Radioactive Waste Management

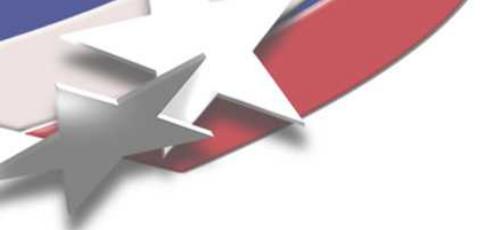## Sandia National Laboratories

October 2012

Betty Humphrey

Opening Discussion

Introductions

- Names

- Description of Responsibilities

- Their Objectives

Overview of Program

- **Purpose**—the purpose of this training program is to provide guidance and assistance to the EAEA staff to develop waste facility operations and practices that meet international standards.

- **Scope**—the scope of this program includes quality assurance and training, including development of procedures for operations and technical processes.

- **Objectives--**the main objective is to provide assistance to the EAEA staff to develop established fundamental procedures including document control, records management, procurement, and emergency planning

10 CFR 830.122—Quality Assurance Criteria

1. Management Program
2. Personnel Training and Qualification
3. Quality Improvement
4. Documents and Records
5. Work Processes
6. Design
7. Procurement
8. Inspection and Acceptance Testing
9. Management Assessment
10. Independent Assessment

49 CFR 100-185—Transportation

- **Hazardous Materials and Oil Transportation**

- **Oil Transportation**

- **Hazardous Materials Regulations**
  - **Shipping papers**
  - **Markings**
  - **Labeling**
  - **Placarding**
  - **Emergency Response**
  - **Training**
  - **Safety and Security Plans**

40 CFR 260, 261, and 268—Hazardous Waste

- Identification and List of Hazardous Waste

- Standards Applicable to Generators

- Standards Applicable to Transporters

- Land Disposal Restrictions

29 CFR 1910—Health and Safety

- **Work Surfaces**
- **Exit Routes and Emergency Planning**
- **Occupational Health and Environmental Control**
- **Hazardous Materials**
- **Personnel Protective Equipment**
- **Medical First Aid**
- **Fire Protection**
- **Compressed Gas**
- **Electrical**

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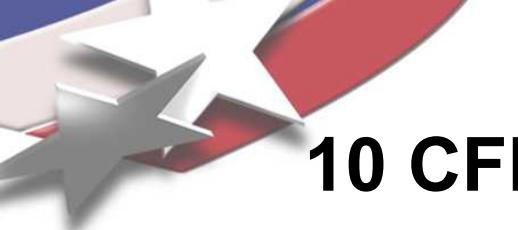
10 CFR 835—Occupational Radiation Protection

- **General Provisions**
- **Standards for Internal and External Exposure**
- **Monitoring in the Work Place**
- **Entry Control Program**
- **Posting and Labeling**
- **Records**
- **Reports to Individuals**
- **Design and Control**
- **Releases of Material and Equipment from Radiological Areas**
- **Accidents and Emergencies**

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DOE Orders

- **DOE Order 435.1 Radioactive Waste Management**
- **DOE Order 435.1-1 Radioactive Waste Management Manual**
- **DOE Order 414.1D Quality Assurance**
- **DOE Order 460.1B Packaging and Transporation Safety**
- **DOE Order 460.2 Departmental Materials Transportation and Packaging Management**
- **DOE Order 422.1 Conduct of Operations**
- **DOE Order 5480.19 Conduct of Operations Requirements for DOE Facilities**

Corporate Requirement Documents

- **Environmental, Health, and Safety Program**

- **Waste Management Program**

- **Training Program**

- **Quality Assurance Program**

- **Radiological Protection Program**

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Each Division/Department Documents

- **Plans and Procedures that specifically implement the requirements stated in the upper tier documents**

- **Plans are usually more general**

- **Procedures are step by step for specific operations or tasks**

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Specific Department Documents

- **Waste/Nuclear Material Disposition Program**

- **Non-Nuclear Operations Safety and Health Program**

- **RWNMDD Training Program**

- **Waste Acceptance Criteria**

- **Work Planning and Control Program**

Plans

- **Four Documents**

  – **Quality Assurance Plan**

  – **Managing Radioactive Waste at SNL**

  – **Waste Characterization Project Overview**

  – **Radioactive Waste Management Basis**

Quality Assurance Plan
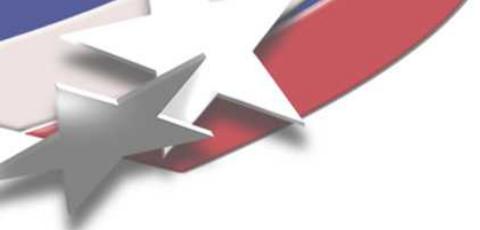
- **Management Criteria**
  - **Program**
    - **Drivers and responsibilities**
  - **Personnel Training and Qualification**
    - **Drivers and training program document**
  - **Quality Improvement**
    - **Non-conformances and corrective actions**
    - **Issues, concerns, and improvements**
    - **Lessons learned**
  - **Documents and Records**

Quality Assurance Plan

- **Performance Criteria**
  - **Work Processes**
    - **Work consistent with technical standards and regulatory requirements**
  - **Design**
    - **Verify and validate, quality significant items**
  - **Procurement**
    - **Meet established requirements**
  - **Inspection and Acceptance Testing**
    - **Establish criteria for accepting procured items and inspection procedures, calibration**

Quality Assurance Plan

- **Assessment Criteria**
  - **Management Assessment**
    - **Conducted by managers or project leads**
    - **Use of checklists based on procedures and requirements**
  - **Independent Assessment**
    - **Request independent assessors**
    - **Technically qualified auditors**
    - **Use of checklist**

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Procedure Workshop

- **Review and Questions** ?

- **Discuss Template**

- **Begin Drafting Procedures**