

**Community Advisory Council
October 11, 2018
Action Items/Notes**

Final

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Research for Clean Energy
5. Agenda Setting
6. Per- and Polyfluoroalkyl substances (PFAS)
7. Community Comment

1. Attendance

Members/Alternates Present: See Attached Sheets.

Others Present: J. Anderson, D. Bauer, J. Carter, M. Dikeakos, B. Dorsch, D. Feldman, D. Gibbs, J. Granzen, R. Gordon, S. Hartzell, R. Howe, B. Jankauskas, A. Juchatz, D. Manning, G. Mattson, R. McKay, J. Mollin, E. Olmsted, A. Ozelis, V. Racaniello, J. Remien, K. Schwager, N. Sundin, R. Tribble

2. Correspondence and Handouts

Items numbered one and two were e-mailed to Members on October 4, 2018. Items numbered three through six were available as handouts at the meeting.

1. Draft agenda for October 11, 2018
2. Draft notes from the June 14, 2018 meeting
3. Copy of presentation: Energy Research at Brookhaven National Lab
4. Copy of presentation: Per- and Polyfluoroalkyl Substances (PFAS) in Groundwater at Brookhaven National Laboratory

3. Administrative Items

The meeting was called to order at 6:31 PM. Michael White, facilitator, welcomed everyone to the meeting. He reviewed the ground rules and draft agenda and those present introduced themselves.

Doon Gibbs, Laboratory Director, told the CAC that the DOE budget for FY19 has passed and includes a 5% increase to the Office of Science. Details are still coming in.

Approval of Minutes

The June notes were approved as written with none opposed and five abstentions.

4. Energy Research at Brookhaven National Lab, Jim Misewich – Associate Laboratory Direction, Energy and Photon Sciences Directorate

Jim Misewich gave the CAC an overview of the Energy and Photon Sciences Directorate at the Lab. He spoke about the DOE energy sciences mission and said the focus is on materials for energy systems. He said the NSLS-II is a world leading synchrotron x-ray facility which has a strong and productive user program. He said in the last three years, it has become possible to obtain atomic resolution with cryo-EM for the first time. He said that at the CFN, researchers develop record-breaking, first of their kind instruments for nanoscience and spoke about “invisible glass”. He spoke about advanced fuel cell electrocatalysts and quantum materials and explained BNL’s goals and approach to energy storage. Misewich spoke about the joint collaboration between Stony Brook and BNL and Offshore wind R&D on Long Island. He said BNL has helped to increase the efficiency of heating systems in the northeast since the late 1970’s. He said BNL grid research is focused on NYS challenges.

Member Stype asked if the infrastructure at the Laboratory is capable of accepting new energy sources.

Misewich said we are looking at those problems. We know we have to upgrade the system and are looking at models to determine what we need to do.

Member Madigan asked if the microgrid is a viable option.

Misewich said that is a hot topic right now. Independent islands or microgrids instead of a large grid can work great, but there are some issues. The supply and demand have to be matched. In some areas they can function well.

5. Agenda Setting

Nora Sundin, liaison to the CAC, said next month there will be a presentation on the Site Environmental Report.

6. Per- and Polyfluoroalkyl Substances (PFAS) in Groundwater at Brookhaven National Laboratory, Douglas Paquette – Groundwater Protection Group, Environmental Protection Division

Doug Paquette explained what per- and polyfluoroalkyl substances (PFAS) are and spoke about their detection and characterization on the BNL site. He explained that PFAS are a diverse group of compounds that are resistant to heat, water and oil. They have been used in firefighting foam since the 1960s. They are also used in Teflon-coated cookware, stain-resistant carpets, fast-food wrappers and other paper products, and water-resistant textiles.

PFAS contamination is an emerging issue internationally and can persist in soils and groundwater for long periods of time with potential health effects. In drinking water, the current focus is on six PFAS compounds. PFOS/PFOA production in the US was phased out starting in the early 2000s due to environmental and health concerns and in 2016, the EPA established a Lifetime Health Advisory Level of 70 ng/L for two of the compounds PFOS/PFOA. The primary route of entry appears to be ingestion of contaminated water, food or dust. It has a very long biological half-life and it is estimated to be present in the blood of about 95% of the general US population.

Areas on LI where firefighting foam was used are; airports, regional fire training facilities, and possibly local firehouses/substations. Contaminated water can be treated effectively by using granular activated carbon filters.

Groundwater at BNL was first tested for PFAS in 2017 and was detected in three of BNL’s five active water supply wells. Routine testing for PFAS was added to the potable water monitoring program in 2018. Based on review of available records and interviews with current long-term

firefighters and retirees, eight locations where foam was stored or released have been identified.

In May 2018, as Phase one of the characterization process, seven temporary wells were installed to determine the distribution and concentrations of PFAS within the source water areas of the supply wells to determine whether PFAS concentrations could impact supply well operations. We are currently conducting Phase two of the characterization effort which is focusing on evaluating PFAS in the groundwater at the foam release sites. We expect that this effort will be completed by late October. As part of the third phase, BNL will propose sampling on-site groundwater treatment systems and extraction wells, Sewage Treatment Plant (STP) effluent and monitoring wells downgradient of the two landfills and the STP.

In coordination with SCDHS, samples were collected for PFAS analyses during routine annual sampling of five private wells south of BNL that were not connected to public water in the DOE-designated hook-up area. DOE/BSA are discussing with SCDHS a request to include about 97 recently identified properties that may have private wells. Problems are that Teflon plumbing components may complicate testing giving false positives and there are other potential off-site sources.

Although PFOS/PFOA levels in drinking water are below the current health advisory level, BNL will proactively refurbish and return to service the carbon filters that were previously installed at potable supply wells 10 and 11. NYS drinking water council was commissioned to recommend drinking water standards for PFAS. The final standards could have a significant impact on future actions and requirements.

Member Giacomaro asked if PFAS stay in the soil. Will you test to see where it has travelled?

Paquette said it does tend to bind to the soil, however it does eventually get into the ground water. We plan to continue testing and are putting together another characterization plan. We will work with the regulatory agencies for their input and then implement the plan.

Member Shuhmann asked if there is a plan to remove the contaminated soil.

Paquette said that is a challenge. We will characterize the soil and determine what to do next. There is no easy answer. Right now, we do not have a cleanup standard for soil and we do not have a drinking water standard. Areas where we have detected high levels of PFAS in the groundwater will need to be characterized for PFAS as well.

Member Sicignano asked if BNL has a list of all chemicals used on-site in the past to look at their potential impacts.

Paquette said we have a chemical management system in place now, but it has not always been so.

Member Esposito said up until a few years ago, no one was testing for this chemical. It wasn't even on the radar.

Jason Remien said this is an emerging contaminant of concern. Every five years the EPA develops a new list of chemicals to be tested for in drinking water. There is an ongoing effort to identify contaminants.

Member Esposito expressed a concern that she gets concerned when PFAS contamination can be blamed on multiple factors including Teflon tape. She said levels detected in groundwater samples have been linked back to fire foams. If you look at the picture you have, you can see

that there were releases. I expect more from BNL. If you need to check 97 private wells, you should do that. The good news is it can be easily filtered with carbon filtration.

Member Giacomaro asked if Suffolk County Water Authority does the public water testing.

Member Esposito said not for this. They don't have the technology. We are finding this contaminant far from the source, so it's hard to pinpoint where it is. That makes it even more challenging to do a complete characterization, so you should err on the side of caution.

Paquette said we are using a groundwater model. We have a timeframe when the foam was used, and we are trying to determine where it might have travelled. The pump and treat systems onsite are complicating this analysis because we were possibly pumping PFAS contaminated water without knowing it.

Bill Dorsch said our plan is to start onsite and march our way downgradient testing along the way, rather than jump off-site. We know where the source areas are and the rate of groundwater flow. Our two biggest PFAS source areas are the current fire department and former fire departments. They are both very close to supply wells, which have been active dating back to the time the PFAS contaminated foam was put on the ground. So, it is very possible that the PFAS never got too far onsite. In addition, we have a line of remediation wells on the south boundary. It's possible it never got beyond the site boundary. In addition, by the time it potentially would have reached the site boundary, the contamination would be so deep it would not be picked up by a private well. We fully intend to characterize the extent of the plume.

Member Schuhmann said, if the supply wells were picking it up, perhaps you should be looking at the people that were drinking that water.

Paquette said that is a concern.

Member Esposito said there is no doubt that the States need to adopt drinking water standard and not wait for the Federal government. I think it's better for the Lab to test the private wells now, rather than wait.

Michael White, facilitator, asked when BNL will have more information to present.

Paquette said at the end of the year, or in January.

Presentation ended at 9:01PM

Member Esposito addressed the CAC members and said her organization cannot support this unless the Lab is willing to test the private wells south of the Lab. The CAC exists to comment and evaluate environmental cleanup and remediation at the Lab. I am unhappy. I will draft a letter to the Lab and circulate to the CAC for support requesting the private wells be tested.

Member Keenan said he agrees, he just doesn't know if it is the Lab's responsibility to do it.

Member Turk asked who will take care of the remediation if they are contaminated.

Member Esposito said first we will find out if they are contaminated and then make a plan.

Member Mack said you can't go out and test and then say we don't have a solution.

Member Esposito said carbon filters can take it out.

White asked what the Lab would be responsible for.

Doug Feldman, Suffolk County Dept. Health Services, said the SCDHS would mail a letter with a packet of information to the homeowners and then go knock on doors and collect the samples if the homeowner gives their consent. The Lab would pay for the testing. Once the analysis comes back we would contact the homeowner with the results.

Member Esposito said I will draft a letter and send it out. If there is consensus, we will send it on.

7. Community Comment

There was no community comment.

The meeting adjourned at 9:13 PM.

Next meeting: November 8, 2018

CAC Agenda Setting Exercise – March 8, 2018

TOPICS

Solar Research/BNL Solar Farm	14	
BNL Expenditures, Priorities, Function	10	(June 2018)
BNL Business Connectivity – Doing business with BNL	10	(June 2018)
Energy Production Innovation (open to public forum at BNL)	9	
Biofuels	9	
NYS Power Grid	8	
Medical Radioisotopes	5	
Brookhaven Women in Science (BWIS)	5	
Holographic Principles of Quantum Mechanics	4	
Research related to Cancer cures	4	
Top Ten Scientific Discoveries	4	
Update on Prion Research	3	

				Jan	Feb	Mar	Apr No mtg.	May	June	July No mtg.	Aug No mtg.	Sep No mtg.	Oct	Nov	Dec
P = Present	2018	Affiliation	First Name	Last Name											
		ABCO – Civic (Garber - 04/02) (Bevington – 6/14) (Keenan-10/14)	Member	Ray	Keenan			P	P				P		
		(Madigan -10/10)	Alternate	Michael	Madigan	P									
		American Physical Society – Business & Labor	Member	Reinhart	Schuhmann			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						
		Brookhaven Retired Employees Association- BNL (Peskin - 09/09)(Franz 1/17)	Member	Eena-Mai	Franz	P	P	P		P	P			P	
		(Franz - 12/09)(Israel 1/17)	Alternate	Mark	Israel	P				P					
		(Shapiro-1/13)	Alternate	Steve	Shapiro										
		Citizens Campaign for the Environment – Advocacy & Environment	Member	Adrienne	Esposito	P	P	P		P	P			P	
		(Somma 11/16)	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	
		(Meade – 06/12, Jim M 10/12, Turk 1/16)	Alternate	Rosa	Turk			P	P		P			P	
		East Yaphank Civic Association	Member	Michael	Giacomaro	P	P	P		P				P	
		(Feinman - 02/09 – 11/15)(Mack 11/15)	Alternate	Catherine	Mack			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	
		(Pratka – 10/14)	Alternate	Craig	Pratka	P				P					
		Friends of Brookhaven- BNL (Kaplan 07/01–11/15)(Bowerman 11/15)	Member	Biays	Bowerman	P		P		P	P			P	
		(Schwartz - 11/02) (Ocko added 11/15)	Alternate	Steve	Schwartz			P		P					
			Alternate2	Ben	Ocko										
		Huntington Breast Cancer Coalition – Health-Based Rep	Member	Mary Joan	Shea			P							
			Alternate	Scott	Carlin										
		Individual	Member	Jane	Corrarino										
		Individual	Member	Karen	Blumer					P					
		Individual	Alternate	Michael	Madigan			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					
		L.I. Progressive Coalition – Advoc & Env	Member	David	Sprintzen	P	P			P	P			P	

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P = Present	2018	Affiliation	First Name	Last Name											
			Alternate												
		Lake Panamoka Civic Association (Biss - 04/02)(Staddon 10/17)	Member	Richard	Staddon				P						
		(Grandal - 10/10)	Alternate	Bonita	Grandal										
		Longwood Central School Dist. – Ed, Sci, & Tech (Castro -06/09)(Adams 9/15)	Member	Tracy	Adams										
		(Gerstenlauer removed & Sterne added 5/14 removed 9/15)(Infranco1/17)	Alternate	Paul	Infranco										
		Mastic Park Civic Association (Sicignano – 6/12)	Member	John	Sicignano		P	P		P			P		
			Alternate	Clara	McManus										
			Alternate	Joe	May										
		Middle Island Civic Association (Filler 2/17)	Member	Martin	Filler	P	P	P		P	P			P	
		(Nowak 01/15 – 5/15)(Malloy 9/15)	Alternate	Margaret	Malloy										
		NSLS-II User Committee – BNL	Member	Jean	Jordan-Sweet	P	P	P		P	P				
		(Ravel -02/11-9/15)(Bohon added 11/15)	Alternate	Jen	Bohon									P	
		Ridge Civic Association (Henagan removed 9/15)(Chattaway added 10/15)	Member	Wesley	Chattaway	P	P			P	P			P	
		Suffolk County Legislature 1st Dist. - Government (added 6/15)	Member	Al	Krupski			P		P					
			Alternate	John	Stype	P								P	
		Teachers Federal Credit Union – Bus & Labor (Murdocco 3/15) (Stafford 1/18)	Member	Christine	Stafford	P	P			P	P				
			Alternate												
		Town of Brookhaven (Graves – 06/06) (removed 1/2015)	Member												
			Alternate												
		Town of Brookhaven, Senior Citizens Office - Government	Member	James	Heil	P	P			P					
			Alternate												
		Town of Riverhead - Government (Doroski - 04/11)	Member	Isidore	Doroski	P		P			P			P	
		(Hulme - 04/11 - 4/14)(Janis Rottkamp 04/16)	Alternate	Janis	Rottkamp					P					
		Wading River Civic Association (Rundlett 09/16)(Kneitel 02/17)	Member	Terri	Kneitel	P				P					
		(Bail and Guthy removed 11/2016)	Alternate	Linda	Rundlett		P								