

**Community Advisory Council  
January 9, 2014  
Action Items/Notes**

*Final*

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Natural Resources Update
5. Utility Energy Service Contract
6. Community Comment
7. Agenda Setting
8. SIX: A Loong Beamline at NSLS-II to Probe Electrons
9. Membership

**1. Attendance**

Members/Alternates Present: See Attached Sheets.

Others Present: S. Bogart, F. Crescenzo, E. Governale, T. Green, R. Howe, I. Jarrige, S. Johnson, T. Kneitel, E. Landini, B. Leonhardt, M. Lynch, R. McKay, J. Remien, N. Sundin, A. Troutman

**2. Correspondence and Handouts**

Items numbered one and two were mailed to Members with a cover letter dated January 2, 2014. Items three through six were available as handouts at the meeting.

1. Draft agenda for January 9, 2014
2. Draft notes December 12, 2013
3. Revised Draft agenda
4. Presentation – Natural Resources Update
5. Presentation – The Utility Energy Savings Contract for Brookhaven National Laboratory
6. Presentation – SIX: A Loong Beamline at NSLS-II to Probe Electrons

**3. Administrative Items**

The meeting was called to order at 6:32 pm. Reed Hodgkin, facilitator, reviewed the ground rules and the agenda. Those in attendance introduced themselves.

Marge Lynch, Assistant Lab Director for Community, Education, Government, and Public Affairs, told the CAC that Kathy Geiger had retired from the Laboratory and will be pursuing other projects.

Nora Sundin, liaison to the CAC, reported that the American Physical Society had appointed Reinhardt Schuhmann, who will join Margaret Malloy as her Alternate.

Approval of Minutes

Hodgkin asked for corrections, additions, or deletions to the December 12, 2013 draft notes. The notes were approved as written with none opposed and four abstentions.

**4. Natural Resources Update – Tim Green, Environmental Protection Division**

Tim Green gave an update on Chapter 6 of the 2012 Site Environmental Report. He spoke about the flora and fauna, the status of deer management, the 4-Poster tick control system, research at the Long Island Solar Farm, and bats on Long Island.

He said the ten-year trend for on- and near off-site deer samples indicates a stabilizing trend with average values of less than 2.0 pCi/g of Cs-137 and bone samples analyzed for Sr-90 indicated background levels. On- and off-site fish sampling indicated low levels of Cs-137, which was consistent with previous years. The maximum value for mercury was 1.08 mg/kg and was found in one Largemouth Bass from on-site Area D. On-site aquatic vegetation contained non-detect levels of Cs-137. The overall values of sediments were consistent with levels in previous years and mercury in sediments was generally <0.19 mg/kg. Garden vegetables had no detection of Cs-137 and soils were at background levels. The last year for garden vegetable monitoring was 2012 because there is no operating reactor on site, so there is no source. Grassy vegetation had no detection to 0.39 pCi/g wet weight of Cs-137. The associated soils were mostly at background levels, with one high value located at the FHWMF wetland; but that was still below clean-up goals. Detectable levels of Cs-137 were found at the Central Steam Facility and HT-W basin. PCBs and pesticides found at low levels were consistent with past monitoring.

The quarterly analysis of precipitation for radiological components indicated normal background levels. Mercury analysis indicated depositional values between 2.92 ng/L and 11.6 ng/L, which is consistent with what has been seen since monitoring began in 2006.

This was the first year of reporting in the SER of the Peconic River post cleanup monitoring. Fish monitoring will alternate with surveillance monitoring, so there was no fish monitoring this year. Mercury sampling of sediment consisted of three samples; two below 2.0 mg/kg, and one with 3.6 mg/kg. Mercury in STP effluents continued to decline with ongoing mercury minimization efforts. Concentrations of both generally trended downward the further from the STP outfall.

Member Chaudhry asked what part of the deer's body is tested.

Green said usually the meat area that would be consumed is the area tested and occasionally the liver is also tested.

Member Shea asked why sampling for Sr-90 is being discontinued.

Green said there is no source; we have done a lot of testing and have never had results above background level. The values we see are the same as in other areas.

(Notes amended 3/13/14 to include question: What are the background levels? And the response: Based on the data that we have from historic monitoring of deer we see very little variation between the deer taken onsite and offsite. The data points for Sr-90 in deer bone with associated error are: for greater than 1 mile 1.79+/- 4.26 pCi/g, dry weight; for deer taken onsite 2.11 +/- 5.56 pCi/g, dry weight; and for deer within 1 mile of the Lab 2.24 +/- 5.60 pCi/g, dry weight.)

Green said there are about 600 deer or 70 per square mile on-site. The archery hunt that was developed and reviewed by management will not be implemented at this time. Some of the East End towns are going through planning stages for a deer cull and BNL has asked for a cost estimate to determine if BNL can be included in this action.

Member Sicignano asked what the ideal deer population would be.

Green said for BNL 10-20 deer per square mile would be ideal. We are trying to balance a healthy population.

Member Esposito asked about the deer culling.

Green said it is scheduled to happen in March or April at a cost of \$75,000 - \$150,000 per year.

Green reported that the 4-Poster tick management system was deployed at 14 locations in March 2013. Each device is photo-monitored and many animals were observed using them. There is a new type of fungus that attacks ticks and kills them from the inside out called *Metarhizium Anisopliae* Strain F52, which is being investigated for possible use in areas where the 4-Poster can't be used.

Member Esposito requested that the CAC be notified if the Laboratory decides to discontinue use of the 4-Poster method of tick control and/or decides to use pesticides to manage ticks.

Green said studies are being done to compare small mammal population and vegetation inside and outside the Long Island Solar Farm (LISF). He said openings were put in the fence that surrounds the LISF and cameras have captured many different animals using them. He reported on a study underway to track the movement of the Eastern Box Turtle using radio telemetry.

Green said that bats on Long Island are not doing well. White-nose syndrome has been to blame for most of the deaths of the Northern bat and they have been proposed for listing as a Federally Endangered Species.

#### **5. Utility Energy Service Contract – Evelyn Landini, Director, Business Mgmt. Div., DOE, BHSO**

Evelyn Landini explained that a Utility Energy Service Contract (UESC) is a limited-source contract between a Federal Agency and its serving utility for energy management services including energy and water efficiency improvements and demand-reduction services. She said a utility company agrees to provide a Federal Agency with services and/or products that make facilities more energy efficient. They can obtain financing for the project from the utility company. During the contract, the Agency pays for the cost of the UESC from the savings resulting from the energy efficiency improvements.

A UESC reduces Federal impact on the environment, increases national energy security, and promotes public-private partnership. The UESC reallocates the utility to avoid costs, lowers demand, pays for equipment/improvements, and achieves cost savings.

The purpose of BNL's UESC is to meet DOE's sustainability goal by increasing lighting efficiency, replacing/enhancing outdated building controls, and reducing chilled water costs. National Grid has been chosen for the facilitation, design, financing, and construction. Siemens Building Technologies will conduct the work. The contract term is 10 years at a total cost of \$12.2M with a savings projection of >\$1.3M. Lighting improvements will be done in 17 buildings and controls improvements will be done in 9 buildings. A new chiller will be installed at the Central Chilled Water Facility.

Member Giacomaro asked if there will be a preference for buying US products.

Landini said yes.

Member Jordan-Sweet asked if there is a limit as to how much the contractor can charge. What if there is no savings? She also asked if Siemens is a local company.

Landini said this will be a fixed-price proposal. They cannot charge any more or less than the agreed upon cost. Siemens will use local people to do the work.

Member Giacomaro asked what other companies have done a UESC.

Landini said Fermi-Lab, the FAA, Vets Association, hospitals, DOD military bases. This is the third project for the DOE and if it does not work, we will not be doing it again.

Hodgin asked Landini to come back at a later date with an update.

## **6. Community Comment**

There was no community comment

## **7. Agenda Setting**

Sundin said that George Goode will be at next month's meeting with a presentation on the status of cleanup at BNL and Bruce Ravel will talk about his research at NSLS. We are open to suggestions if anyone has any other topic of interest.

## **8. SIX: A Loong Beamline at NSLS-II to Probe Electrons – Ignace Jarrige, SIX Beamline Group Leader, NSLS-II**

Ignace Jarrige spoke about synchrotrons and his beamline, the Soft Inelastic X-ray Scattering (SIX) Beamline, which is under construction at the NSLS-II. He explained that a synchrotron is an extremely powerful source of light providing many different colors (types of light) and described the synchrotron light range from infrared to x-ray. He talked about the NSLS-II and said light sources are used to explore all types of matter. His beamline is designed to look at electrons. He explained why SIX needs to be so long, describing how perfectly flat mirrors will be used to split, focus, and deflect the beam of light and showed pictures of a local construction firm putting up the building that will house it at the NSLS-II.

CAC members asked questions about the quantum effects of colliding electrons and about the measurements that will be taken from his beamline.

## **9. Membership - Attendance**

Nora Sundin explained that the requirement for CAC members is that each member or their alternate attend two-thirds of the meetings in a 12-month period. In 2013, there were nine meetings so the requirement is that there be representation from each organization at six of those meetings. She said she will be calling those that did not meet the requirement and following up with emails to see if there were extenuating circumstances. She will recommend that new representatives be appointed or the slot be opened up for other organizations to fill.

Member Chaudhry observed that of the four members in the Individual category, three have fallen below the requirement for 2013. He said perhaps it is not a good idea to have a category for Individuals.

Hodgin said the Laboratory will look into his suggestion.

The meeting adjourned at 9:10 p.m.

Agenda Topics Exercise  
April 11, 2013

Biological Research at BNL - 8  
~~Cyber Security & BNL~~ – 7 (May 9, 2013)  
~~Ticks & Tick Research~~ – 8 (June 13, 2013)  
Quantum Physics - 7  
Battery Advances & Research - 6  
Nanotechnology - 7  
BNL & Higgs Boson - 4  
Progress Report on Blueprint - 4  
~~Update on Solar Farm~~ – 5 (June 13, 2013)  
Sustainability - 4  
Impacts of Politics on Science - 4  
Computational Science - 3  
Overview of Science Programs at ISB - 4  
Update on Fukushima – Lab Work – 3  
Nuclear Safety - 3  
~~Physics Research at BNL~~ – 2 (November 14, 2013)  
Intellectual Property - 2  
~~Tree Bronzing~~ – 1 (June 13, 2013)  
Fluctuations in Vacuum - 1  
Impact of Fukushima Radiation - 1

| <b>P = Present</b> | <b>2014</b> | <b>Affiliation</b>   |           | First Name | Last Name | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec |
|--------------------|-------------|--|-----------|------------|-----------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|
|                    |             | <b>ABCO</b> (Garber - 04/02)                                     | Member    | Don        | Garber    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Madigan -10/10)   | Alternate | Michael    | Madigan   |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>American Physical Society</b>                                 | Member    | Margaret   | Malloy    | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Schuman 1/14)   | Alternate | Reinhart   | Schuman   |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Brookhaven Retired Employees Association</b> (Peskin - 09/09) | Member    | Arnie      | Peskin    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Franz - 12/09)  | Alternate | Eena-Mai   | Franz     | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Shapiro-1/13)   | Alternate | Steve      | Shapiro   |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Citizens Campaign for the Environment</b>                     | Member    | Adrienne   | Esposito  | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Colonial Woods Whispering Pines</b> (Birben - 06/09)          | Member    | Christine  | Birben    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Rehbein -11/10)   | Alternate | Eric       | Rehbein   | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Coram Civic Association</b> (Ziems - 06/12)                   | Member    | Paul       | Ziems     | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Meade – 06/12, Jim M 10/12)                                     | Alternate | Jim        | Meade     |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>East Yaphank Civic Association</b>                            | Member    | Michael    | Giacomaro | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Feinman - 02/09)  | Alternate | Bob        | Feinman   |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Emeritus</b> (changed 3/8/12)                                 | Member    | Jean       | Mannhaupt |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Friends of Brookhaven</b> (Kaplan - 07/01)                    | Member    | Ed         | Kaplan    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Schwartz - 11/02)   | Alternate | Steve      | Schwartz  |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Huntington Breast Cancer Coalition</b>                        | Member    | Mary Joan  | Shea      | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |  | Alternate | Scott      | Carlin    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>IBEW/Local 2230</b> (Krsnak 01/07)                            | Member    | Scott      | Krsnak    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Individual</b> (changed 3/12)                                 | Member    | Karen      | Blumer    | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (added 6/12)   | Alternate | Michael    | Madigan   | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Individual</b> – (changed 3/12)                               | Member    | Greg       | Bush      |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |  | Alternate | Adam       | Martin    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |  | Alternate | Bruce      | Martin    |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Individual</b> – (changed 3/12)                               | Member    | Jane       | Corrarino |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Individual</b> – (changed 3/12)                               | Member    | Iqbal      | Chaudhry  | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |     |     |     |

| <b>P = Present</b> | <b>2014</b> | <b>Affiliation</b>  |           | First Name | Last Name    | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec |
|--------------------|-------------|---|-----------|------------|--------------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|
|                    |             | <b>L.I. Pine Barrens Society</b>  | Member    | Richard    | Amper        |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Murdocco - 04/11, deleted 6/12) (Muller added – 8/12)(Katie Rose Leonard added – 6/13) | Alternate | Katie Rose | Leonard      | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>L.I. Progressive Coalition</b>   | Member    | David      | Sprintzen    | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate |            |              |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Lake Panamoka Civic Association</b> (Biss - 04/02)                                   | Member    | Rita       | Biss         | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Grandal - 10/10)   | Alternate | Bonita     | Grandal      | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Longwood Central School Dist.</b> (Castro -06/09)                                    | Member    | Maria      | Castro       |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate | Allan      | Gerstenlauer |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Mastic Park Civic Association</b> (Sicignano – 6/12)                                 | Member    | John       | Sicignano    | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate | Clara      | McManus      |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate | Joe        | May          |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Middle Island Civic Association</b>  | Member    | Tom        | Talbot       | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate | Kevin      | Crowley      |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>NSLS Users Committee</b>   | Member    | Jean       | Jordan-Sweet | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Ravel -02/11)  | Alternate | Bruce      | Ravel        | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Ridge Civic Association</b>  | Member    | Pat        | Henagan      | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate |            |              |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Town of Brookhaven</b> (Graves - 06/06)  | Member    | Anthony    | Graves       |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate |            |              |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Town of Brookhaven, Senior Citizens Office</b>                                       | Member    | James      | Heil         | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate |            |              |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Town of Riverhead</b> (Doroski - 04/11)  | Member    | Isidore    | Doroski      | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | (Hulme - 04/11)   | Alternate | Suzanne    | Hulme        |     |     |     |     |     |      |      |     |     |     |     |     |
|                    |             | <b>Wading River Civic Association</b>   | Member    | Helga      | Guthy        | P   |     |     |     |     |      |      |     |     |     |     |     |
|                    |             |   | Alternate | Sid        | Bail         |     |     |     |     |     |      |      |     |     |     |     |     |