlin												
Intl. Brotherhood of Electrical Workers/Local 2230	Member	Mark	Walker	P	P	P	P	P	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)	Alternates	Phoebe	Loris			P	P	P	P	P					
L.I. Progressive Coalition	Member	David	Sprintzen	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		
Long Island Association	Alternate	William	Evanzia				P								
Longwood Alliance	Member	Tom	Talbot	P			P		P						
Longwood Alliance	Alternate	Kevin	Crowley												
Longwood Central School Dist. (switched 11/02)	Member	Barbara	Henigin	P	P	P			P	P			P		
Longwood Central School Dist.	Alternate	Allan	Gersytern												
NEAR	Member	Jean	Mannhaupt	P		P	P						P		
NEAR (prospect taken off ¾)(blumer added 10/04	Alternate	Karen	Blumer												
NSLS User	Member	Jean	Jordan-Sweet	P	P		P	P	P						
NSLS User	Alternate	Peter	Stephens												
Peconic River Sportsmen's Club (added 4/8/04)	Member	John	Hall	P	P		P		P	P					
Peconic River Sportsmen's Club	Alternate	Jeff	Schneider		P										
Science & Technology (added 1/13/05)	Member	Iqbal	Chaudhry	P	P	P	P		P						
Town of Brookhaven	Member	John	Turner												
Town of Brookhaven	Alternate	Anthony	Graves	P	P		P	P	P	P			P		
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	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		
Wading River Civic Association	Alternate	Sid	Bail												