

**Community Advisory Council  
January 12, 2012  
Action Items/Notes**

*Final*

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Solar Research Array
5. ESD for BGRR
6. Community Comment
7. Agenda Setting
8. 2010 Site Environmental Report

**1. Attendance**

Members/Alternates Present: See Attached Sheets.

Others Present: L. Bates, M. Bebon, S. Bogart, B. Bookless, J. Carter, J. D'Ascoli, B. Dorsch, L. Garber, A. Garciar, K. Geiger, D. Gibbs, T. Green, M. Holland, T. Kneitel, B. Lee, M. Lynch, L. Lyons, R. McKay, A. Nunziata, V. Racaniello, J. Rampe, A. Rapeijko, D. Rocco, D. Shea

**2. Correspondence and Handouts**

Items numbered one and two were mailed to Members with a cover letter dated January 5, 2011. Items numbered three through nine were available as handouts at the meeting.

1. Draft agenda for January 12, 2012
2. Draft notes for December 8, 2011
3. Revised draft agenda
4. Copy of presentation, Progress Update Freon-11 Groundwater Treatment System and g-2 Tritium Plume Monitoring, Douglas Paquette – Environmental Protection Division
5. Copy of presentation, BNL's Solar Energy Research Plans, Bob Lofaro – Sustainable Energy Technologies Department
6. Copy of presentation, BGRR Projects & ESD, Diane Rocco – Environmental Restoration Projects
7. Copy of presentation, 2010 Site Environmental Report, Robert Lee – Environmental Protection Division
8. 2010 Site Environmental Report, Volume 1
9. 2010 Site Environmental Report, Summary

**3. Administrative Items**

The meeting began at 6:34 p.m. Reed Hodgkin, facilitator, reviewed the ground rules and the agenda. Those in attendance introduced themselves.

Approval of Minutes:

Hodgkin asked for corrections, additions, or deletions to the December 8, 2011 draft notes. Member Shea said that on page four, she was asking for specific information on how Fukushima affects us in the US and if BNL has done any testing of the air. Member Blumer said that the comment on page four about the influx of environmental groups, which was attributed to her, was actually said by Member Garber. The notes were approved as amended with none opposed and three abstentions.

### Freon-11 Update

Doug Paquette, Environmental Protection Group, gave the CAC an update on the installation of the Freon treatment system. He said 12 new wells have been installed and two existing wells will be used. There will be long term monitoring of the source area and plume with a quarterly monitoring schedule. The first samples were collected in November 2011. He said the new extraction well EW-18 was installed to capture the high concentration portion of the plume and the existing Building 96 extraction well RTW-1 will capture the lower concentrations in the plume. The construction of the treatment system should be completed this month, the water and air discharge equivalency permit applications will be submitted to the NYSDEC (New York State Department of Environmental Conservation), and a draft ESD (Explanation of Significant Differences) will be prepared. Then system start-up testing will begin and full time operation of the treatment system will begin. We will continue to update the CAC and the Lab community.

Member Esposito asked for the location of the recharge basin where the water is being discharged.

Paquette said it is south of the plume.

Member Esposito asked why that location was chosen and what level must it be treated to.

Paquette said the water currently being treated discharges there so we are going to combine them. We will treat to drinking water standards. These are very efficient systems.

Paquette said source control and groundwater monitoring for the g-2 plume is continuing. He said tritium was detected (58,600 pCi/L) south of Brookhaven Avenue in December 2011, so additional monitoring will be done in that area.

Member Blumer asked how this was originally discovered in 1999 and if the Lab is doing anything other than monitoring. Are you doing any remediation?

Paquette said during the design process for that experiment we knew there was the possibility for soil activation. The cap was put on top to prevent rainwater from causing it to migrate down into the groundwater. We have determined that the contamination was coming from the area not covered by the cap. Sample wells have been tested on-and off-site for radiological analysis.

Bill Dorsch said historically we have found trace amounts of tritium off-site, but nothing approaching drinking water standards.

Paquette said we are treating and pumping to the center of the site to the recharge basin. Concentrations are below 20,000 pCi/L.

Member Heil asked where the plume will be in a year and a half.

Paquette said 250 – 260 feet further south. It is slow moving.

Member Esposito said she thought this plume was caused by the groundwater leeching up rather than the area not being covered by the cap.

Paquette said the groundwater at the g-2 source area is 25-30 feet below land surface. The activated soil shielding is located above the land surface and slightly below. The highest concentrations are nowhere close to the water table. There is a smearing effect. Some gets held up above the water table.

Member Esposito asked if the plume breaking apart like it is was a common event.

Paquette said yes it is common.

#### **4. Solar Research Array, Bob Lofaro-Sustainable Energy Technologies Department**

Bob Lofaro gave an update on solar energy research plans. He said the LISF (Long Island Solar Farm) is complete and is now operating to generate up to 32 MW of power for Long Island. The Lab has completed installing a suite of instruments in the LISF for research purposes. He said development of the research array is underway and will address key issues with utility-scale solar plants.

Member Giacomaro asked if there are any plans for wind-generated power.

Lofaro said not at this time.

Member Sprintzen asked if this relates in any way to the recent SGRID<sup>3</sup> project.

Lofaro said yes, there will be a direct correlation. This will include the ability to look at the problems with generating and controlling power.

Member Esposito asked if this will reduce or replace fossil fuels. As the newer energy generators go on, the old ones should go off.

Member Garber asked if this will displace 32 MW of fossil fuels when it goes into the existing grid.

Lofaro said yes, it will cause it to drop off. They have to balance supply and demand off the grid.

#### **5. ESD for BGRR, Diane Rocco – Project Manager, Environmental Restoration Projects**

Diane Rocco spoke about the Explanation of Significant Differences (ESD) being prepared. She explained due to the issues involved in removing the last three feet of bioshield wall to below floor level, it was determined with the regulators that it would be left in place. Less than .5 percent of activity will remain and it will be isolated by the building and a new concrete floor. The ESD will not cause any change to the activity removal commitment in the ROD.

Rocco reported on the progress of the remaining decommissioning activities at the BGRR (Brookhaven Graphite Research Reactor). She explained that aerial work on the BGRR was suspended after the accident that we spoke about last month where the worker fell off a lift, however non-aerial work is continuing. Concrete and inner steel removal is complete. The excavators have been removed from the building and the first pour of concrete is complete, with dose being consistent with target goals. Plans are underway to resume aerial work sometime next week. She said other DOE sites are interested in using the excavator, so we will be sending it on to them.

Member Sprintzen asked what was used to wrap up the excavators and what type and how much contamination does it contain.

Rocco said it is wrapped in a plastic shrink wrap. We spent a lot of time decontaminating it, there is no removable contamination left on it. The shrink wrap material is inspected every day. Since there is no removable contamination, it is adequate. It can't wash off. We have tried. It is fixed.

Member Sprintzen asked for actual numbers for the level of contamination left on the excavator.

Rocco said she will get that information before the next meeting.

**ACTION ITEM: Find out level of contamination left on excavator and send to CAC.**

Member Schwartz asked if the dust particulates from the excavators were a radiological hazard for workers.

Rocco said there are HEPA filters in the tent enclosure, the work is done remotely, and the workers wear respirators. Pouring the new concrete floor also encapsulated anything that was left behind.

**6. Community Comment**

There was no community comment.

Member Giacomaro presented a copy of the Report to the Suffolk County Legislature from Brookhaven National Laboratory Environmental Task Force dated January 26, 1998 that Member Chaudhry requested at last month's meeting. He also left an extra copy for the Community Relations Office.

**7. Agenda Setting**

Jeanne D'Ascoli, Manager, Community Relations, said there will be a presentation next month on the STEM (Science, Technology, Energy, and Mathematics) Hub, which was postponed from this month. If the speaker is available, we will also have a presentation on Fukushima and a presentation on SGRID<sup>3</sup>. She said there will also be a presentation coming up in the next month or two on the Environmental Timeline that was prepared by Sherry Johnson. This contains a lot of information on what the CAC has done over the years.

**8. 2010 Site Environmental Report (SER), Robert Lee – Environmental Protection Division**

Bob Lee, Manager, Environmental Protection Division, reported that a pipe for the Strontium-90 treatment system near the BGRR had leaked. We suspect the leak was caused by the separation of a joint.

Member Esposito asked for an update on next month's agenda and how many gallons of water leaked out?

Lee said 400-800 gallons of water.

Hodgin said we will have an update next month when we have more information.

Member Garber asked if there are pressure monitors that would signal so if a pipe ruptures you will be notified. If there is a catastrophic severing of a pipe, how would you find out about it?

Dorsch said there are low pressure sensors on that system. There are about 400 feet of pipeline between that and the building. We got to it before the sensor triggered. We were there within 10-15 minutes. It would have shutdown on its own shortly thereafter.

Lee then gave a report on the 2010 SER. He spoke about the Environmental Management System ISO-14001 and Occupational Safety and Health Management System-OHSAS 18001. He talked about the Pollution Prevention (P2) Program, waste generation, energy management and conservation. He gave an update on the compliance status, inspections, and assessments. He spoke about water monitoring, radiological and non-radiological air quality, and dose assessment.

Member Sprintzen asked if the Laboratory would have a greater P2 Program if DOE supplied money for the program.

Lee said he does not know why DOE stopped funding the P2 Program. The return on investment is three years or less. He said there are plans for a 20MW combined heat and power plant.

Member Esposito asked if this is an actual plan or a hope for the future.

Lanny Bates said it is an active plan for the future. Probably 6-10 years down the road.

Member Schwartz said after looking at the report, he would like to compliment the Lab on the reduction in the amount of energy consumption. He said it is an impressive display of accomplishments.

Member Krsnak asked what kind of exposure to the soil and road resulted from the Strontium-90 treatment system leak. He asked if the Lab expects any problems with the workers in that area.

Lee said there were no exposures and no problems with the workers.

Member Bush asked why the graph showing energy usage indicates much less used in 1999.

Lee said RHIC was not running at that time and heating degree days were down. Bringing facilities like NSLSII online has actually been detrimental to our energy usage.

Member Ravel asked how much the energy consumption will increase once NSLS-II comes online.

Lee said there will be about a 12 percent increase.

Mike Bebon said it is actually more than that.

Lee said we can check it out.

**\*ACTION ITEM – Find out how much energy consumption at BNL will increase once NSLSII comes online.**

Member Blumer asked if there are plans to recycle gray water.

Lee said we have thought about that, but the costs associated with recycling gray water are prohibitive.

The meeting adjourned at 9:06 p.m.

Agenda Topics  
February 10, 2011 Poll

Homeland Security – 9  
Nanotechnology Developments & Standards – 7 (3/10/2011 - E. Mendez)  
Science & Politics – 7  
Overview of BNL Land Use Plan – 6  
Sustainability – 6  
Photovoltaics – 6 (3/10/2011 - E. Mendez and R. Lofaro)  
PET/MRI Research – 6  
LISE Tour Prior to Completion – 6 (11/18/11 – ribbon cutting)  
Business/Lab Integration of New Technologies – 6 (4/14/11 – Walter Copan)  
Nano Patterning – 5  
Natural Resources Management Plan – 5 (12/8/11 – Tim Green)  
Nuclear Non Proliferation – 4  
Nuclear Safety – 4  
Catalysis & Super Conducting Magnets – 3  
Cosmology – 3  
Accelerate Long Island as information becomes available - 3  
Safety Progress – 2  
CRADAS – 2  
Radio Isotopes – 2  
Nuclear Stewardship - 1  
Technology Transfer – 0 (4/14/11 – W. Copan)

<b>P = Present</b>	<b>2012</b>	<b>Affiliation</b>		<b>First Name</b>	<b>Last Name</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
		ABCO (Garber - 04/02)	Member	Don	Garber	P											
		ABCO (Madigan -10/10)	Alternate	Michael	Madigan	P											
		American Physical Society	Member	Margaret	Malloy	P											
		American Physical Society	Alternate														
		Brookhaven Retired Employees Association (Peskin - 09/09)	Member	Arnie	Peskin												
		Brookhaven Retired Employees Association (Franz - 12/09)	Alternate	Eena-Mai	Franz	P											
		Citizens Campaign for the Environment	Member	Adrienne	Esposito	P											
		Citizens Campaign for the Environment	Alternate														
		Colonial Woods Whispering Pines (Birben - 06/09)	Member	Christine	Birben	P											
		Colonial Woods Whispering Pines (Rehbein -11/10)	Alternate	Eric	Rehbein	P											
		E. Yaphank Civic Association	Member	Michael	Giacomaro	P											
		E. Yaphank Civic Association (Feinman - 02/09)	Alternate	Bob	Feinman	P											
		Educator (Bush - 05/10)	Member	Greg	Bush	P											
		Educator (B. Martin - 09/01)	Alternate	Bruce	Martin	P											
		Educator	Alternate	Adam	Martin	P											
		Friends of Brookhaven (Kaplan - 07/01)	Member	Ed	Kaplan												
		Friends of Brookhaven (Schwartz - 11/02)	Alternate	Steve	Schwartz	P											
		Health Care	Member	Jane	Corrarino												
		Health Care	Alternate														
		Huntington Breast Cancer Coalition	Member	Mary Joan	Shea	P											
		Huntington Breast Cancer Coalition	Alternate	Scott	Carlin												
		IBEW/Local 2230 (Krsnak 01/07)	Member	Scott	Krsnak	P											
		IBEW/Local 2230	Alternate														
		L.I. Pine Barrens Society	Member	Richard	Amper												
		L.I. Pine Barrens Society (Murdocco - 04/11)	Alternate	Richard	Murdocco	P											
		L.I. Progressive Coalition	Member	David	Sprintzen	P											
		L.I. Progressive Coalition	Alternate														
		Lake Panamoka Civic Association (Biss - 04/02)	Member	Rita	Biss												
		Lake Panamoka Civic Association (Grandal - 10/10)	Alternate	Bonita	Grandal												
		Longwood Alliance	Member	Tom	Talbot												
		Longwood Alliance	Alternate	Kevin	Crowley												
		Longwood Central School Dist. (Castro -06/09)	Member	Maria	Castro												
		Longwood Central School Dist.	Alternate	Allan	Gerstenlauer												

<b>P = Present</b>	<b>2012</b>	<b>Affiliation</b>		First Name	Last Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
		NEAR	Member	Jean	Mannhaupt												
		NEAR (Blumer - 10/04)	Alternate	Karen	Blumer	P											
		NSLS User	Member	Jean	Jordan-Sweet												
		NSLS User (Ravel -02/11)	Alternate	Bruce	Ravel	P											
		Ridge Civic Association	Member	Pat	Henagan												
		Ridge Civic Association	Alternate														
		Science & Technology (Chaudhry -01/05)	Member	Iqbal	Chaudhry												
		Town of Brookhaven (Graves - 06/06)	Member	Anthony	Graves												
		Town of Brookhaven (Ormond - 09/10)	Alternate														
		Town of Brookhaven, Senior Citizens	Member	James	Heil	P											
		Town of Brookhaven, Senior Citizens	Alternate														
		Town of Riverhead (Doroski - 04/11)	Member	Isidore	Doroski												
		Town of Riverhead (Hulme - 04/11)	Alternate	Suzanne	Hulme	P											
		Wading River Civic Association	Member	Helga	Guthy	P											
		Wading River Civic Association	Alternate	Sid	Bail												