

U.S. DOE/NNSA
NGSI
**Human Capital
Development**

Program Review 2013

October 29-30, 2013

**Brookhaven National Laboratory
Presented by Susan Pepper**





TO BE ADDRESSED

- Summary of HCD efforts 2008-2013
 - University Engagement
 - Safeguards Internships
 - Safeguards Graduate and Post-Graduate Fellows
 - Safeguards Courses
 - Professional Development
 - Other Efforts
- Future Plans (FY14)
- Implementation Challenges



University Engagement 2008-2013

- Universities Engaged
 - Mercyhurst College, Erie, PA
 - University of Georgia, Athens, GA
 - Georgia Institute of Technology, Atlanta, GA
 - University of Michigan, Ann Arbor, MI
 - Monterey Institute of International Studies, Monterey, CA
 - Penn State University, College Park, PA
 - Massachusetts Institute of Technology, Cambridge, MA
 - University of California – Berkeley, Berkeley, CA
 - Rensselaer Polytechnic Institute, Troy, NY
 - University of Chicago, Chicago, IL
 - Illinois Institute of Technology, Chicago, IL
 - University of Wisconsin-Madison, Madison, WI
 - University of Tennessee, Knoxville, TN



University Engagement 2008-2013

- Courses held for academic credit
 - SUNY – Stony Brook: International Safeguards and Nonproliferation
 - coming Spring 2014
- Other university outreach or engagement efforts
 - Presentations to student groups
 - Participation in career fairs



Safeguards Internships 2008-2013

- 14 NGSi internships
- Available statistics/metrics on interns:
 - 10 Universities represented: Eckerd College, Penn State, University of Michigan, University of Chicago, University of Georgia, Harvard, University of Southern Florida, Marist College, Ohio University
 - 8 Majors: Nuclear Engineering (3), Computer Science (1), Political Science (3), International Affairs(5), Public Policy (1), Public Administration (1), Economics (1), History (1)
 - 5 interns attending INMM (2010, 2011 and 2012) - one twice
 - 2 interns returned for a second internship: 2
 - 100% of interns worked on NA-24 safeguards projects (vs. NA-22)
 - 4 undergrads, 8 graduates, and 2 high school students
 - 8 interns in graduate school during internship
 - 5 interns going to graduate school following internships



Grad and Post-Grad Fellowships 2009-2013

- Statistics on post-doctoral fellowship and graduate research assistant appointments
 - how many currently: None
 - how many in the past: 5
 - have any transitioned to permanent Lab positions? 5
 - one currently on leave of absence at WINS



Nonproliferation, National Security and Safeguards in the 21st Century

- Addresses history of arms control and nonproliferation, the IAEA, the NPT, traditional and strengthened safeguards, nuclear security
- Lectures, demonstrations, and exercises by BNL staff and outside experts
- Delivered annually since 2009
 - Three weeks in June
- Targets graduate students in nuclear engineering and international relations
- 104 students; plus BNL interns and staff

Year	# of students
2009	21
2010	21
2011	22
2012	21
2013	19



Efforts to reach and engage mid-career and young professionals

- BNL's International Safeguards Project Office recruits U.S. citizens for positions in the IAEA's Department of Safeguards
 - Junior Professional Officer positions for entry level candidates
 - Cost Free Expert and regular positions for experienced candidates
 - ISPO attends trade shows and career fairs and speaks to student groups to recruit Americans for jobs at the IAEA
- Next Generation Safeguards Professional Network (NGSPN)
 - Jay Dissler and Sarah Poe have attended NGSPN events
- 2010 WNU Summer Institute - Jay Dissler attended



Other HCD Efforts 2008-2013

- Other NGSi HCD activities at BNL
 - Workshops on human capital issues
 - 2008: Enhanced Recruitment for International Safeguards
 - 2010: Americans in International Organizations in Vienna
 - Knowledge retention activities
 - HCD Roadmap (with ORNL)
 - Novel approaches or initiatives
 - ISPO Website (www.bnl.gov/ispo) identifies IAEA staff, CFE and JPO opportunities and useful information for people contemplating positions in Vienna and/or moving to Vienna
 - ISPO Facebook page
 - Nuclearpedia:
https://wiki.bnl.gov/nuclearpedia/index.php/Main_Page



International Safeguards Textbook:

Deterring Nuclear Proliferation: The Importance of IAEA Safeguards

- Authored by team of BNL staff and consultants
 - Michael Rosenthal with Leslie Fishbone, Linda Gallini, Allan Krass, Myron Kratzer, Jonathan Sanborn, Barclay Ward, and Norman Wulf
- Review edition released in April 2013
- More than 400 downloads
 - <http://www.bnl.gov/gars/NNS/IAEAtextbook.php>
 - by universities, national laboratories, the IAEA, and U.S. and foreign government agencies



Summary of FY14 NGSi HCD plans

- FY14 HCD efforts
 - SUNY – Stony Brook: International Safeguards and Nonproliferation
 - University Engagement
 - Safeguards Recruitment
 - Nonproliferation, National Security and Safeguards in the 21st Century
 - Professional Development
 - NGSi NNIS Graduate Fellowships
 - Knowledge Retention – HCD Roadmap (with ORNL)
 - White paper on Intercultural Communication and Leadership



Implementation Challenges

Challenges, concerns, & issues:

- Metrics for recruitment
- Ensuring prospective IAEA candidates are aware of services and support offered by USG
- Maintaining HCD activities when market is down; maintaining awareness of the field
- Notifying U.S. government and national laboratory contacts about U.S. citizens (regular staff, CFEs, and JPOs) returning to the U.S. following IAEA assignments