

**Community Advisory Council
October 13, 2016
Action Items/Notes**

Final

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Natural & Cultural Resource Update
5. Agenda Setting
6. Nanoscience Environment, Safety, and Health at the Center For Functional Nanomaterials
7. Community Comment

1. Attendance

Members/Alternates Present: See Attached Sheets.

Others Present: D. Bauer, C. Black, F. Crescenzo, D. Gibbs, T. Green, F. Loeb, D. Manning, G. Mattson, R. McKay, W. Ng, E. Nowak, J. Peters, J. Remien, N. Sundin, R. Tribble

2. Correspondence and Handouts

Items numbered one through three were e-mailed to Members on October 6, 2016. Items numbered four through six were available as handouts at the meeting.

1. Draft agenda for October 13, 2016
2. Draft notes from the September 9 meeting
3. Community Advisory Council Membership Renewal Request form
4. Copy of Presentation: Natural & Cultural Resources Update
5. Copy of Presentation: Nano Safety at Brookhaven National Laboratory
6. List of organizations with expiring memberships

3. Administrative Items

The meeting was called to order at 6:30 PM. Reed Hodgkin, facilitator, welcomed everyone to the meeting. He reviewed the ground rules and draft agenda and those present introduced themselves.

Jason Remien said in response to the question raised by Member Jordan Sweet at the September CAC meeting; the release that was unaccounted for from BLIP was .01% or .45 curies of tritium from the HFBR.

Hodgkin said that membership renewal forms were emailed to Members and he will pass out forms listing all those organizations that have expiring memberships. He asked for everyone to indicate next to each of those organizations whether they approve, disapprove, or need to talk before their request for continued membership is approved. He also asked each group to indicate on the form if they are requesting membership renewal. If everyone approves a group's renewal request, there is no need to talk and they will be renewed. We will notify the organizations this month and next month we can address any issues. If your group is not listed on the form, that means you are not scheduled for renewal at this time.

Nora Sundin, liaison to the CAC, said there are two groups listed that have not been in attendance and may be receiving a letter letting them know they are in danger of losing their membership status. Those two groups are Longwood School District and Colonial Woods Whispering Pines.

Member Ziems said Longwood School District needs representation here. Someone should reach out to them to find out their status.

Hodgin asked everyone to fold their forms and hand them in to be tallied.

Member Peskin said that he has decided as of January 2017 he will be asking the president of BREA to appoint someone else to fill his position on the CAC.

Approval of Minutes

The September notes were approved as written with none opposed and one abstention.

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

Tim Green spoke about deer management and the deer cull. He said surveillance monitoring shows that the Cs-137 in deer had similar results as in past years and the ten-year trend shows a decline.

Member Shea asked for a larger copy of the graph showing the ten-year trend of Cs-137 concentrations in deer meat.

***Action Item: Email large copy of graph showing ten-year trend of Cs-137 concentrations in deer meat to CAC Members.**

Member Ziems asked about the size of the deer.

Green said the deer are now getting bigger because the population is smaller due to the cull so there is less competition for food.

Green then spoke about post cleanup fish monitoring. He said on-and off-site fish sampling indicated low levels of Cs-137, which is consistent with previous years. He said the maximum value for mercury was 3.26 mg/kg in a largemouth bass from on-site area C and the highest value for mercury in sediment was 23.0 mg/kg from PR-WC-06. A plan is being developed to clean-up the area containing elevated mercury.

Member Keenan asked what part of the Carman's River is sampled.

Green said the Lower Lakes.

Member Esposito asked for information regarding what the levels were; what they are today, and what the target goals are so we could see progression. We've come a long way.

Green said the values we are finding in fish are not much different from what we have seen historically.

Action Item: Provide a chart showing the history of mercury levels from the beginning of cleanup until the present time

Hodgin asked Green to provide a graph to see the trend.

Member Schuhmann asked why is testing done in Carman's River for comparison.

Green said Laboratory operations did not impact Carman's River.

Member Shea asked how fast fish travel.

Green said most of these fish have not travelled much; they have been in the same area.

Member Blumer asked if the Lab is the only source of mercury.

Green said there is atmospheric deposition. The Lab does precipitation monitoring. We take quarterly samples and have seen results from nothing to 24.6 nanograms/liter.

Green then spoke about the Lab's Cultural resource tagging project. He said the history of the BNL site has been presented to Summer Sunday visitors and other organizations. The first video game, tennis for two, has been loaned to museums for displays on the history of video games.

Member Trotta said the Cradle of Aviation would be interested in borrowing it.

Member Peskin said the first video game was developed here by the Lab's Instrumentation Division before Atari.

Green said the effects of the 2015 deer cull are still evident and the Lab is planning for another cull in 2017. Population estimates are currently ~500 deer onsite, our target population is <250. We also continue to see a drop in numbers of ticks on-site which can be attributed to the 4-Poster systems as well as the decline in number of deer.

Green spoke about protecting pollinators and said that BNL has established no-mow areas and planted native grasses and flowering plants.

Member Kneitel asked if BNL has considered having beekeepers or beehives onsite.

Green said it has been considered, but our focus is on wild bees and pollination.

5. Agenda Setting

Nora Sundin said in November, we will have the Annual Groundwater Report and a presentation on the Large Synoptic Survey Telescope (LSST) by Anze Slozar, as well as the membership discussion.

6. Nanoscience Environment, Safety, and Health at the Center For Functional Nanomaterials, Chuck Black – Director, Center for Functional Nanomaterials and Wai-Lin Ng – Safety & Health Representative, Safety & Health Services Division

Chuck Black said the mission of the CFN is to advance nanoscience to impact society. He said it is one of five DOE Nanoscale Science Research Centers and is operated as a national user facility. The CFN is an essential resource for the community and carries out impactful internal nanoscience research. Users come from Universities, Government Laboratories, and Companies. The CFN operates productively, efficiently, and safely.

Member Sprintzen said he would like to hear more about the CFN.

Hodgin said we will put it on a future agenda.

Wai-Lin Ng said that the US DOE Order 456.1, "The Safe Handling of Unbound Engineered Nanoparticles", establishes requirements to ensure that the work involving unbound engineered nanoparticles occurs in a safe and secure manner that protects workers, the public, and the environment. BNL's SMBS Procedure, "Nanoscale Particle ESH", sets forth practices for

managing environmental, safety, and health (ESH) hazards associated with unbound engineered nanoscale particles (UNP). Ng explained that engineered nanoparticles are intentionally created and have one or more dimensions that are greater than 1 nanometer and less than 100 nm. Unbound engineered nanoparticles (UNP) are particles that are “loose” and can become airborne, such as powders or aerosols.

Nanomaterial work is performed in several facilities at the Lab and requires special care. BNL take a precautionary approach to handling nanomaterials that have unknown toxicity and reactivity. Research is being conducted by the National Institute for Occupational Safety and Health (NIOSH) to determine hazards of nanoparticles in the workplace. Required ESH controls for UNP work include: engineering controls, administrative controls, and personal protective equipment. Current data show that HEPA filtration is capable of removing more than 99.97% of particles down to the range of 2-4 nm.

Member Shea said HEPA filters don't capture all the particles and could be hazardous. She also asked where the waste goes.

Ng said we look at risks as well as exposure and HEPA filters are suitable for this application. The waste is packaged with other hazardous waste and taken to facilities designed to accept and incinerate it.

At BNL, a condensation particle counter is used to measure particle concentrations in the nano-size range to screen for suspect emissions and atypical conditions that warrant further investigation. Scientists are developing more sensitive and specific sampling techniques to evaluate exposures to nanoparticles in the workplace. Signs are posted at the entrance of locations or areas where nanomaterials are stored or used. All materials to be disposed of that have come in contact with nanomaterials must be disposed as hazardous waste. All work is planned, hazards are identified, and controls are put in place.

Member Blumer asked if there are any known health risks.

Ng said we have not gotten any reports of workers becoming ill. We try to ensure they are not exposed. There is very little data available.

Member Sprintzen said there are a lot of unknowns. Are there serious concerns regarding the unknown dangers? Will reliable standards be developed?

Ng said standards are slow in development, but there are recommendations.

Hodgin said please come back with updates as information becomes available.

7. Community Comment

Hodgin asked for comments from the community. There were none.

The meeting adjourned at 9:02 PM.

Next meeting: November 10, 2016

CAC Agenda Setting – November 12, 2015

TOPICS

Advances in Renewable Energy Technologies – 10

~~Update on Fukushima—9 (9/9/16)~~

NASA Research – 8

Holographic Principles of Quantum Mechanics – 7

Gamma Forest & Tour – 7

~~Medical Research at BNL—7 (April 2016)~~

~~DOE Funding & Research Priorities & Impact on BNL—7~~

Update & Advances on Battery Storage – 6

Discussion of Neutrino Projects at BNL – 6

Global Warming & Sea Level Rise – 6

~~Nanotechnology Research at BNL—5 (October 2016)~~

Capturing the COSMOS LSST – 4

Groundwater Monitoring Around New Facilities – 4

Advances in Solar Energy – residential & commercial – 4

Climate Science & White House Report (Steve Schwartz) – 4

Economic Impact of Lab – 3

Peak Oil (peak of World's ability to produce oil) - 3

Non-proliferation – 2

Progress on Strategic Plan Update (Discovery Park) – 1

Long-Term Vision for BNL – 1

More Lab History – 1

Status, Progress, Production Report on LI Solar Array – 1

NSLS-II Research – 1

				Jan	Feb Info session only	Mar	Apr	May	June	July No mtg	Aug No mtg	Sep	Oct	Nov	Dec
P = Present	2015	Affiliation		First Name	Last Name										
		ABCO – Civic (Garber - 04/02) (Bevington – 6/14) (Keenan-10/14)	Member	Ray	Keenan	P		P	P	P			P	P	
		(Madigan -10/10)	Alternate	Michael	Madigan	P				P					
		American Physical Society – Business & Labor	Member	Reinhart	Schuhmann	P		P		P	P		P	P	
		(Schuhmann 1/14, member 9/15)	Alternate	Donavan	Hall				P						
		Brookhaven Coalition of Chambers of Commerce – Bus & Labor (added 6/15)	Member	Ron	Trotta			P		P	P			P	
		Brookhaven Retired Employees Association- BNL (Peskin - 09/09)	Member	Arnie	Peskin	P		P		P	P		P	P	
		(Franz - 12/09)	Alternate	Eena-Mai	Franz	P			P		P			P	
		(Shapiro-1/13)	Alternate	Steve	Shapiro										
		Citizens Campaign for the Environment – Advocacy & Environment	Member	Adrienne	Esposito	P				P	P		P	P	
			Alternate												
		Colonial Woods Whispering Pines – Civic (Birben - 06/09) (O'Neal 01/15, removed 10/15)	Member												
		(Rehbein -11/10)	Alternate	Eric	Rehbein										
		Coram Civic Association (Ziems - 06/12)	Member	Paul	Ziems	P		P	P	P	P		P	P	
		(Meade – 06/12, Jim M 10/12, Turk 1/16)	Alternate	Rosa	Turk	P		P	P	P	P		P		
		East Yaphank Civic Association	Member	Michael	Giacomaro	P			P	P	P				
		(Feinman - 02/09 – 11/15)(Mack 11/15)	Alternate	Catherine	Mack			P	P	P			P		
		Emeritus (changed 3/8/12)	Member	Jean	Mannhaupt										
		Foundation for Economic Education – Ed, Sci, & Tech (5/14)(Martin – 10/14)	Member	Bruce	Martin			P	P	P			P		
		(Pratka – 10/14)	Alternate	Craig	Pratka			P	P	P	P			P	
		Friends of Brookhaven- BNL (Kaplan 07/01–11/15)(Bowerman 11/15)	Member	Biays	Bowerman	P		P	P	P	P		P	P	
		(Schwartz - 11/02) (Ocko added 11/15)	Alternate	Steve	Schwartz			P							
			Alternate2	Ben	Ocko										
		Huntington Breast Cancer Coalition – Health-Based Rep	Member	Mary Joan	Shea	P			P	P				P	
			Alternate	Scott	Carlin										
		Individual	Member	Jane	Corrarino	P							P		
		Individual	Member	Blumer	Karen					P				P	
		Individual	Alternate	Michael	Madigan	P		P	P	P			P		
		L.I. Pine Barrens Society – Advoc & Env	Member	Richard	Amper										
		(Murdocco - 04/11, deleted 6/12) (Muller added – 8/12)(Katie Rose Leonard added – 6/13)(Muether added – 5/15)	Alternate	Katie	Muether			P	P	P			P	P	
		L.I. Progressive Coalition – Advoc & Env	Member	David	Sprintzen	P		P		P	P		P	P	

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P = Present	2015	Affiliation	First Name	Last Name											
		Alternate													
		Member	Rita	Biss	P		P	P	P	P		P	P		
		Alternate	Bonita	Grandal	P		P	P	P	P		P	P		
		Member	Tracy	Adams											
		Alternate													
		Member	John	Sicignano			P		P						
		Alternate	Clara	McManus											
		Alternate	Joe	May											
		Member													
		Alternate	Margaret	Malloy			P			P			P		
		Member	Jean	Jordan-Sweet	P			P	P			P	P		
		Alternate	Jen	Bohon			P								
		Member	Wesley	Chattaway	P		P	P		P		P	P		
		Member	Al	Krupski			P		P			P			
		Alternate	John	Stype				P					P		
		Member	Richard	Murdocco											
		Alternate	Suzanne	Gillan				P				P			
		Alternate	Christine	Stafford								P			
		Member													
		Alternate													
		Member	James	Heil	P			P		P					
		Alternate													
		Member	Isidore	Doroski	P		P		P	P		P			
		Alternate	Janis	Rottkamp				P	P	P			P		
		Member	Linda	Rundlett	P		P		P	P		P			
		Alternate	Terri	Kneitel									P		