

***The Coming Nuclear Renaissance for the Next Generation Safeguards Expert
Maximizing Benefits While Minimizing Proliferation Risks***

December 15-18, 2008

Joint Institute of Computational Sciences (JICS) Building 5100

***Oak Ridge National Laboratory (ORNL) UT-Battelle in partnership with
Y-12 National Security Complex***

***Savannah River National Laboratory (SRNL) and Savannah River Nuclear Solutions (SRNS)
(Version 16)***

Day I - Monday, December 15, 2008

***8:30 - 9:30 – Registration – Joint Institute for Computational Sciences (JICS) Building 5100
9:30 – Welcome – Dana Christensen, Associate Laboratory Director, Energy and Engineering
Sciences Directorate
10:00 – Alan Icenhour, Director Global Nuclear Security Technology Division***

I. Introduction to the Nuclear Renaissance

***10:30 – Course Objectives – Michael Whitaker
10:45 - Overview of Course and Logistics – Dawn Eipeldauer***

Overview of Site Missions

***11:00 - Chuck Goergen, Deputy Manager, Separations, Savannah River Nuclear Solutions;
11:20 - Morris Hassler, Y-12 National Security Complex***

Lunch on own

II. The Nuclear Fuel Cycle

***1:00 – 1:15 – Ken Baker, Deputy Administrator for Defense Nuclear
Nonproliferation
Adam Scheinman, Assistant Deputy Administrator for Nonproliferation &
International Security***

A. 1:15 – The Nuclear Fuel Cycle – Mike Ehinger (ORNL)

B. Safeguards for Nuclear Material Production

2:00 – Safeguards for Enrichment – Michael Whitaker (ORNL)

C. 2:45 – Reactors (Production, Research and Power) – Dan Ingersoll (ORNL)

3:30 – Break

D. 3:45 – Safeguards for Plutonium Reprocessing – Chuck Goergen (SRNS)

***E. 4:30 – Type B Radioactive Material (RAM) Packagings for Plutonium Content – Steve
Bellamy (SRNL)***

***F. 5:15 – The Radiation Safety Information Computational Center – In Support of the
Nuclear Renaissance and Human Resource Development – Bernadette Kirk, RSICC
Director (ORNL)***

5:45 – Closing Comments Day I and Review Day II agenda

Day II – Tuesday, December 16, 2008

III. Legal Framework- Regulating Authority

- A. **8:00 – Nonproliferation Regime and International Safeguards – Ana Raffo-Ciaido (ORNL)**
- B. **9:00 – The Safeguards System of the International Atomic Energy Agency – John Oakberg (Haselwood Enterprises)**
10:00 – 10:15 – Break
- C. **10:15– The Nuclear Regulatory Framework and Implementation of MC&A Systems, Martha Williams, NRC**
- D. **11:15 - The Nuclear Regulatory Commission (NRC) Oleg Bukharin, Nuclear Security Incidence Response**
12:15 – Lunch at ORNL on own
- E. **1:15 – Overview of Export Control Program, David Snider (ORNL)**

IV. Domestic Safeguards and Security Systems

- A. **2:15 - Domestic Physical Protection Safeguards and Security Systems – Richard E. Glass, Y-12 National Security Complex**
- B. **3:00 –Potential Benefits of Advanced Warehouse Technology Applications for DOE Material Storage Areas, Richard Koenig, K-Area Complex, SRNS**
- C. **4:00 - Domestic Nuclear Material Control and Accounting System, Amy Wilson (Y-12)**
- D. **4:45 – PA Coulometric Measurement System for Plutonium Assay, Michael Holland (SRS)**
5:30 – Closing Comment Day II and Review Day III agenda
7:00 – Flatwater Grill

Day III –Wednesday, December 17, 2008

V. Tours at Y-12 or ORNL

A. **8:00 – 12:00 – Tours at Y-12**

7:00-7:15 – New Hope Center – meet hosts Sharon Disney and KJ Maddux for tour

8:00 – depart on bus with Ray Smith providing history of Y-12

8:30 – JL Davis – Central Training Facility

9:30 – Building 9213 – Nuclear Radiological Field Training Center

10:30 – New Hope – HEU/MF Storage Facility with Mona Williams & Operational Testing Demonstrations with David Speaks & Joe Rainwater

Participants divided into groups that will three locations for 1 hour

- 1. Safeguards Systems Technology Integration Center*
- 2. High Flux Isotope Reactor*
- 3. Coupled End-to-End Demonstration*

3:00- 3:15 - Break

B. **4:30 – Global Security and Nonproliferation Training – Sharon Wagner (ORNL)**

5:00 – Closing Comment Day III and Review Day IV agenda

Day IV – Thursday, December 18, 2008

8:00 - Introduction – Bernadette Kirk (ORNL)

VI. Next Generation Safeguards Specialists

8:15 – Ed Wonder, Office of International Regimes and Agreements/QinetiQ-North America, Principal Scientist QNA

VII. University Partnerships

9:00 - Dr. Glenn Sjoden – University of Florida (UF)

9:20 – Dr. Jason Hayward – University of Tennessee (UT)

9:40 - Dr. Man-sung Yim – North Carolina State (NCS)

10:00 – Break

10:20 – Dr. David Ford, Texas A&M University (TAMU)

10:40 - Dr. Shaheen Dewji - Georgia Institute of Technology (GA)

11:00 - Dr. Paul Wilson – University of Wisconsin (UW)

11:20 – Dr. Sudarshan Loyalkas - University of Missouri (UM)

11:40 - Dr. Shaun Clarke, University of Michigan (UM)

12:00 – at ORNL on own

1:00 - Cheryl Terry – Oak Ridge Institute for Science and Engineering (ORISE)

1:20 – Dawn Eipeldauer – ORNL Outreach to Universities and Internships

1:40 - Craig Williamson, South Carolina Universities Research Education Foundation (SCUREF)

2:00 - Open Discussion on University Engagement concerning university needs– Bernadette Kirk (ORNL), and Jeff Jay (SRNL)

4:00 – Wrap Up