

**Application of
Integrated Safety Management to
Design Phases
of DOE Projects**

**DOE Project Management Order (413.3),
Manual (draft), and Practices (draft)**

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April 3, 2001

Functions

There is a need to apply the functions of Integrated Safety Management to ensure that the design addresses hazards

Functional Comparison

ISM (Work)

Define the Work

Analyze the Hazards

Identify Controls

Perform the Work

Assessment and Feedback

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ISM (Design)

Define the Work (Design Baseline)

Design Basis/Analyze Hazards

Develop Design Requirements

Perform Design Work

Review and Validation

Continuous development and incorporation of safety analysis as an integral part of design is required.

Mechanism

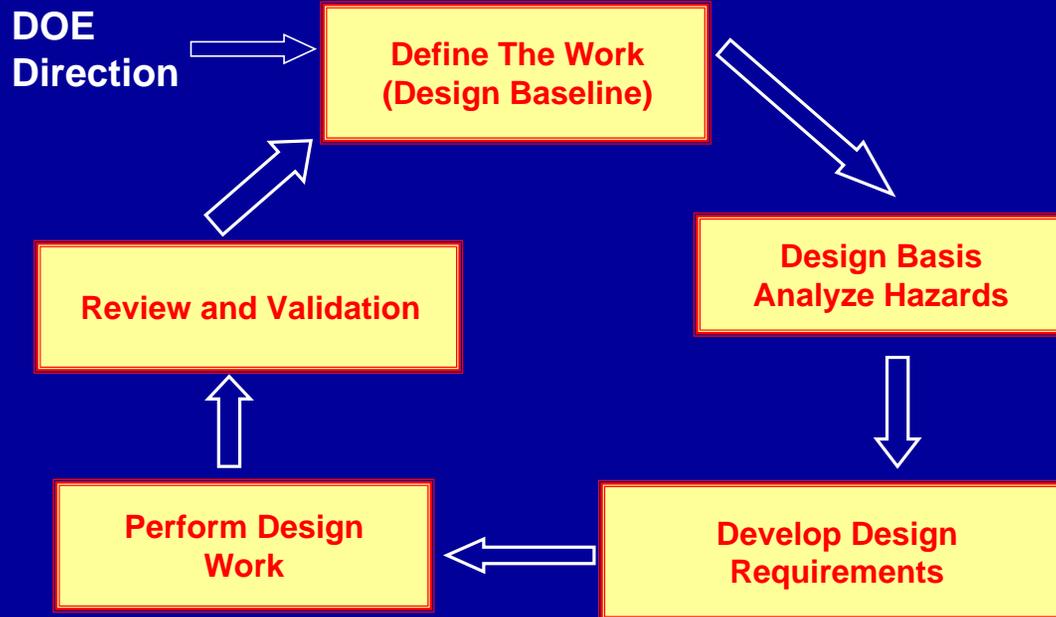
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Highlights

- Hazard Controls are integrated into the design early in the project
 - Formal expectations to build and document the baseline for SSCs
 - Deliberate link to contractor's Work Smart Standards
 - Establish DOE expectations for review and validation at each CD
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The fulfillment of safety functions by systems and structures becomes an integral element of mission functions.

SAFETY ASPECTS IN A TYPICAL DESIGN STAGE



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CRITICAL ISM EXPECTATIONS BY DESIGN STAGE

CONCEPTUAL DESIGN

- Preliminary Hazards Analysis Documented
- Preliminary Identification of Safety SSCs and Safety Functions

PRELIMINARY DESIGN

- Draft Preliminary Safety Analysis Report Established
- Design Basis Accidents Identified
- Finalize Identification of Safety SSCs and Safety Functions

FINAL DESIGN

- Complete and Approved Preliminary Safety Analysis Report
- Accident Analysis Completed and Design Basis Accidents Fully Established