NGSPN @ BNL

Susan E. Pepper
Katherine M. Bachner
Jose Gomera

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NGSPN @ BNL

Katherine Bachner, Jose Gomera, and Susan Pepper
Brookhaven National Laboratory

October 2016

**Nonproliferation and National Security Department
Brookhaven National Laboratory**

**United States National Nuclear Security Administration
Defense Nuclear Nonproliferation
Office of Nonproliferation and Arms Control
Office of International Nuclear Safeguards**

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Introduction

Brookhaven National Laboratory's (BNL's) Nonproliferation and National Security Department hosted the Next Generation Safeguards Professional Network (NGSPN) at BNL September 6-9, 2016. Thirteen representatives from seven Department of Energy National Laboratories, including two from BNL, participated in the four-day meeting.

The NGSPN meeting was sponsored by the Office of International Nuclear Safeguards (NA-241) of the National Nuclear Security Administration, which provided funding for BNL's development and conduct of the meeting program and the participant's labor and travel. NGSPN meetings were previously held at Savannah River National Laboratory, Oak Ridge National Laboratory, Idaho National Laboratory, Sandia National Laboratories, and Los Alamos National Laboratory. The purpose of NGSPN is to provide a forum for early-career international safeguards practitioners to network with their peers, to meet international safeguards experts from other institutions and to learn about organizations other than their employers who contribute to international safeguards.

Participants

The NGSPN participants came from seven laboratories: ANL, BNL, INL, LANL, ORNL, PNNL, and SRNL. They were 75% female, had degrees ranging from Bachelors to PhD, had total work experience ranging from one to seventeen years and safeguards work experience ranging from zero to six years. Seven of the participants previously participated in Next Generation Safeguards Initiative activities sponsored by the Office of International Nuclear Safeguards. A list of participants is provided in Appendix 2. Figures 1-5 depict the data collected in a demographic survey of the respondents. Twelve of the 14 participants responded to the survey.

Figure 1: Participant Gender

Figure 2: Participant Education

Figure 3: Years in the Workforce

Figure 4: Years in the SGs Workforce

Figure 5: Participants' Previous NGSI Activities

In advance of the meeting, BNL requested that the participants complete the following training courses: General Employee Radiological Training, Cyber Security, and Guest Site Orientation.

Taking these courses prior to coming to their arrival enabled BNL to allocate more time to enriching activities. Most of the participants complied with our request and those who did not were able to complete the training prior to the start of the program without interfering.

Program

The agenda for the NGSPN meeting at BNL is provided in Appendix 1. The program was developed over an extended period that began in 2014, when BNL first proposed to the Office of International Nuclear Safeguards to host the NGSPN meeting, and was finalized in July 2016 and distributed to the participants prior to the beginning of the meeting. The program consisted of presentations, discussions, tours, and exercises scheduled over a four-day period from September 6 to September 9, 2016. A continental breakfast was provided each day to encourage prompt arrival and to encourage networking during the meeting. In addition, BNL hosted a reception for the participants on Tuesday evening, September 6, and arranged a no-host dinner at a local restaurant on Wednesday evening, September 7. BNL did not arrange an activity for Thursday

evening, September 8, to allow the participants the opportunity to catch up on their work or to arrange their own activity.

The following is a brief description of each agenda item and its objectives.

Welcoming Remarks - Robert Tribble, Deputy Director for Science and Technology

Dr. Tribble provided an overview of BNL's mission, operations and scientific endeavors to create an understanding of BNL's focus areas.

Safety Brief

All participants were assigned training to be completed prior to arrival at BNL. The training was required to allow them to participate fully in the laboratory tours and exercises and to access the Internet while on-site. To complement this training, the NGSPN participants viewed a video about site-specific hazards, such as wildlife, and site-specific safety requirements, such as the on-site speed limit, to ensure their safety while at BNL.

Lab Overview - Susan Pepper, Chair, Nonproliferation and National Security Department

Ms. Pepper provided an overview of BNL's history and the work of the Nonproliferation and National Security Department to identify the work done at BNL that is directly related to the work of the Office of International Nuclear Safeguards.

Participant Presentations

Each participant was asked to make a ten-minute presentation about his or her work. Most participants gave informal presentations.

NA-20 Work at BNL: Research and Development - Peter Vanier, Interim Group Leader, Radiation Detector and Nonproliferation R&D Group

The Department of Nonproliferation and National Security at BNL consists of four groups, three of which address safeguards issues. A representative from each of the safeguards-related groups made a presentation to describe the group's work. Dr. Vanier described the work performed by the Radiation Detector and Nonproliferation R&D Group, which performs work for the Defense Nuclear Nonproliferation R&D Office (NA-22), the Office of Nuclear Noncompliance Verification (NA-243), the Office of Counterterrorism and Counterproliferation (NA-80), the Department of Homeland Security, the Defense Threat Reduction Agency, and the National Institutes of Health.

NA-20 Work at BNL: International Engagement - Maia Gemmill, Nonproliferation Policy and Implementation Group

Ms. Gemmill, who was also a participant in the meeting, spoke about her work in the International Nuclear Safeguards Engagement (INSEP) program, which is a program on which many of the DOE laboratories collaborate.

NA-20 Work at BNL: Human Capital Development - Lisa Toler, Group Leader, Nonproliferation Policy and Implementation Group

Dr. Toler spoke about BNL's work under the Office of International Nuclear Safeguards' Human Capital Development program to inform the participants of BNL's activity in that program.

NA-20 Work at BNL: Policy, Concepts and Approaches - Katherine Bachner, Nonproliferation Policy and Implementation Group

Ms. Bachner spoke about BNL's work under the Office of International Nuclear Safeguards' Policy and Concepts and Approaches programs to inform the participants of BNL's activity in those programs.

Introduction to the Radiological Assistance Program (RAP) - Lee Michel, Nonproliferation and Homeland Security Field Support Group

BNL advocated strongly for inclusion of information about RAP in the NGSPN meeting program because we believe that it can be an important element in the work portfolio of international safeguards practitioners. Even though RAP is not a safeguards program, it requires knowledge and skills that are also required in the safeguards field and can help early career professionals develop related skills and provide a complementary source of funding. Mr. Michel spoke about the organization and role of RAP in general and BNL's role in supporting the national program.

RAP Consequence Management Presentation – Stephen Musolino

The participants were scheduled to observe and constructively critique a RAP exercise on consequence management. Unfortunately, due to other priorities and weather safety concerns, the scope of the exercise was significantly curtailed to the point where it was not of value to the NGSPN participants. Instead, Dr. Musolino, spoke about consequence management and its importance to national security.

Brief Introduction to and Tour of AGS/RHIC (Bldg. 911) - Paul Sampson, Collider/Accelerator Department

The Alternating Gradient Synchrotron (AGS) and the Relativistic Heavy Ion Collider (RHIC) are two important user facilities at BNL. They are not directly safeguards-relevant, but a tour was provided because of their significance to the fundamental science conducted at BNL and the physics community overall. Mr. Sampson introduced the user facilities and conducted the tour.

Laboratory and User Facility Tours: Escorted by Jose Gomera, Katherine Bachner, and Susan Pepper

On Wednesday afternoon, the participants were divided into two groups for intimate tours of the Radiation Detector and Nonproliferation R&D (Detector R&D) Group's laboratories, the Center for Functional Nanomaterials (CFN), the National Synchrotron Light Source II (NSLS II), and the NASA Space Radiation Laboratory (NSRL). These facilities are safeguards significant in that the Detector R&D Group is engaged in developing and improving materials for radiation detection and designing detector systems and the CFN and NSLS II can be used for characterization of detector

materials and analysis of nuclear materials for forensics purposes. The NSRL is used to test equipment and components that are exposed to radiation. BNL staff members involved in these tours included Aleksey Bolotnikov, Giuseppe Camarda, Utpal Roy, Anwar Hossain, Peter Vanier, Ge Yang, Biays Bowerman, Juergen Thieme, Tara Shiels, Adam Rusek and Michael Sivertz. A BNL van was used to transport the participants about the laboratory site. The detailed schedule for these tours is provided in Table 1.

Table 1: NGSPN Meeting Facility Tour Schedule

Tours on Wednesday, September 7, 2016	Group 1 (Lead: Jose Gomera)	Group 2 (Lead: Kate Bachner)
Lab Tour 1 (Building 830): Crystal Growth of Nuclear Detector Materials Host: Utpal Roy	1:35 - 1:50 PM	3:05 - 3:20 PM
Lab Tour 2 (Room D-6, Building 815): Gamma-ray Detectors Host: Aleksey Bolotnikov	1:55 - 2:10 PM	3:25 - 3:40 PM
Lab Tour 3 (Room 1-24, Building 815): Thermal Annealing of Detector Materials Host: Ge Yang	2:10 - 2:20 PM	3:40 - 3:50 PM
Lab Tour 4 (Room C-7, Building 815): Radiation Detector Fabrication Host: Anwar Hossain	2:20 - 2:35 PM	3:50 - 4:05 PM
Lab Tour 5 (Center of Functional Nanomaterials (CFN), Building 735): Host: Ge Yang	2:45 - 3:00 PM	4:15 - 4:30 PM
Lab Tour 6 (National Synchrotron Light Source II (NSLSII), Building 743) Host: Juergen Thieme	3:10 - 3:45 PM	1:20 - 2:05 PM
Lab Tour 7 (NASA Space Radiation Laboratory (NSRL)), Hosts: Adam Rusek/Michael Sivertz	3:55 - 4:30 PM	2:15 - 3:00 PM

Introduction to the Complementary Access Exercise - John Gilbert, Consultant

Under funding from the U.S. Support Program to IAEA Safeguards, BNL provides training annually to IAEA inspectors in the Complementary Access that is allowed under the Additional Protocol. In this training, the IAEA participants attend one week of instruction at IAEA Headquarters in Vienna, Austria, and then come to BNL to practice their skills in scenarios that have been developed based on BNL's facilities. For NGSPN, BNL condensed the site visit portion of this two-week training exercise into a one-day exercise. John Gilbert, an expert in complementary access, supports BNL's IAEA course and was engaged to support the NGSPN exercise. Mr. Gilbert delivered an introductory lecture to explain the concepts and orient the participants to the exercise.

Complementary Access Exercise: Escorted by Josh Tackentien and Joseph Carbonaro, International Safeguards Project Office (ISPO)

Josh Tackentien and Joseph Carbonaro created the one-day exercise for the NGSPN participants. The exercise made use of BNL's Magnet Division and Waste Management Facility, both of which are used for the IAEA training. The NGSPN participants were again divided into groups and "inspected" different facilities at different times according to the detailed schedule below. Katherine Bachner and Jose Gomera escorted the groups through the facilities, and other BNL staff members acted as state representatives and facility operators during the "inspections."

Table 2: Next Generation Safeguards Professional Network Meeting Complementary Access Exercise Schedule

	CA #1 (24 hr)		CA#2 (24hr)	
	Magnets		Waste Mgt. Facility	
	(Bldgs. 902, 905)		(Bldgs. 855, 860, 865, 870)	
Freedonia SSAC Escorts	John Gilbert / Yonggang Cui		Biays Bowerman / Joe Carbonaro	
Freedonia Operators	Joe Muratore / John Cintorino		Glen Todzia / Sam Velazquez	
Thursday 8 Sept.	Inspectors	Observers	Inspectors	Observers
09:30 - 11:00	1A	1B	2A	2B
11:00 - 12:30	1B	1A	2B	2A
12:30 - 13:30	LUNCH			
13:30 - 15:00	2B	2A	1B	1A
15:00 - 16:30	2A	2B	1A	1B
16:30 - 17:00	Review			
	TEAM 1.A		TEAM 2.A	
	Cassandra Pate		Chris Barrett	
	Amanda Sayre		Amanda Rynes	
	Steve Cleveland		Holly Watson	
	TEAM 1.B		TEAM 2.B	
	KC Dryplochier		Kathryn McIntosh	
	Lauren Boldon		Gavin Mattingly	
	Cathy Mussi		Jodi Lieberman	
Observer:	Jose Gomera		Katherine Bachner	

Complementary Access Conclusions Presentation - John Gilbert (Consultant), Josh Tackentien (ISPO)

John Gilbert “debriefed” the NGSPN exercise teams on Friday morning, September 9. Each group was asked to review their findings and then Mr. Gilbert revealed the “proliferation indicators” that had been planted in the BNL facilities. Overall, the NGSPN did a very good job of completing the inspections despite very limited preparation.

US Support Program Activities and Opportunities - Ray Diaz, Head, International Safeguards Project Office

Mr. Diaz made a presentation on the employment opportunities at the IAEA, in particular the Junior Professional Officer opportunity for early career professionals, and the support that ISPO provides to applicants.

Intercultural Preparedness - Katherine Bachner, Nonproliferation Policy and Implementation Group

Ms. Bachner spoke about her work in applying the principles of intercultural preparedness to activities in nuclear safeguards, safety and security. NGSPN participants will likely interact with counterparts from other countries and should be aware of the impact that cultural factors will have in those interactions.

Wrap-up

BNL prepared two surveys to collect information regarding the participants’ satisfaction with the meeting and to collect demographic information. Because the participants included ten women and three men and included experienced professionals, BNL believes the demographic information will be of use to the Office of International Nuclear Safeguards. The results of the demographic survey were presented in Figures 1-5 earlier in this paper and the results of the “satisfaction” survey are discussed in the Outcome section below.

Outcome

BNL appreciated the opportunity to host the 2016 NGSPN meeting. It provided international safeguards personnel at BNL with opportunity to meet and interact with early career members of the community. BNL distributed a survey to the participants to obtain their feedback on the program of the NGSPN meeting. The results are provided in Table 3 below.

Table 3: Participants' Satisfaction with the NGSPN Program

Question (1-5)											AVG
The NGSPN meeting met my expectations.	5	5	4	5	4	4	5	5	4	4	4.5
The tours were useful in displaying BNL's capabilities in general.	5	5	4	5	5	4	5	4	5	3	4.5
The Complementary Access exercise was useful in understanding some of the practical challenges of CA.	5	5	5	5	4	5	5	5	5	3	4.7
The NGSPN meeting was a useful way to network with counterparts at other national labs.	5	5	4	5	5	5	5	5	4	5	4.8

Two open-ended questions were included in the survey regarding the BNL NGSPN meeting and the respondents replied as follows:

1. What was your favorite topic or exercise during the meeting?
 - a. Complementary Access
 - b. Complementary Access/Culture
 - c. Complementary Access
 - d. Complementary Access
 - e. NSLS II/culture
 - f. Complementary Access
 - g. Complementary Access
 - h. Complementary Access
 - i. Complementary Access
 - j. Complementary Access (Waste Management)
2. What was your least favorite topic or exercise during this meeting?
 - a. No response
 - b. Human Capital Development presentations
 - c. Human Capital Development presentations
 - d. No response
 - e. Complementary Access
 - f. Detector R&D
 - g. First day powerpoint presentations
 - h. NSLS II
 - i. First day PowerPoint presentations
 - j. Complementary Access (Magnet Division)/First day PowerPoint presentations

In addition to those questions, participants were asked about the focus of future NGSPN events and about how future events could be improved. A recurring theme appeared to be a focus on exercises and the ability to have additional interaction with staff of the host lab to foster collaboration. Detailed survey answers can be found in Appendix 4.

Photos of the NGSPN participants taken during the meeting are provided in Appendix 3.

As a result of our experience hosting the NGSPN meeting, we have the following observations to share:

1. The participants complied with the advance training requirements, which preserved on-site time for program activities.
2. The Additional Protocol-Complementary Access exercise was successful as a one-day activity. BNL suggests that a short course modeled after the U.S. Support Program's APEX course would be useful for the U.S. safeguards community. BNL recommends that the APEX course not be condensed as drastically in future offerings because additional preparation would make it more valuable for the participants.
3. BNL did not anticipate that the participants would need instruction in the use of the complementary access tools.
4. Conducting a demographic survey several weeks before a meeting would help to ensure that topics are discussed at the appropriate level of detail for the audience.

Appendix 1: Agenda

Tuesday, September 6

08:30-09:00	Guest Registration, as required - Bldg. 400
08:30-09:00	Continental Breakfast
09:00-09:10	Welcoming Remarks <i>Bob Tribble, Deputy Director for Science and Technology</i>
09:10-09:20	Safety Brief
09:20-10:00	Lab Overview <i>Susan Pepper, Chair, Nonproliferation and National Security Department</i>
10:00-10:10	Coffee Break
10:10-12:10	Participant Presentations
12:10-13:15	Lunch (no-host)
13:15-13:45	NA-20 Work at BNL: Research and Development <i>Peter Vanier, Group Leader, Radiation Detector and Nonproliferation R&D Group</i>
13:45-14:15	NA-20 Work at BNL: International Engagement <i>Maia Gemmill, Nonproliferation Policy and Implementation Group</i>
14:15-14:30	Coffee Break
14:30-15:00	NA-20 Work at BNL: Human Capital Development <i>Lisa Toler, Group Leader, Nonproliferation Policy and Implementation Group</i>
15:00-15:30	NA-20 Work at BNL: Policy, Concepts and Approaches <i>Katherine Bachner, Nonproliferation Policy and Implementation Group</i>
15:30-16:30	Introduction to the Radiological Assistance Program (RAP) <i>Lee Michel, Nonproliferation and Homeland Security Field Support Group</i>

17:00-18:00 Reception (Bldg. 490 Lobby)

Wednesday, September 7

08:30-09:00 Continental Breakfast

09:00-10:30 RAP Consequence Management Exercise

10:30-10:40 Brief Introduction to AGS/RHIC (Bldg. 911)
Paul Sampson, Collider/Accelerator Department

10:40-12:15 Tour of AGS & RHIC

12:15-13:15 **Lunch** (no-host)

13:15-13:30 Group Photo (Bldg.740)

Laboratory and User Facility Tours: Escorted by Jose Gomera, Katherine Bachner, and Susan Pepper

13:30-15:00 Group A: Radiation Detector Development Tour (Bldgs.830, 815, 735)**
Group B: NSRL/NSLS-II Tour (Bldgs.740, 958)**

15:00-16:30 Group A: NSRL/NSLS-II Tour (Bldgs.740, 958)**
Group B: Radiation Detector Development Tour (Bldgs.830, 815, 735)**

1800- **Dinner** (no-host)
The Bellport
159 South Country Road
Bellport, NY 11713
Phone: 631-286-7550

Thursday, September 8

08:00-08:30 Continental Breakfast

08:30-09:30 Introduction to the Complementary Access Exercise
John Gilbert, Consultant

Complementary Access Exercise: Escorted by Josh Tackentien and Joseph Carbonaro, International Safeguards Project Office

09:30-12:30	Group A: Waste Management Division (Bldgs. 855, 860, 865, 870)** Group B: Magnet Division (Bldgs. 902, 905)**
12:30-13:30	Lunch (no-host)
13:30-16:30	Group A: Magnet Division (Bldgs. 902, 905)** Group B: Waste Management Division (Bldgs. 855, 860, 865, 870)**

Friday, September 9

08:30-09:00	Continental Breakfast
09:00-10:00	Complementary Access Conclusions Presentation John Gilbert (Consultant), Josh Tackentien and Joseph Carbonaro (ISPO)
10:00-10:30	US Support Program Activities and Opportunities <i>Ray Diaz, Head, International Safeguards Project Office</i>
10:30-10:40	Coffee Break
10:40-11:30	Intercultural Preparedness <i>Katherine Bachner, Nonproliferation Policy and Implementation Group</i>
11:30-12:00	Wrap-up

Meeting points-of-contact:
Susan Pepper – 631-834-9242
Jose Gomera – 631-494-5858

For emergencies while on site at BNL, call 631-344-2222. For on-site, Police assistance, call 631-344-2238.

Appendix 2: List of NGSPN Participants

Name	Email	Affiliation	Phone
Lauren Boldon	boldon@anl.gov	ANL	630-252-7275
Jodi Lieberman	jlieberman@anl.gov	ANL	202-494-5472
Maia Gemmill	mgemmill@bnl.gov	BNL	631-599-6231
Cassandra Pate	cassandra.pate@inl.gov	INL	512-677-9592
Amanda Rynes	amanda.rynes@inl.gov	INL	506-695-8388
Kate McIntosh	kmcintosh@lanl.gov	LANL	518-727-7361
KC Dryplocher	kcd@lanl.gov	LANL	505-695-8388
Gavin Mattingly	mattinglyge@ornl.gov	ORNL	309-830-2523
Steve Cleveland	clevelandsl@ornl.gov	ORNL	406-781-8569
Chris Barrett	chris.barrett@pnnl.gov	PNNL	706-621-2654
Amanda Sayre	Amanda.sayre@pnnl.gov	PNNL	925-998-2744
Holly Watson	holly.watson@srnl.doe.gov	SRNL	803-208-0461
Cathy Mussi	catherine.mussi@srnl.doe.gov	SRNL	803-725-7536

Appendix 3: Photos of NGSPN Participants at BNL

Photo 1: NGSPN Participants at the National Synchrotron Light Source II (Lobby)

Photo 2: NGSPN Participants at the National Synchrotron Light Source II (Stairs)

Photo 3: NGSPN Participants at the Relativistic Heavy Ion Collider STAR Detector

Appendix 4: Results of Surveys

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments: Although fascinating, I would have personally preferred some time on Wednesday to get briefed for CA exercise				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments: I would have preferred to see presentations from the other professionals on what specifically may be most interesting project they work on.

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments:	CA Exercise

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments:	

7.	What do you think future NGSPN events should focus on?
Comments:	Other than the detector R&D & CA exercise In Addition to more Safeguards topics

8.	How do you think future NGSPN engagements can be improved?
Comments:	Mixing up walking/Touring time w/ sitting time

Additional Comments:

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments:				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments:				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments:				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments:

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments: I really enjoyed the Complementary Access exercise and the Intercultural Preparedness.	

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments: I found everything interesting, but the Human Capital Development was similar to the presentation at INMM I had already seen.	

7.	What do you think future NGSPN events should focus on?
Comments:	

8.	How do you think future NGSPN engagements can be improved?
Comments: Splitting up the lectures and tours so it would be lecture in the morning & tours in the afternoon instead of full days of both.	

Additional Comments:

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	④	3	2	1
Comments: was came in blind				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	④	3	2	1
Comments: Very informative tours were well explained				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
⑤	4	3	2	1
Comments: Huge eye opener on a concept I hadn't thought of before				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	④	3	2	1
Comments: Hadn't met anyone in the labs before

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments:	CA exercise. very usefull learned a lot of big picture info

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments:	Human capital development. As I am not involved with hiring

7.	What do you think future NGSPN events should focus on?
Comments:	exercises would be a better focus

8.	How do you think future NGSPN engagements can be improved?
Comments:	triming of the CA exercise would make it more useful

Additional Comments:

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments:	The mock inspection

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments:	No particular topic/exercise

7.	What do you think future NGSPN events should focus on?
Comments:	Networking!

8.	How do you think future NGSPN engagements can be improved?
Comments:	More opportunities to network

Additional Comments:

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1

Comments:

was not sure what to expect, but was pleasantly surprised by the diversity of the group, aspects of BNL seen, and networking opportunities

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1

Comments:

really great to learn about all of the facilities/capabilities - too little generally known about other DOE facilities!

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1

Comments:

Was useful but found it a bit long/ belabored - perhaps visiting a single facility for longer would have been better. Would have liked a primer on how to use the inspectors toolkit (<10 min would probably be sufficient) as several group members had never seen the instrumentation before.

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1

Comments:

Excellent. Met counterparts with whom I could develop funding proposals.

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments: ① Visit to the NSLS-II ② Intercultural preparedness discussion	

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments: Complementary Access exercise. See previous page. It was a bit long and too self-directed @ the start, not enough instruction given on inspector procedures and toolkit.	

7.	What do you think future NGSPN events should focus on?
Comments: Similar focus would be great. Plus a bit of additional access to local facility staff.	

8.	How do you think future NGSPN engagements can be improved?
Comments: Would love to see an opportunity to have more detailed discussions w/ scientists @ host site who have projects of interest, potential for collaboration.	

Additional Comments: Perhaps an info packet w/ bios could be circulated beforehand or open/brief powerpoints @ start

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments:				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: Less tours on crystals would be better—or at least split between 2 days.				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: Need more background intro on CAs prior to the exercise.				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments:

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments:	Waste mgmt facility CA.

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments:	The crystal growth lab tours.

7.	What do you think future NGSPN events should focus on?
Comments:	More on safeguards presentations and inspection practices, less on BNL capabilities.

8.	How do you think future NGSPN engagements can be improved?
Comments:	More background on CA/preparation.

Additional Comments:

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments: I had not visited BNL prior to this meeting and did not have a good understanding of the capabilities on site. Great to talk to the experts				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments: Very useful facilities + exercises				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments: The CA exercise. Extremely useful. The operators were great and made the exercise extremely interesting.	

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments: While the overview of projects + programs at BNL on the first day were very interesting, sketch cutting back on the overview + adding more of a SG intro which have been helpful for the groups prior to the exercise.	

7.	What do you think future NGSPN events should focus on?
Comments: Keep the high percentage of time in facilities.	

8.	How do you think future NGSPN engagements can be improved?
Comments: •	

Additional Comments:

Great meeting. Thank you for hosting. The facility experience + managed access presentation were very useful.

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: Great Content & Pace.				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: more emphasis on BNL Role in Safeguards R&D				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: maybe some homework ahead of time to better prepare for a CA & facilities which will be visited				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments:

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments:	The CA exercises was very informative

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments:	The light source

7.	What do you think future NGSPN events should focus on?
Comments:	Everything this week was great & covered many SG concepts.

8.	How do you think future NGSPN engagements can be improved?
Comments:	more background before exercises.

Additional Comments:

Great instructors and events which were planned for the week. Look forward to building on the networking that happened this week & hopefully attending additional workshops.

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	(4)	3	2	1
Comments:				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	4	3	2	1
Comments:				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	(4)	3	2	1
Comments:

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments:	The CA exercises

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments:	The barrage of powerpoints the first day was a little difficult

7.	What do you think future NGSPN events should focus on?
Comments:	

8.	How do you think future NGSPN engagements can be improved?
Comments:	More advanced notice and an updated / relevant website. That would make it a lot easier to participate / ^{plan} organize and stay

Up to date on events. I didn't know much about NGSPN because the website hasn't been updated in years and I wasn't sure who to even contact.

Additional Comments:

Next Generation Safeguards Professional Network Meeting

General Evaluation

1. The NGSPN meeting met my expectations.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: I wasn't sure what to expect & the networking redeemed other frustrations. I would have expected to meet more BNL employees.				

2. The tours were useful in displaying BNL's capabilities in general.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: The tours were too in the weeds to the point I did not understand the purpose or what questions to ask for clarification.				

3. The Complementary Access exercise was useful in understanding some of the practical challenges of CA.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: It would have been helpful to have more instructions. Joe at WPI helped to bring us up to the level of the investigators. John was unwilling to help us which led to great frustration making the magnets portion not fun. John seemed more focused on deceiving us than on helping us learn.				

4. The NGSPN meeting was a useful way to network with counterparts at other national labs.				
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1
Comments: It was an excellent opportunity to meet other counterparts!

Next Generation Safeguards Professional Network Meeting

5.	What was your favorite topic or exercise during this meeting?
Comments: Waste management portion of APEX. JDE was excellent in bolstering our confidence & making us feel feel proud & confident.	

6.	What was your <i>least</i> favorite topic or exercise during this meeting?
Comments: Magnets - see previous page for explanation. Full day of lectures was rough; I'd recommend lecture in AM & talks in PM.	

7.	What do you think future NGSPN events should focus on?
Comments: Logical flow. Build up to final activity. Lectures & activities seemed ad hoc. They were either too high level or too in the weeds... know your audience.	

8.	How do you think future NGSPN engagements can be improved?
Comments:	

Additional Comments:

- would like the opportunity to meet more people at BNL.