

**Community Advisory Council
May 8, 2014
Action Items/Notes**

Final

These notes are in the following order:

1. Attendance
2. Correspondence and Handouts
3. Administrative Items
4. Advances in Accelerator Science Deliver Precision Beams for Cancer Therapy
5. Community Comment
6. Membership Discussion/Vote
7. June Agenda setting
8. Agenda setting exercise for FY 2015

1. Attendance

Members/Alternates Present: See Attached Sheets.

Others Present: N. Baggett, C. Bevington, S. Bogart, C. Cleary, P. Genzer, R. Gordon, M. Israel, S. Johnson, G. Mattson, P. Paul, S. Peggs, A. Rapiejko, M. Schaefer, N. Sundin, R. Tribble

2. Correspondence and Handouts

Item numbers one and two were mailed to Members with a cover letter dated May 1, 2014. Item number three was available as a handout at the meeting.

1. Draft agenda for May 8, 2014
2. Draft notes from the April 10, 2014 meeting
3. Presentation – Advances in Accelerator Science Deliver Precision Beams for Cancer Therapy

3. Administrative Items

The meeting was called to order at 6:35 PM. Reed Hodgkin, facilitator, reviewed the ground rules and the agenda. Those in attendance introduced themselves.

Agenda changes

The environmental update was removed from the agenda. It will be presented at next month's meeting. The discussion on membership was moved to follow the science presentation.

Dr. Robert Tribble, BNL Deputy Director for Science and Technology, announced that Peter Genzer will be serving as Interim Assistant Laboratory Director for Community, Education, Government, and Public Affairs.

Genzer said he has been at the Lab since 1996. He has been to many CAC meetings over the years and looks forward to working with them.

Nora Sundin, liaison to the CAC, showed the movie trailer to *Particle Fever* and invited everyone to attend the screening at the Huntington Cinema Arts Centre on May 18th at 2 PM.

Hodgkin said this is an International event that Brookhaven Lab is part of.

Approval of Minutes

Hodgin asked for corrections, additions, or deletions to the April 10, 2014 draft notes. The notes were approved as written with none opposed and three abstentions.

4. Advances in Accelerator Science Deliver Precision Beams for Cancer Therapy, Steve Peggs, physicist and Stony Brook University adjunct professor

Steve Peggs described the characteristics of x-rays and protons. He said x-rays are photons and have only one collision, stopping at a spread of ranges. Protons (ions) have many collisions, which all stop at about the same range. Protons can be steered left/right or up/down with magnets. He showed the difference between dose received from x-rays and from protons. The goal is to irradiate a tumor without irradiating the surrounding healthy tissue. He explained Brookhaven's role and said carbon ions are smaller and cheaper and that North America has fallen behind in the trend towards carbon/ion therapy.

Member Ziems asked why North America is behind. Is it funding, politics, or legislation?

Peggs said it's all three, but funding is always an issue. We need to get the National Institute of Health to work with the Department of Energy.

Member Chaudhry asked about carbon ion treatment.

Peggs said carbon is more effective than protons because it kills double strand DNA cells in two places instead of one.

Member Martin asked if the carbon does more damage on the way in.

Peggs said no, it actually does less damage than protons.

Member Shea asked if there have been a lot of animal and primate studies. She also asked if the damage from the treatments is cumulative.

Peggs said the only place that primate studies are done, to his knowledge, is in Washington, DC at the Walter Reed facility. Typically, the treatments kill cancer tissue and healthy tissue. The healthy tissue regenerates at a faster rate than the cancer, so it's a race to kill the cancer cells before they regenerate, while allowing the healthy ones to regenerate.

Member Blumer asked if there is a cost difference between carbon and proton.

Peggs said carbon is harder to bend, so therefore, it is more expensive than protons.

Member Malloy asked if Japan is the leading country with accelerators.

Peggs said, yes, the regional government is funding it.

An audience member asked if there have been any efforts to treat lung cancer with protons.

Peggs replied there is research funded by the Army on lung and breast cancer. There is a need to steer the beam with the breathing cycle, especially in lung cancer. I am not aware of any clinical trials.

Tribble said in a facility in Japan, they are building a new wing with real time ways to track a patient's breathing and movement and to monitor where the beam goes.

Member Blumer asked how this work is funded. Is this fundamental research or applied research?

Peggs said there are three or four patents on various aspects of the design. He said his work is funded partially by Best Medical through a cooperative research and development agreement (CRADA) with them and partly funded by Nuclear Physics. I am both a theorist and an experimentalist.

Member Shea said she would be interested in any information Peggs has regarding breast cancer research and treatment.

Peggs said that research is being done at Loma Linda, and suggested visiting their website for information.

Member Henagan suggested looking on the Internet under Google Scholar for published papers on the topic.

5. Community Comment

There was no community comment.

6. Membership Discussion and Vote

Hodgin said there is a proposal to change the membership status for Greg Bush and Bruce Martin from Individual members to an Education Organization. They would remain the primary and alternate members, respectively. The CAC's priorities for new organizations are qualification, interest, and commitment, so that is what we will be looking at as we discuss this proposal. The representatives have announced their intention and have attended and observed at least two CAC meetings. They now need to give a brief presentation to the CAC, which will include their interest, some background information, and the value that their organization will bring to the CAC. Reed said members of the audience are welcome to stay for this portion of the meeting, but if they would like to leave, that would be okay because the rest of the meeting will be organizational in nature.

Member Martin gave a brief history of their position on the CAC. He said 15 years ago when the CAC was organized there was a membership category for Education. That status was subsequently changed from Education to Individual. Recently, we have been in touch with an organization called Foundation for Economic Education (FEE), which also has a national Long Island discussion group. They are interested in sponsoring Greg Bush's membership on the CAC, with Martin as the alternate. He said under the new rules, there needs to be an organization and their original organization is no longer functional, so FEE has stepped in.

Hodgin asked how this organization will bring value to the CAC.

Member Martin said throughout the years during the sequence of educators that have been on the CAC, the members have made contributions to the discussions. Professor Bush, being an economist, has looked at various cost-benefit proposals and has gotten involved in the technical issues as well.

Member Sprintzen asked how many members are in the organization, how often they meet, what are the topics of discussion, and what kind of activities they engage in.

Member Martin said there are two organizations; on a national and local level. On a national level, I would guess there are a few thousand members. They sponsor seminars and give presentations. Some are by economists, some are philosophical. The local discussion group has been in existence for eight or ten years and they have sponsored seminars at local libraries and Suffolk Community College. They have monthly meetings with about 30 in attendance. There are 65 members of the group.

Member Peskin asked if the organization knows anything about Brookhaven National Lab.

Member Martin said the Operations Director is quite familiar with the Lab and he was eager to sponsor us. Their knowledge of Brookhaven is from afar. There are 15 local members that are aware of the Lab and concerned about what goes on here.

Member Martin asked to have Adam Martin removed as an alternate member, at his request.

Member Giacomaro asked if anyone from the Lab had ever presented at one of FEE's meetings.

Martin said no, but he would make that suggestion if the Lab's Public Relations Office thinks that would be appropriate.

Member Henagan asked what their mission statement is. I have been told this is a libertarian organization. Is this truly educational or a political organization.

Martin replied that he didn't have a formal statement, but would say the mission is to promote economic education. Some of the members, including myself, are libertarians. It is not a political organization. It's free market economics.

Member Sprintzen said it appears to be a right-wing libertarian organization, with an ideological perspective, which I don't share, but it's clearly an appropriate organization.

Hodgin said let's avoid using politically charged words. He then asked Member Martin to leave the room so the CAC could discuss the proposal.

The CAC discussed including the Foundation for Economic Education as a CAC Member organization represented by Greg Bush and Bruce Martin as the Member and Alternate, respectively.

A vote was taken and unanimously approved to invite FEE to join the CAC as an education organization under Education, Science & Technology and remove Member Bush from the Individual category.

Nora Sundin, liaison to the CAC, said the Lab has been reaching out to those members who have not met the attendance requirements. We have reached out several times to the IBEW. They have not returned phone calls or emails. We are asking for a vote on whether or not to remove the organization from CAC membership.

Hodgin said all the steps have been taken that are in our guidelines, so now it is time to take some action.

Member Schwartz asked what steps were taken to reach the organization.

Sherry Johnson, BNL Stakeholder Relations Office, reported that phone calls were made, emails were sent, letters were sent through the mail, and a letter was also sent to the President of IBEW Local 2230 asking if they want to appoint a new member. This has been going on for four or five months with no response. They are required to attend two thirds of the meetings and the last time someone was here to represent the organization was January 2013. The letter that we send out notifying them that they are being removed from membership gives them the opportunity to attend the next meeting and state their case and request to be put back on the membership role.

Member Peskin said this is an important organization to have represented at the CAC, because IBEW is the lead bargaining unit of all onsite union activities.

Member Giacomaro said perhaps make an effort to contact someone higher than the President of the local union.

Member Henagan suggested making a phone call to the President of IBEW.

Sundin said we can do that.

Hodgin said IBEW is very important, therefore an additional effort could be made to contact Phil Pizzo before taking a vote to exclude them.

Member Peskin said we could hold a vote, but hold off on taking action until contact is made.

Hodgin said the vote could be taken and a letter sent that states that BNL is going to work to re-establish the relationship. A vote was taken to rescind the membership of the IBEW contingent on first making an additional effort to contact them.

The motion is approved unanimously

Hodgin said BNL will reach out again to the IBEW and ask for a response before the next meeting to recover their membership.

7. June Agenda Setting

Sundin said there will be a tour of NSERC at 5 PM before the June meeting, an update on the NSLS-II, and the environmental update that was scheduled for tonight. There will be no meeting in July or August.

8. Agenda setting exercise for FY15

Sundin asked for a list of tour requests as well as agenda topics.

See results below.

The meeting adjourned at 9:02 PM

CAC Agenda Setting – May 8, 2014

PRESENTATIONS

- Pros & Cons of Bringing Back Commercial Nuclear Power – 12
- Holographic Principles of Quantum Mechanics – 8
- Biological Research at BNL – 7
- The Gamma Forest (where was it onsite; the kind of research done there) - 7
- Survey of all DOE Labs – 6
- Climate Science & W.H. Report (Steve Schwartz) – 5
- NASA Research – 5
- Waste Minimization at BNL - 5
- Update on Battery Storage – 5
- More History – 4
- Economic Impact of the Lab - 4
- Nanotech Research, Safety, Environment, Ethics – 4
- Fukushima – 4
- Update on LI Solar Farm (production, environment) – 4
- Research / Trends on Wildlife on LI – 3
- Non Proliferation – 3
- Patents & Commercialization – Pros & Cons of Science vs. Commercialization – 3
- Update of Tick-borne Diseases – 3
- Electric Grid (by J. Misewich) – 3
- Update on G-2 – 3
- Invite HS Students to Speak on Their Topics – 3
- Update on State Program for Carbon Footprint Reduction (80x50?) – 2
- Research towards Sustainability – 2
- STEM Research Update (InSynC) – 2
- Computer Facility for LHC/ATLAS / RHIC – 2
- Research by Students at NSLS – Reach Out Program – 1

TOURS

- ISB - 3

				Jan	Feb No mtg	Mar	Apr	May	June	July No mtg	Aug No mtg	Sep	Oct	Nov	Dec
P = Present	2014	Affiliation	First Name	Last Name											
		ABCO (Garber - 04/02)	Member	Don	Garber										
		(Madigan -10/10)	Alternate	Michael	Madigan			P	P						
		American Physical Society	Member	Margaret	Malloy	P		P	P						
		(Schuhmann 1/14)	Alternate	Reinhart	Schuhmann										
		Brookhaven Retired Employees Association (Peskin - 09/09)	Member	Arnie	Peskin				P						
		(Franz - 12/09)	Alternate	Eena-Mai	Franz	P		P	P						
		(Shapiro-1/13)	Alternate	Steve	Shapiro										
		Citizens Campaign for the Environment	Member	Adrienne	Esposito	P		P							
			Alternate												
		Colonial Woods Whispering Pines (Birben - 06/09)	Member	Christine	Birben										
		(Rehbein -11/10)	Alternate	Eric	Rehbein	P		P		P					
		Coram Civic Association (Ziems - 06/12)	Member	Paul	Ziems	P		P		P					
		(Meade – 06/12, Jim M 10/12)	Alternate	Jim	Meade				P						
		East Yaphank Civic Association	Member	Michael	Giacomaro	P		P	P	P					
		(Feinman - 02/09)	Alternate	Bob	Feinman			P		P					
		Emeritus (changed 3/8/12)	Member	Jean	Mannhaupt										
		Foundation for Economic Education (5/14)	Member	Greg	Bush										
			Alternate	Bruce	Martin			P	P	P					
		Friends of Brookhaven (Kaplan - 07/01)	Member	Ed	Kaplan										
		(Schwartz - 11/02)	Alternate	Steve	Schwartz				P	P					
		Huntington Breast Cancer Coalition	Member	Mary Joan	Shea	P		P	P	P					
			Alternate	Scott	Carlin										
		IBEW/Local 2230 (Krsnak 01/07)	Member	Scott	Krsnak										
			Alternate												
		Individual (changed 3/12)	Member	Karen	Blumer	P				P					
		(added 6/12)	Alternate	Michael	Madigan	P		P							
		Individual – (changed 3/12)	Member	Jane	Corrarino			P		P					
			Alternate												
		Individual – (changed 3/12)	Member	Iqbal	Chaudhry	P			P	P					

P = Present	2014	Affiliation		Jan	Feb No mtg	Mar	Apr	May	June	July No mtg	Aug No mtg	Sep	Oct	Nov	Dec
			First Name	Last Name											
			Alternate												
		L.I. Pine Barrens Society	Member	Richard	Amper		P								
		(Murdocco - 04/11, deleted 6/12) (Muller added – 8/12)(Katie Rose Leonard added – 6/13)	Alternate	Katie Rose	Leonard	P									
		L.I. Progressive Coalition	Member	David	Sprintzen	P		P	P	P					
			Alternate												
		Lake Panamoka Civic Association (Biss - 04/02)	Member	Rita	Biss	P		P							
		(Grandal - 10/10)	Alternate	Bonita	Grandal	P		P							
		Longwood Central School Dist. (Castro -06/09)	Member	Maria	Castro				P						
		(Gerstenlauer removed & Sterne added 5/14)	Alternate	Phyllis	Sterne										
		Mastic Park Civic Association (Sicignano – 6/12)	Member	John	Sicignano	P		P		P					
			Alternate	Clara	McManus										
			Alternate	Joe	May										
		Middle Island Civic Association	Member	Tom	Talbot	P		P	P	P					
			Alternate	Kevin	Crowley										
		Photon Sciences User Committee	Member	Jean	Jordan-Sweet	P			P						
		(Ravel -02/11)	Alternate	Bruce	Ravel	P		P							
		Ridge Civic Association	Member	Pat	Henagan	P		P	P	P					
			Alternate												
		Town of Brookhaven (Graves - 06/06)	Member	Anthony	Graves										
			Alternate												
		Town of Brookhaven, Senior Citizens Office	Member	James	Heil	P		P	P	P					
			Alternate												
		Town of Riverhead (Doroski - 04/11)	Member	Isidore	Doroski	P		P		P					
		(Hulme - 04/11)(Hulme removed 4/14)	Alternate												
		Wading River Civic Association	Member	Helga	Guthy	P		P	P						
			Alternate	Sid	Bail										