

**Community Advisory Council  
November 10, 2022  
Action Items/Notes**

*Final*

*Note: This meeting was held virtually. A video recording of the Zoom meeting is available.*

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Groundwater Cleanup Update
5. BNL Site Sustainability Status and Path Forward to Carbon Pollution-Free Electricity
6. Agenda Setting
7. Membership
8. Community Comment

### **1. Attendance**

Members/Alternates Present: See Attached Sheets.

Others Present: J. Anderson, D. Bauer, T. Daniels, B. Dorsch, A. Engel, C. Fracalvieri, S. Gonzalez, K. Green, R. Hodgins, R. Howe, R. McKay, M. McQueen, D. Paquette, D. Pocze, V. Racaniello, A. Rapiejko, J. Remien, R. Tribble, J. Wanless, D. Yuan

### **2. Correspondence and Handouts**

Items numbered one and two were e-mailed to Members on November 2, 2022. Items numbered three and four were e-mailed to Members on November 10, 2022.

1. Draft agenda for November 2022 meeting
2. Draft notes from the October 2022 meeting
3. Copy of presentation: Groundwater update
4. Copy of presentation: BNL Site Sustainability Status and Path Forward to Carbon Pollution-Free Electricity

### **3. Administrative Items**

The meeting was called to order at 6:31 p.m. Reed Hodgins, facilitator, welcomed everyone to the Zoom virtual meeting. He reviewed the ground rules and draft agenda.

Robert Tribble, Deputy Director for Science and Technology, said this has been a banner year for the Lab for new projects and funding. He said this is his last CAC meeting since he will be stepping down from his role at the end of this calendar year. He recognized the important work of the CAC.

### **Approval of minutes:**

The October 2022 CAC action items and notes were approved as written with none opposed and six abstentions.

#### **4. Groundwater Cleanup Update – Bill Dorsch, Groundwater Protection Group, Environmental Protection Division**

Bill Dorsch spoke about the status of the groundwater plumes and treatment systems; the performance, progress, and recommendations. He gave the CAC an overview of the remediation systems and spoke about the Per- and Polyfluoroalkyl Substances (PFAS) time critical removal action (TCRA) and OU X remedial investigation/feasibility study (RI/FS) work plan status. He noted that most of the information presented is contained in volume two of the 2021 Site Environmental Report and cited the website where it is posted.

Member Esposito asked how long the Lab waits before decommissioning the systems.

Dorsch explained that each system has an exit strategy documented in the O&M manual for that system and that once the extraction wells are placed in standby they continue to be monitored quarterly (in the case of VOC systems). He said the average shutdown period is between two and five years.

Member Esposito asked if it costs anything to keep them there on standby mode so in case something happens you don't have to reinstall them.

Dorsch said when in standby mode the wells are still sampled at a quarterly frequency which creates a cost in addition to electric, heating buildings etc, but it is minimal.

Member Esposito asked what level the Volatile Organic Compound (VOC) plumes are being treated to.

Dorsch said that the capture goal for the Airport extraction and monitoring wells is 20 µg/L.

Member Esposito asked since the wells are hovering around about 100 µg/L with no decline, could there still be a source area.

Dorsch said in 2010 when the soil was removed, the water table was at a high point. Since that time, it has dropped off. So, there was probably some contamination that was below the water table at the time and not reachable when the soil was removed. Therefore, there is probably some residual PCE in the soils remaining. Recent data showed TVOC concentrations in this well dropping down to 49 µg/L and the Lab will continue to monitor.

Member Esposito asked, if the groundwater rises again, will the same issue occur again.

Dorsch said that is possible. In pump and treat remediation, it is always the last 5-10 percent of plume cleanup that is the most difficult.

Member Sprintzen asked why the OUV EDB plume stays concentrated and does not dissipate. He asked if it has to do with the chemical composition.

Dorsch noted that some dispersion and attenuation of the plume concentrations has been observed over the years tracking the plume as it migrated off of the site. He said this is a very narrow plume that has depth and is moving in a linear fashion through permeable sands and therefore remains as a coherent mass. This is typical for plumes on Long Island.

Member Esposito asked if the Lab is still actively remediating the slugs of contamination.

Dorsch said no, that natural attenuation is being employed. The actual concentrations we have been observing are lower than the model predictions to this point. If the concentrations at any point are significantly higher than predicted, the Lab will re-evaluate. Right now, concentrations are well below levels that would indicate a need for action.

Member Esposito asked if this Sr-90 plume has ever had active remediation.

Dorsch said no, however there was a VOC plume co-located in this area that was remediated by two extraction wells on the boundary.

Member Schuhmann asked how much natural attenuation is caused by radioactive half-life and how much is caused by dilution effects.

Dorsch said it is a mixture of both. He noted the Sr-90 half-life is 29 years and the plume is moving very slowly and undergoing dispersion.

Member Jordan Sweet asked if you can use the same extraction wells for VOC and PFAS, that implies the heights are the same – is this true.

Dorsch said they are not extracted together. It just happens that they are traveling along the same plume path, but at different depths. He then went on to discuss the depths of the Sr-90 and PFAS plumes and the fact that the intent of the PFAS extraction well is not to remediate Sr-90. He explained that the Lab wants to monitor to ensure that Sr-90 is not captured by the PFAS extraction well above the 8 pCi/L drinking water standard.

Member Esposito asked if you can treat Sr-90 with the same monitoring well.

Dorsch said these extraction wells will not treat Sr-90 and that was not their purpose.

Member Freeman asked with the migration and comingling, are there new chemical profiles being created.

Dorsch said most are at different depths so there is no interaction between them.

Member Esposito said the decision to allow natural attenuation for Sr-90 was made a long time ago, but it was thought that the contaminant would not leave the BNL site boundary above drinking water standards. She said that 25 pCi/L is unacceptable. The expectation is that there has to be active remediation if it is above 8 pCi/L

Dorsch said the decision was made years ago with the regulators, but the Lab will continue to closely monitor the plume and would consider doing something else if Sr-90 appears to be threatening the site boundary above drinking water standards.

Member Esposito asked if the challenge with the filters having to be replaced more often was resolved.

Dorsch said the resin filters that are used for Sr-90 worked out well.

Bob Howe said that a pilot study was done originally, and the concern was if the systems run at a higher rate of flow the filters would need to be replaced more often. However, the ones currently being used operate at a lower rate of flow.

Member Esposito said NYS is looking at four more PFAS chemicals and there are another 27 next year in waiting. She asked if the Lab will be able to pivot the remediation plans as more drinking water standards come online.

Doug Paquette said the Lab is tracking that carefully. PFOA and PFAS are longer chain chemicals and carbon filters will take care of them. However, some of the newer chemicals have shorter chains and the Lab will need to be watching for breakthrough times. The carbon filters may not be as efficient for removing those over time.

Dorsch said those four new PFAS compounds are actually being analyzed now and the Lab is keeping tabs on them.

Paquette said the Lab is testing for about 30 different PFAS chemicals and will be expanding that to a list of about 40 once this new analytical method becomes available.

**5. BNL Site Sustainability Status and Path Forward to Carbon Pollution-Free Electricity – Tom Daniels, Associate Laboratory Director – Facilities and Operations, Debbie Bauer - Environmental Protection Division, Dennis Yuan - Modernization Project Office**

Tom Daniels spoke about BNL's site sustainability plan and the path to carbon pollution - free energy.

Dennis Yuan talked about the science user support center (SUSC) sustainable design.

Member Israel asked if the Lab considered using geothermal in any of the new buildings.

Yuan said that was looked into in the beginning, but based on the soil composition onsite, it would not work efficiently.

Member Jordan Sweet asked about how the open floor plan and the noises associated with that will affect staff working in the building.

Yuan said the ceiling panels are acoustically treated.

Member Sprintzen asked about Leeds evaluation.

Yuan said the DOE guidelines require that the Lab provide a highly sustainable building where the occupants are comfortable.

Member Sprintzen asked about the use of solar panels.

Daniels said using life cycle cost analysis, the installation of solar panels did not pan out for these buildings.

Member Ziems asked about electric vehicle charging stations. He asked where the power to these stations would come from.

Daniels said it will come right off the grid.

Debbie Bauer spoke about purchasing and waste management.

Member Freeman asked if bamboo can be used somewhere in the buildings.

Yuan said the buildings are predominantly steel and concrete. None of the finishes implement bamboo.

Member Freeman asked if new technology is being taken into consideration for battery storage.

Daniels said that will be a third party under contract with DOE. That project is in its infancy, so the technical specifics are not available yet.

Hodgin asked for more information when it becomes available.

Member Jordan Sweet asked where the integrated facility for all the crafts will be sited. She asked if it would make sense to locate it near the railroad.

Daniels said right now it is proposed to be sited on Princeton across from the truck scale. The rail station will not be on Lab property.

## **6. Agenda Setting**

Amy Engel, Stakeholder Relations office, said that in the Spring the Lab will be presenting the usual environmental updates, including PFAS. In April there will be an update on natural resource management. She said if CAC members have any ideas between now and next March, please email her so the Lab can have time to work on them. There will be new Lab leadership in 2023 so we will be inviting those leaders to introduce themselves to the CAC. There will also be updates on the EIC.

## **7. Membership**

Hodgin announced to the CAC that Coram Civic association will be retiring from membership next year.

Member Ziems, Coram Civic, said that he enjoyed his time on the CAC and learned a lot. He said maybe in the future Coram Civic will be interested in becoming a member again. He thanked everyone.

Hodgin said the CAC and the Laboratory appreciates everything Member Ziems has done for the group.

Hodgin said Friends of Brookhaven is also retiring from membership on the CAC. None of those members were available tonight, but they did send a statement to be read from them.

Statement from Friends of Brookhaven:

The organization Friends of Brookhaven was founded in the late 90's, when the lab was the subject of much concern in the local community, to provide an unofficial response (distinct from management response) dealing with the accomplishments of the lab and its importance in the community, and also providing a factual response to many unfounded statements about the environmental effects that were being attributed to the contamination of groundwater associated with the spent fuel rod cooling tank.

Now some twenty plus years later the situation is different, with the important role of BNL being widely recognized in the community, in large part due to the CAC and its members.

As a result, there is really no longer a need for Friends of Brookhaven as an organization, the main activity of the organization in recent years being its participation in the CAC through a few remaining active members.

Given this situation we would respectfully request that we might withdraw from membership in the CAC, but with thanks for CAC's continued warm welcome

to our organization, and with the confidence that BNL's important role in the community is now widely recognized and secure.

We wish the CAC well in its continued role in connecting BNL with its neighbors in Brookhaven Town, Suffolk County, and the broader Long Island Community.

The American Physical Society is also leaving the CAC. They have physically moved out of the area. However, their representative, Reinhardt Schuhmann, is still interested in participating in the CAC. He is a member of the Brookhaven Village Association, and that group is interested in membership. Since Coram Civic has left, there is an opening, so the BVA has been invited to apply for membership.

Schuhmann said the BVA is the oldest Civic association on Long Island and is located on the south shore of Long Island. This is a large organization with a several hundred members. They meet monthly and the meetings are open to the public. They are very interested in environmental issues

Hodgin said at the next meeting we will vote on the membership request from BVA.

#### Five Year Renewal Process

Hodgin said emails were sent out to groups needing to renew membership. The Lab asked for a statement of intent and has received responses from 16 member groups. The Lab expects to hear from the others soon and we will vote on those at the March meeting.

The 16 groups wishing to renew their five-year memberships are:

- Affiliated Brookhaven Civic Organization
- Brookhaven Coalition of Chambers
- Brookhaven Retired Employees Association
- Citizen's Campaign for the Environment
- Colonial Woods Whispering Pines
- East Yaphank Civic Association
- Foundation for Economic Education
- Long Island Pine Barrens
- Middle Island Civic Association
- Photon Sciences Users committee
- Suffolk County Legislature District 1
- Teachers Federal Credit Union
- Wading River Civic Association
- Emeritus – David Sprintzen
- Individual – Karen Blumer
- Individual - Jane Corrarino

Members were asked if discussion was needed for the reapplication for any member group.

Member Esposito asked if all of these organizations have met the attendance requirements.

Engel said everyone was checked to make sure they attended four out of the six meetings during the past year. She said sometimes an alternate member has attended instead of the main member.

Hodgin said last year the Lab reached out to groups that had not met the minimum attendance requirements.

Hodgin said if anyone feels discussion is needed or plans to vote no on any of these, please let us know either publicly or privately and we will move to a process of voting individually. If not, there will be one vote for the entire group of applicants.

No one requested additional discussion.

A vote was held and five-year renewal applications for all 16 groups were approved.

Jack Anderson, Deputy Director for Operations, thanked the CAC on behalf of the Lab for renewing memberships. He said this group is incredibly valuable to the Lab.

Hodgin said it would be nice to all get together in person in the Spring as COVID numbers decrease.

## **8. Community Comment**

There was no community comment.

The meeting adjourned at 9:22 PM.

Next meeting: March 9, 2023

<b>X = Present</b>	<b>2022</b>	<b>Affiliation</b>		<b>First Name</b>	<b>Last Name</b>	<b>Jan No mtg</b>	<b>Feb No mtg</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>June No mtg</b>	<b>July No mtg</b>	<b>Aug No mtg</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
		<b>ABCO – Civic</b>	Member	Ray	Keenan			X	X	X				X	X	X	
			Alternate	Michael	Madigan			X	X								
		<b>American Physical Society – Business &amp; Labor</b>	Member	Reinhardt	Schuhmann			X	X					X	X	X	
			Alternate														
		<b>Brookhaven Coalition of Chambers of Commerce – Business &amp; Labor</b>	Member	Ron	Trotta									X		X	
			Alternate	Carmine	Inserra											X	
		<b>Brookhaven Retired Employees Association- BNL Affiliation</b>	Member	Mark	Israel			X	X	X				X	X	X	
			Alternate	Eena-Mai	Franz												
			Alternate2	Steve	Shapiro												
		<b>Citizens Campaign for the Environment – Advocacy &amp; Environment</b>	Member	Adrienne	Esposito			X	X	X				X	X	X	
			Alternate														
		<b>Colonial Woods Whispering Pines – Civic</b>	Member	Jane	Koropsak			X	X						X	X	
			Alternate														
		<b>Coram Civic Association - Civic</b>	Member	Paul	Ziems			X	X	X				X	X	X	
			Alternate	Rosa	Turk			X	X	X					X		
		<b>East Yaphank Civic Association - Civic</b>	Member	Robert	Feinman			X	X	X				X		X	
			Alternate	Laura	Reid											X	
		<b>Emeritus</b>	Member	David	Sprintzen			X	X	X				X		X	
		<b>FOREST - Advocacy &amp; Environment</b>	Member	John	Pavacic				X	X					X	X	
			Alternate														
		<b>Foundation for Economic Education – Education, Science &amp; Technology</b>	Member	Bruce	Martin				X	X				X			
			Alternate	Craig	Pratka			X								X	
		<b>Friends of Brookhaven- BNL Affiliation</b>	Member	Biays	Bowerman				X	X				X			
			Alternate	Steve	Schwartz			X		X							
			Alternate2	Ben	Ocko												
		<b>Gordon Heights Civic Assoc. - Civic</b>	Member	James	Freeman									X	X	X	
			Alternate														
		<b>Individual</b>	Member	Jane	Corrarino			X		X						X	
		<b>Individual</b>	Member	Karen	Blumer			X	X	X				X	X	X	
		<b>Individual</b>	Alternate	Michael	Madigan									X	X	X	
		<b>L.I. Pine Barrens Society – Advocacy &amp; Environment</b>	Member	Richard	Amper												



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			Alternate	Andrew	Wong			X	X					X	X	X	
		<b>Longwood Central School Dist. – Education, Science &amp; Technology</b>	Member	Tracy	Adams			X									
			Alternate	Paul	Infranco												
		<b>Middle Island Civic Association – Civic</b>	Member	Martin	Filler			X	X	X				X	X	X	
			Alternate	Margaret	Malloy												
		<b>NSLS-II User Committee – BNL Affiliation</b>	Member	Jean	Jordan-Sweet			X	X					X		X	
			Alternate	Matthew	Whitaker												
		<b>Ridge Civic Association – Civic</b>	Member	Ken	Casanova					X				X		X	
		<b>Suffolk County Legislature 1<sup>st</sup> Dist. – Government</b>	Member	Al	Krupski			X		X					X		
			Alternate	John	Stype											X	
		<b>Teachers Federal Credit Union – Business &amp; Labor</b>	Member	Sandra	Santos-Keel			X									
			Alternate	Sandra	Young												
		<b>Town of Brookhaven, Senior Citizens Office – Government</b>	Member	James	Heil												
			Alternate														
		<b>Town of Riverhead - Government</b>	Member					X	X	X				X			
			Alternate														
		<b>Wading River Civic Association - Civic</b>	Member	Henry	Perez										X		
			Alternate	Linda	Rundlett					X							