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Title: Course Overview and Objectives

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Intended for: International Training Course on Implementating State Systems of Accounting for and Control (SSAC) of Nuclear Material for States with Small Quantity Protocols (SQP), November 2-7, 2014, Santa Fe, NM

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Course Overview and Objectives

International Training Course on Implementing State Systems of Accounting for and Control (SSAC) of Nuclear Material for States with Small Quantity Protocols (SQP)

Los Alamos National Laboratory
Peter Santi

Satellite View of Northern New Mexico

Staying in New Mexico

- Santa Fe is located 2134 meters (7,199 feet) above sea level (Los Alamos 7,320 feet)
- Altitude + low humidity = higher risk of dehydration.
- Lightning

Foreign National Requirements

- U.S. immigration law requires that all foreign nationals at all times possess their passport.

Course Overview

- This course is hosted by Los Alamos National Laboratory on behalf of the U.S. National Nuclear Security Administration (NNSA) in collaboration with the IAEA to support Member States in managing small quantities of nuclear and radioactive materials in a manner that is compliant with their international obligations.

Nuclear Safeguards at LANL

- The nuclear safeguards program at Los Alamos was started in 1966 by Bob Keepin,
  - Keepin had just returned from a two-year stint as the head of the physics section at the IAEA and recognized the need for a safeguards program.

LANL Safeguards Training Program

- Domestic training began in 1973
- IAEA inspectors participation began in 1974
- Dedicated IAEA NDA training for inspectors began in 1980
  - offered 56 times
  - Every new IAEA inspector since 1980 has taken the course
- SSAC course 1980-2009; SQP course
- Since its inception in 1973, LANL has conducted >310 courses, >**5400** students

Course Objectives

- Identify international legal instruments for nuclear safeguards
- Describe the main obligations under the Non-Proliferation Treaty
- Define the essential elements of an effective State System of Accounting and Control (SSAC) for states following the Small Quantity Protocol (SQP)

Course Objectives

- Identify and describe Fundamental Principles of Nuclear Material Control
  - Basics of licensing or authorizing possession and use of nuclear material.
  - Describe safeguards-related activities of operators or licensees/permit holders
  - Define basic elements of an Information Management System supporting SSAC

Course Objectives

- Explain reporting requirements of a State with a SQP
  - Define nuclear material subject to safeguards
  - List potential institutions that might use or store nuclear material
  - Discuss the initial report
  - Describe Additional Protocol reporting requirements
- Discuss support activities for IAEA access

Course Agenda

Date	Session Number	Lecture	Responsible	Time
Sunday, November 2		Course Registration		3:00-5:00pm
		Welcome Address Introduction of Participants	All	5:00pm
		Course Overview and Objectives	Peter Santi, LANL	5:30pm
		Opening Remarks and Keynote Presentation	Nancy Jo Nicholas, LANL	6:00pm
		Reception	IAEA (host)	6:30pm

Monday, November 3		Module 1: Legal and Regulatory Framework for Safeguards	Responsible	Time
	1.1	Introduction to IAEA Safeguards	John Lepingwell	9:00-10:30am
		<i>Break/Course Photo</i>		
	1.2	MS Experience in Implementing Safeguards	(TBD)	10:45-11:15am
	1.3	Group Discussion on State Structures for SSAC	Rebecca Stevens	11:15-11:30am
		<i>Lunch</i>		11:30am-1:00pm
		Module 2: Role and Key Functions of an SSAC		
	2.1	Role of the SRA in Implementing Safeguards	Stevens	1:00-2:00pm
	2.2	Applications of Nuclear Material	Lepingwell	2:00-2:45pm
		<i>Break</i>		2:45-3:00pm
	2.3	Exercise– Establishment of an SSAC, Part 1	IAEA/all	3:00-5:00pm

Course Agenda

Tuesday, November 4			Responsible	Time
		Summary of Day 1		9:00-9:30am
		Module 3: Accounting and Control of Nuclear Material		
	3.1	Nuclear Fuel Cycle	Deborah Dale, LANL	9:30-10:15am
	3.2	Exercise: Starting Point of Safeguards	Stevens	10:15-10:45am
		Break		10:45-11:00am
	3.3	Fundamentals of Nuclear Material Accounting and Control	Tomas Stepanek	11:00-12:00am
		Lunch		12:00-1:30pm
	3.4	WORKSHOP—Controlling Nuclear Material (initial report)	Stepanek	1:30-3:00pm
		Break		3:00-3:15pm
	3.4	WORKSHOP – Controlling Nuclear Material (inventory changes)	Stepanek	3:15-4:00pm
		Module 4: Provision of Information		
	4.1	WORKSHOP – Reporting Nuclear Material	Stepanek	4:00-5:00pm

Course Agenda

Wednesday, November 5			Responsible	Time
		Summary of Day 2		9:00-9:30am
	4.2	Overview of Additional Protocol Requirements	Lepingwell	9:30-10:30am
	4.3	Declarability Exercise + Protocol Helper	Kimberly Gilligan/ Mark Killinger	10:15-10:45am
		Break		10:45-11:00am
	4.4	Introduction to Additional Protocol Workshop	Stepanek	11:00-11:15am
	4.4	Additional Protocol Workshop (continued)	Stepanek	11:15am-12:00pm
		Lunch	Stepanek	12:00-1:30pm
	4.4	Additional Protocol Workshop (continued)	Stepanek	1:30-4:30pm

Thursday, November 6			Responsible	Time
		Summary of Day 3		9:00-9:30am
		Module 5: Provision of Access and cooperation		
	5.1	IAEA Nuclear Material Verification, Complementary Access	Lepingwell	9:30-10:30am
	5.2	Exercise on Complementary Access	Dale	10:15am-12:00pm
		Lunch with Keynote Speaker: Alan Carr (LANL)	LANL (host)	12:00-1:30pm
		Tour of the Bradbury Science Museum	LANL	1:30-5:30pm

Course Agenda

Friday, November 7			Responsible	Time
		Summary of Day 4		9:00-9:30am
	5.3	Overview of Key Steps in the Implementation of Safeguards Obligations (summary)	Stevens	9:30-10:15am
	5.4	Exercise: Establishment of an SSAC (wrap-up)	Dale	10:15-11:00am
		Group Presentations	All	11:00am-12:30pm
		Lunch		
		[TBD]		
		Course Wrap-up and Certificates		
		End of Course		

Thanks and Good Luck

**Finally, this is your course,
ask questions, learn, and have fun!**

Enjoy New Mexico

La Tierra Encantada