

**10 CFR 830 and
Chemical Hazard Analysis Issues**

Richard Stark, DOE-HQ/EH-53

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Safety Basis (consistent with and based on ISM)

- Define the work
- Identify and analyze hazards associated with the work
- Prepare a Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR)
- Establish hazard controls for adequate protection of workers, public, and environment
- Perform work in accordance with the safety basis
- Categorize the facility consistent with DOE-STD-1027.

Documented Safety Analysis (DSA)

- Describe the facility including design of safety systems and description of the work
- Provide systematic identification of hazards associated with the facility
- Evaluate normal, abnormal, and accident conditions that might contribute to the generation or uncontrolled release of radioactive and other hazardous materials, and consider the need for analysis of beyond design basis accidents
- Derive hazard controls to eliminate, limit, or mitigate hazards, necessary for adequate protection of workers, the public and the environment
- ef• Define characteristics of safety management programs necessary for safe operation

- 830 establishes ten “Safe Harbors” as acceptable methods for compliance with the DSA requirements of the 830 rule.
- Relevant ones for most situations are DOE-STD-3009 and DOE-STD-1120.

Analysis Relative to Treatment of Chemical Hazards in Hazard Category 1, 2, and 3 Nuclear Facilities

- 1. DSA is focused on facility level hazards; i.e., those hazards whose controls are primarily related to facility and process design for elimination, prevention, and mitigation.
- 2. Rule does not limit consideration of hazards to nuclear hazards. This is a nuclear facility safety rule, not a nuclear safety rule.
- 3. STD-3009 “Preparation guide for U.S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports”
 - Chapter 8 of 3009 describes how hazardous materials are to be identified, hazardous material exposures are to be controlled, how material control limits and worker exposure limits are handled, how hazardous material training is achieved, etc.
 - Chapter 9 of 3009 describes how radioactive and hazardous material waste management programs are to be analyzed and reviewed in the SAR.
- 4. STD-1120 “Integration of Environment, Safety, and Health into facility disposition Activities” provides similar guidance for combining 29 CFR 1910 and 29 CFR 1926 (Hazwoper) hazard analyses with nuclear safety analyses and worker hazard analyses.