

**Community Advisory Council  
December 12, 2013  
Action Items/Notes**

*Final*

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. SPDES Permit Modification update, Jason Remien
5. Activated Graphene presentation, Eric Stach
6. Community Comment
7. Agenda Setting
8. Annual Groundwater update, Bill Dorsch

**1. Attendance**

Members/Alternates Present: See Attached Sheets.

Others Present: L. Bates, S. Bogart, J. Carter, B. Dorsch, K. Geiger, P. Genzer, M. Giacomaro, D. Gibbs, G. Goode, R. Gordon, R. Howe, M. Israel, S. Johnson, R. McKay, D. Paquette, P. Paul, V. Racaniello, A. Rapiejko, J. Remien, E. Stach

**2. Correspondence and Handouts**

Items numbered one through three were mailed to Members with a cover letter dated December 5, 2013. Items four through seven were available as handouts at the meeting.

1. Draft agenda for December 12, 2013
2. Draft notes November 14, 2013.
3. Action Item - Response from November's meeting regarding the HFBR Stack Drain Tank
4. Copy of presentation: Sewage Treatment Plant (STP) Design/SPDES Permit Modifications Update – Jason Remien, Environmental Protection Division
5. Copy of presentation: Activated graphene: A new material for electrical energy storage – Eric Stach, Center for Functional Nanomaterials.
6. Copy of presentation: Annual Groundwater Update – Bill Dorsch, Groundwater Protection Group.
7. Action Item - Response to the question asked last month about the natural background levels of radiation for air and water for the local area.

**3. Administrative Items**

The meeting was called to order at 6:30 pm. Reed Hodgkin, facilitator, reviewed the ground rules and the agenda. Those in attendance introduced themselves.

Hodgkin gave a short presentation on his granddaughter's science fair project about shadows.

Approval of Minutes

Hodgkin asked for corrections, additions, or deletions to the November 14, 2013 draft notes. The notes were approved as written with none opposed and four abstentions.

**4. SPDES Permit Modification Update, Jason Remien – Interim Division Manager,  
Environmental Protection Division**

Remien reported that a Notice of Complete Application for modifications to the Lab's SPDES Permit was published in Newsday on Thursday, November 21, 2013 and comments are due by 12/21/13. He said the modification to the permit includes relocation of the STP discharge from the Peconic River to groundwater via recharge beds – a project that has been ongoing since 2009. The draft SPDES permit with the proposed effluent limits and monitoring requirements is available for review at the NYSDEC Region 1 Office in Stony Brook.

Remien explained that groundwater monitoring has been added to the draft permit, mercury minimization program requirements will be removed, a requirement has been added for a short term monitoring program for PCBs and pesticides, and the Water Treatment Chemical (WTC) requirements page has been updated to list the current WTCs used and approved at BNL.

The contract for the STP Design Modifications has been awarded to SECECA, SCMC, LLC. Construction is expected to start in September 2013 and be completed by Spring 2014.

### **5. Activated Graphene Presentation, Eric Stach – Center for Functional Nanomaterials**

Stach spoke about the reasons new materials are needed for energy storage and the different technologies. He talked about capacitors, supercapacitors, graphene, graphene oxide (GO), and microwave exfoliated graphene oxide (MEGO).

Member Blumer asked what the next steps are.

Stach said filing a patent and starting a company. We are still learning more.

Hodgin asked if Stach would return with an update on his research.

Stach agreed to return.

### **6. Community Comment**

There was no community comment

### **7. Agenda Setting**

Hodgin said that Tim Green will give a presentation in January on natural resource management. There will also be a presentation on the DOE BHSO utilities service contract and a discussion on membership. The presentation on the status of cleanup activities will be on the agenda for February.

### **8. Annual Groundwater Update, Bill Dorsch, Groundwater Protection Group**

Dorsch gave an update on the status of the groundwater cleanup. He spoke about regulatory approval of system shutdowns for 2013, current Volatile Organic Compound (VOC) groundwater issues, progress in recent VOC groundwater remedies, and the status of Tritium/Strontium-90 plumes. He reported that from 1996 to 2012 21 billion gallons of contaminated groundwater have been treated and recharged to the aquifer, 6,950 lbs of VOCs have been removed, and 27 mCi of Strontium-90 have been removed.

Dorsch explained the shutdown process. He said the groundwater treatment system completion process begins when plume capture goals are reached for a system. The regulators are then petitioned for system shutdown. Upon approval, the extraction wells are turned off and maintained in a standby mode with the wells being sampled for several years. If no rebound in VOC concentrations is observed, the regulators are petitioned for system closure. Upon approval, the equipment is decommissioned, the wells are abandoned, and there is continued limited monitoring. The following systems are closed: OU IV Air Sparge/Soil Vapor Extraction, Carbon Tetrachloride Pump and Treat, and the Industrial Park East Pump and Treat. The following systems are shutdown: OU I South Boundary, Industrial Park, North Street, and HFBR Tritium Pump and Recharge.

Dorsch showed maps with the status of the Building 96 VOC Plume Source Area and the Building 452 Freon-11 plume. He showed detailed cross-section maps of several of the plumes and showed sequential maps showing the reduction in size of the plumes over time. He said a new extraction well was installed for OU III Middle Rd. Treatment System and shut down of North Street East Treatment System is planned for 2014. The Laboratory will continue to keep regulators and the community stakeholders informed about cleanup progress, issues, and the results of 2014 planned activities.

Member Esposito said this presentation should have been given first. The reason the CAC was created was to address environmental issues, not to hear science presentations.

Hodgin said the Laboratory will take note of her concern.

Member Heil asked how Freon-11 is removed.

Dorsch said it is pumped and then air stripped.

Member Esposito asked if the filters clog often.

Dorsch said no.

Member Giacomaro asked why soil was removed at Building 96. Was something missed?

Dorsch said nothing was missed, but we determined it to be a continuing source, so the contaminated soil was removed.

The meeting adjourned at 8:59 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>2013</b> | <b>Affiliation</b>   |           | First Name | Last Name | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct<br>cancelled | Nov | Dec |
|--------------------|-------------|--|-----------|------------|-----------|-----|-----|-----|-----|-----|------|------|-----|-----|------------------|-----|-----|
|                    |             | <b>ABCO</b> (Garber - 04/02)                                     | Member    | Don        | Garber    |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | (Madigan -10/10)   | Alternate | Michael    | Madigan   | P   |     |     | P   | P   |      |      |     |     |                  |     | P   |
|                    |             | <b>American Physical Society</b>                                 | Member    | Margaret   | Malloy    | P   |     | P   | P   | P   | P    |      |     |     |                  | P   | P   |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>Brookhaven Retired Employees Association</b> (Peskin - 09/09) | Member    | Arnie      | Peskin    |     |     | P   | P   | P   | P    |      |     | P   |                  | P   | P   |
|                    |             | (Franz - 12/09)  | Alternate | Eena-Mai   | Franz     |     | P   | P   |     |     | P    |      |     | P   |                  |     | P   |
|                    |             | (Shapiro-1/13)   | Alternate | Steve      | Shapiro   | P   |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>Citizens Campaign for the Environment</b>                     | Member    | Adrienne   | Esposito  |     | P   | P   | P   | P   |      |      |     | P   |                  |     | P   |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>Colonial Woods Whispering Pines</b> (Birben - 06/09)          | Member    | Christine  | Birben    |     | P   |     | P   | P   | P    |      |     |     |                  |     |     |
|                    |             | (Rehbein -11/10)   | Alternate | Eric       | Rehbein   | P   | P   |     |     | P   | P    |      |     | P   |                  |     |     |
|                    |             | <b>Coram Civic Association</b> (Ziems - 06/12)                   | Member    | Paul       | Ziems     | P   | P   | P   | P   | P   | P    |      |     | P   |                  | P   | P   |
|                    |             | (Meade – 06/12, Jim M 10/12)                                     | Alternate | Jim        | Meade     |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>East Yaphank Civic Association</b>                            | Member    | Michael    | Giacomaro | P   | P   | P   | P   | P   |      |      |     | P   |                  | P   | P   |
|                    |             | (Feinman - 02/09)  | Alternate | Bob        | Feinman   | P   | P   | P   | P   | P   | P    |      |     | P   |                  |     | P   |
|                    |             | <b>Emeritus</b> (changed 3/8/12)                                 | Member    | Jean       | Mannhaupt |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>Friends of Brookhaven</b> (Kaplan - 07/01)                    | Member    | Ed         | Kaplan    | P   |     | P   |     |     | P    |      |     |     |                  | P   |     |
|                    |             | (Schwartz - 11/02)   | Alternate | Steve      | Schwartz  |     |     | P   |     | P   |      |      |     | P   |                  | P   |     |
|                    |             | <b>Huntington Breast Cancer Coalition</b>                        | Member    | Mary Joan  | Shea      | P   |     | P   |     | P   |      |      |     | P   |                  | P   | P   |
|                    |             |  | Alternate | Scott      | Carlin    |     | P   |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>IBEW/Local 2230</b> (Krsnak 01/07)                            | Member    | Scott      | Krsnak    | P   |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>Individual</b> (changed 3/12)                                 | Member    | Karen      | Blumer    |     |     |     |     |     |      |      |     |     |                  |     | P   |
|                    |             | (added 6/12)   | Alternate | Michael    | Madigan   |     |     | P   |     |     | P    |      |     |     |                  |     |     |
|                    |             | <b>Individual</b> – (changed 3/12)                               | Member    | Greg       | Bush      |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             |  | Alternate | Adam       | Martin    |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             |  | Alternate | Bruce      | Martin    |     |     |     |     |     |      |      |     | P   |                  | P   | P   |
|                    |             | <b>Individual</b> – (changed 3/12)                               | Member    | Jane       | Corrarino |     |     | P   |     |     |      |      |     |     |                  |     |     |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |                  |     |     |
|                    |             | <b>Individual</b> – (changed 3/12)                               | Member    | Iqbal      | Chaudhry  | P   |     | P   | P   |     | P    |      |     | P   |                  | P   |     |
|                    |             |  | Alternate |            |           |     |     |     |     |     |      |      |     |     |                  |     |     |

| <b>P = Present</b> | <b>2013</b> | <b>Affiliation</b>  |           | First Name | Last Name    | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep | Oct<br><small>cancelled</small> | Nov | Dec |
|--------------------|-------------|---|-----------|------------|--------------|-----|-----|-----|-----|-----|------|------|-----|-----|---------------------------------|-----|-----|
|                    |             | <b>L.I. Pine Barrens Society</b>  | Member    | Richard    | Amper        | P   | P   |     |     |     |      |      |     | P   |                                 |     |     |
|                    |             | (Murdocco - 04/11, deleted 6/12) (Muller added – 8/12)(Katie Rose Leonard added – 6/13) | Alternate | Katie Rose | Leonard      | P   |     | P   | P   |     | P    |      |     | P   |                                 | P   | P   |
|                    |             | <b>L.I. Progressive Coalition</b>   | Member    | David      | Sprintzen    | P   |     | P   | P   | P   | P    |      |     | P   |                                 | P   | P   |
|                    |             |   | Alternate |            |              |     |     |     |     |     |      |      |     |     |                                 |     |     |
|                    |             | <b>Lake Panamoka Civic Association</b> (Biss - 04/02)                                   | Member    | Rita       | Biss         |     |     |     |     | P   | P    |      |     |     |                                 |     |     |
|                    |             | (Grandal - 10/10)   | Alternate | Bonita     | Grandal      |     | P   |     |     | P   | P    |      |     |     |                                 |     |     |
|                    |             | <b>Longwood Central School Dist.</b> (Castro -06/09)                                    | Member    | Maria      | Castro       |     |     |     |     |     |      |      |     | P   |                                 |     |     |
|                    |             |   | Alternate | Allan      | Gerstenlauer |     |     |     |     |     |      |      |     |     |                                 |     |     |
|                    |             | <b>Mastic Park Civic Association</b> (Sicignano – 6/12)                                 | Member    | John       | Sicignano    |     |     | P   |     |     | P    |      |     |     |                                 |     |     |
|                    |             |   | Alternate | Clara      | McManus      |     |     |     |     |     |      |      |     |     |                                 |     |     |
|                    |             |   | Alternate | Joe        | May          |     |     |     |     | P   |      |      |     |     |                                 |     |     |
|                    |             | <b>Middle Island Civic Association</b>  | Member    | Tom        | Talbot       | P   | P   | P   |     |     | P    |      |     | P   |                                 | P   | P   |
|                    |             |   | Alternate | Kevin      | Crowley      |     |     |     |     |     |      |      |     |     |                                 |     |     |
|                    |             | <b>NSLS Users Committee</b>   | Member    | Jean       | Jordan-Sweet | P   | P   | P   | P   |     |      |      |     | P   |                                 | P   | P   |
|                    |             | (Ravel -02/11)  | Alternate | Bruce      | Ravel        |     |     |     |     |     | P    |      |     | P   |                                 |     |     |
|                    |             | <b>Ridge Civic Association</b>  | Member    | Pat        | Henagan      | P   | P   | P   | P   |     | P    |      |     | P   |                                 | 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   |     | P   |     | P   | P    |      |     | P   |                                 |     | P   |
|                    |             |   | Alternate |            |              |     |     |     |     |     |      |      |     |     |                                 |     |     |
|                    |             | <b>Town of Riverhead</b> (Doroski - 04/11)  | Member    | Isidore    | Doroski      | P   |     |     | P   | P   |      |      |     | P   |                                 | P   | P   |
|                    |             | (Hulme - 04/11)   | Alternate | Suzanne    | Hulme        |     |     | P   |     | P   |      |      |     |     |                                 |     |     |
|                    |             | <b>Wading River Civic Association</b>   | Member    | Helga      | Guthy        |     | P   | P   | P   | P   |      |      |     |     |                                 | P   |     |
|                    |             |   | Alternate | Sid        | Bail         |     |     |     |     |     |      |      |     |     |                                 |     |     |