U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

NRC Inspector Role and Qualification

U.S. NRC – KINAC Cooperation

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U.S. NRC Inspector Qualification Program

The mission of the U.S. Nuclear Regulatory Commission (NRC) is to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment.

The U.S. Nuclear Regulatory Commission (NRC) has designed its inspector training and qualification program to ensure competency in four general areas:

1) legal basis and regulatory processes,
2) technical expertise,
3) regulatory practices,
4) personal and interpersonal effectiveness.

Wolf Creek Generating Station, Unit 1

May 2013

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Knowledge Requirements for U.S. NRC Inspection Staff

All inspection disciplines:

- Degree in physical science, engineering, statistics or equivalent.

MC&A Inspectors:

- Detailed knowledge of nuclear material processing operations, measurement systems, measurement quality control, physical inventory process, item and process monitoring programs, and alarm resolution programs.

Reactor Inspectors:

- Detailed knowledge of Reactor Engineering, Reactor Health Physics, Reactor Security, Emergency Preparedness, Fire Protection, Operator Licensing, Security Risk and Safety Culture Programs.

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U.S. NRC Inspector Qualification Method

- Self-study
- Formal classroom training
- Extensive on-the-job training consisting of accompanying trained and qualified inspectors on inspections
- Oral Qualification Board:
  - Board established to assess the qualifications and competency of an individual to conduct the prescribed NRC inspection or licensing program activities.

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U.S. NRC Inspector Required Training

- Inspection Fundamentals
- Inspecting for Performance
- Root Cause/Incident Investigation
- Effective Communications for Inspectors
- General Health Physics Practices
- Hazards Analysis
- Conducting Meetings

NRC Inspects Monticello Nuclear Plant

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U.S. NRC Inspector MC&A Formal Training

- **Basic Level Courses:**
  - MCA-110 Basics of Nuclear Materials Accountability
  - MCA-120 Basics of Nuclear Materials Control
  - MCA-130 Statistical Concepts in Nuclear Material Control and Accountability
  - MCA-260 Physical Inventory for Nuclear Material
- **Measurements:**
  - Chemical analysis
  - Nondestructive assay
  - Volume and mass
- **Measurement Quality Control:**
  - Calibrating measurement systems
  - Statistical quality control charts
- **Fuel Manufacturing Processes and Technology**

UF6 storage cylinders

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Summary:

- The U.S. NRC primary responsibility is to license and regulate the Nation's civilian nuclear industry and serve as a facilitator and mediator between the facility and the IAEA.
- Training for U.S. NRC inspectors is designed to develop an awareness of the role of the agency, the role of the inspector, and the technology being regulated.
- The qualification process is intended to provide inspectors with sufficient information to conduct inspections that are technically correct and in accordance with NRC regulations, policies and procedures.

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Reference

- http://www.nrc.gov/materials/fuel-cycle-fac/oversight.html, NRC Fuel Cycle Oversight Program
- http://pbadupws.nrc.gov/docs/ML0904/ML090400870.pdf, Fuel Facility Material Control & Accounting Inspector Technical Proficiency Training and Qualification Journal
- http://www.nrc.gov/materials/ql-materials.html., Nuclear Materials Quick links

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Reference (cont.)

Department of Energy:

DOE collaborates with foreign nationals in a large variety of scientific and technical disciplines. The goal of the Unclassified Foreign Visits and Assignments (FV&A) Program is to ensure balance between the value foreign nationals bring and DOE's need to protect national security interests. The DOE National Training Center provides instructor lead training for nuclear and material security disciplines.

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National Training Center – http://ntc.doe.gov/

DOE NTC Foreign Interactions (FI) – http://ntc.doe.gov/curriculumareas/ss/fit.aspx

National Training Center, Training Approval Program (TAP) – http://ntc.doe.gov/trainingresources/tap.aspx

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