

**Community Advisory Council
February 13, 2017
Action Items/Notes**

Final

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Site Sustainability Plan
5. Accelerator Complex Cooling Water Line Leak and Repair
6. Community Comment

1. Attendance

Members/Alternates Present: See Attached Sheets.

Others Present: J. Anderson, J. Carter, F. Crescenzo, P. Genzer, D. Gibbs, T. Green, E. Lessard, G. Mattson, R. McKay, A. Ozelis, D. Paquette, J. Remien, N. Sundin, M. Toscano, R. Tribble, A. Troutman, M. Woolley

2. Correspondence and Handouts

Items numbered one and two were e-mailed to Members on February 2, 2017.

1. Draft agenda for February 9, 2017
2. Draft notes from the January 12 meeting

3. Administrative Items

The February meeting was postponed from February 9 to February 13 due to a snow storm.

The meeting was called to order at 6:33pm. Reed Hodgkin, facilitator, welcomed everyone to the meeting. He reviewed the ground rules and draft agenda and those present introduced themselves.

Hodgkin explained that the presentation on wildfire protection that was on the draft agenda has been postponed to next month.

Member Doroski said that he has information on the holographic principles of quantum mechanics to pass around for anyone interested. He also brought in the presentation on the CAC that he gave to the Town of Riverhead. It is on a flash drive if anyone would like to make a copy of it because the file is too large to email.

Approval of Minutes

The January notes were approved as written with none opposed and two abstentions.

Agenda Setting

Nora Sundin said that next month, Judy Jacobsen will give her presentation on the Community Wildfire Protection Plan and there will be another environmental update on deer management.

4. Site Sustainability Plan – Action Item Response – BNL Historical Energy Use Data, Mark Toscano – Manager, Energy Management - Energy and Utilities Division

Mark Toscano responded to the CAC's question from the January meeting regarding energy use at BNL. He said the Lab's energy use is about 281,000,000 kWh/year. The average homeowner uses about 9000 kWh/year. Most of the energy is expended at BNL's High Energy Mission Specific Facilities (HEMSF), which include the Collider Accelerator Dept., the National Synchrotron Light Source I & II, and the Center for Functional Nanomaterials. He explained that BNL continues to develop plans to reduce/offset their greenhouse gas emissions. More energy is used during the winter months because the Lab attempts to conserve energy during summer months so some of the larger machines only run during the winter. He said natural gas use is down about 40% from 20 years ago.

Member Doroski said he thought energy use at the Lab was down.

Toscano said fuel use is down.

5. Accelerator Complex Cooling Water Line Leak and Repair – Jason Remien, Manager – Environmental Protection Division

Jason Remien explained that an underground section of a water system used to cool about 60 beam line magnets for the RHIC experiment developed a slow leak. Cooling water contains low levels of tritium. There were no impacts to workers or public health and BNL has made the necessary immediate repairs and is designing a new above ground pipeline for long-term use.

The leak was first noticed on October 15 and was isolated to a welded section of a 35 foot underground supply pipe between the pump house and the tunnel on January 19. It was determined that about 4 gallons of water per day was leaking and an estimated 375 gallons in total leaked during that period of time. New piping was installed and tested between January 28 and February 3rd. On February 10th, the cooling water system was placed back into service.

Remien said that tritium leaches into the cooling water from the walls of activated cooling water piping in magnets, not by direct activation. Repeated flushing does not eliminate the tritium. Tritium concentrations in the cooling water are about 5% of the 20,000 pCi/L drinking water standards. To date, tritium has not been detected in a nearby monitoring well. Leaked water would have to migrate through about 30 feet of soil to reach the groundwater table. The distance to the monitoring well from the buried pipe is about 70 – 90 feet. Groundwater flows at about .75 feet per day, so, it was determined that the leaked water would migrate to the well in 3-4 months. Water leaked in October might start reaching the monitoring well by late January 2017. Dispersion effects in the aquifer will reduce tritium concentrations and it is expected to be near the typical detection limit of 350 pCi/L by the time it reaches the well. The closest BNL drinking water supply well is about 2400 feet from the leak area.

The most recent sample taken from the permanent monitoring well was on 1/27/17 and there was no tritium detected. This well will continue to be sampled on a monthly basis. In addition, four temporary monitoring wells were installed between January 30th and February 2nd. At each location, three samples were taken at four foot intervals from the water table to 12 feet below the water table. No tritium was detected in any of the samples.

The short term solution was to install five-inch diameter stainless steel pipes inside the existing six-inch diameter aluminum supply and return pipes and pressure test to 300 psi before reconnecting the system. The long term solution is to re-route the supply and return pipes above ground and is currently being designed. This will consist of double wall piping and leak detection for all outdoor sections. After the design is approved, installation will begin, with final connections completed mid-June.

The accelerator complex has 46 closed-loop cooling water systems that are closely monitored for tritium and water makeup. Nine systems have tritium concentrations above DWS, all of which are above ground, indoors, and registered with Suffolk County.

After the AtR cooling system is modified, only one system within the accelerator complex will be single walled and underground. This system has tritium concentration of 2700 pCi/L with no history of leaking. The Lab will be looking for this system to be re-routed above ground in double-wall piping or have equivalent protection.

Member Filler asked if this has happened before.

Remien said no.

Ed Lessard said there have been leaks in the water pipes inside the accelerator before where it was visible. This occurred outside in the soil.

Member Keenan said with the groundwater flow, you might not have seen it yet in your samples.

Remien said we expected to see it by now due to the timeframe.

Member Keenan said if it shows up, you can backtrack to see when the leak started.

Bob Tribble said the supply line runs 170 psi and before October 15, there was no pressure, so it couldn't have happened earlier than mid-October.

Member Keenan said it could have started later.

Remien said that is why we will continue to test.

Member Heil asked if the leak occurred in the berm and if that could affect the speed of flow.

Remien said yes, that is possible. The concentration could be so low that it doesn't get picked up.

Member Keenan asked what the total capacity of the system is.

Remien said 1000 gallons.

Member Keenan said 375 gallons out of 1000 gallons seems too significant a loss to not be noticed earlier.

Lessard said the way the system works; it maintains pressure until it loses 25 gallons of cooling water. The system normally weeps and there is some evaporation. It makes up lost water in chunks rather than a little at a time, so it wasn't noticed immediately that a larger amount of water was being lost.

Remien said, once it was realized, we starting looking for the leak. 2,900 feet of above ground piping was inspected before it was realized that the leak was in the 35 foot underground area.

Member Jordan-Sweet asked how the new stainless steel is joined to the existing aluminum pipes.

Lessard said a rubber seal is used to avoid a chemical reaction between the metals.

Remien said we are very sensitive to leaks and we want to be transparent. That's why we are talking about it. We have notified the regulators and are making repairs as soon as possible even though it is low level.

Member Filler asked if the pipe will be above ground now and if so, can it freeze.

Remien said it will be above ground and it will also be double-walled and heated to keep it from freezing.

Member Heil asked if tritium can be measured in soil.

Lessard said no.

6. Community Comment

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

The meeting adjourned at 7:32 PM.

Next meeting: March 9, 2017

CAC Agenda Setting – December 8, 2016

TOPICS

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Update on Advances in Battery Storage	11
Advances in Renewable Energy Technologies	10
Global Warming & Sea Level Rise	9
History of Environmental Movement on LI	8
Steve Schwartz-Energy/Climate Presentation	7
Holographic Principles of Quantum Physics	7
BNL/Camp Upton History (Anniversary)	6
NYS Electric Power Grid	6
Alistair Rogers - Terrestrial Ecosystems	6
The LSST & Mapping the Galaxy	6
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Medical Research at BNL	4
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Sea Level Rise & Earthquakes	3
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Status & Progress of Solar Farm	2
Lab Research on Solar Energy	2
Discovery Park Update	2
Chem-Trails	2
Laboratory Ten-Year Plan	1

P = Present	2015	Affiliation		First Name	Last Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
		ABCO – Civic (Garber - 04/02) (Bevington – 6/14) (Keenan-10/14)	Member	Ray	Keenan	P	P										
		(Madigan -10/10)	Alternate	Michael	Madigan	P											
		American Physical Society – Business & Labor	Member	Reinhart	Schuhmann	P	P										
		(Schuhmann 1/14, member 9/15)	Alternate	Donavan	Hall												
		Brookhaven Coalition of Chambers of Commerce – Bus & Labor (added 6/15)	Member	Ron	Trotta												
		Brookhaven Retired Employees Association- BNL (Peskin - 09/09)(Franz 1/17)	Member	Eena-Mai	Franz	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											
		(Somma 11/16)	Alternate	Harry	Somma	P	P										
		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										
		(Meade – 06/12, Jim M 10/12, Turk 1/16)	Alternate	Rosa	Turk	P	P										
		East Yaphank Civic Association	Member	Michael	Giacomaro												
		(Feinman - 02/09 – 11/15)(Mack 11/15)	Alternate	Catherine	Mack												
		Emeritus (changed 3/8/12)	Member	Jean	Mannhaupt												
		Foundation for Economic Education – Ed, Sci, & Tech (5/14)(Martin – 10/14)	Member	Bruce	Martin												
		(Pratka – 10/14)	Alternate	Craig	Pratka	P	P										
		Friends of Brookhaven- BNL (Kaplan 07/01–11/15)(Bowerman 11/15)	Member	Biays	Bowerman		P										
		(Schwartz - 11/02) (Ocko added 11/15)	Alternate	Steve	Schwartz												
			Alternate2	Ben	Ocko												
		Huntington Breast Cancer Coalition – Health-Based Rep	Member	Mary Joan	Shea												
			Alternate	Scott	Carlin												
		Individual	Member	Jane	Corrarino												
		Individual	Member	Karen	Blumer												
		Individual	Alternate	Michael	Madigan												
		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											
		L.I. Progressive Coalition – Advoc & Env	Member	David	Sprintzen	P	P										
			Alternate														

P = Present	2015	Affiliation		First Name	Last Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
		Lake Panamoka Civic Association (Biss - 04/02)	Member	Rita	Biss	P											
		(Grandal - 10/10)	Alternate	Bonita	Grandal	P											
		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											
			Alternate	Clara	McManus												
			Alternate	Joe	May												
		Middle Island Civic Association (Filler 2/17)	Member	Martin	Filler		P										
		(Nowak 01/15 – 5/15)(Malloy 9/15)	Alternate	Margaret	Malloy												
		NSLS-II User Committee – BNL	Member	Jean	Jordan-Sweet		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										
		Suffolk County Legislature 1st Dist. - Government (added 6/15)	Member	Al	Krupski												
			Alternate	John	Stype	P											
		Teachers Federal Credit Union – Bus & Labor (Murdocco 3/15)	Member	Richard	Murdocco												
			Alternate	Christine	Stafford	P											
		Town of Brookhaven (Graves – 06/06)-(removed 1/2015)	Member														
			Alternate														
		Town of Brookhaven, Senior Citizens Office - Government	Member	James	Heil		P										
			Alternate														
		Town of Riverhead - Government (Doroski - 04/11)	Member	Isidore	Doroski	P	P										
		(Hulme - 04/11 - 4/14)(Janis Rottkamp 04/16)	Alternate	Janis	Rottkamp												
		Wading River Civic Association (Rundlett 09/16)(Kneitel 02/17)	Member	Terri	Kneitel	P	P										
		(Bail and Guthy removed 11/2016)	Alternate	Linda	Rundlett												