

Safety Analyses for Environmental Restoration Activities at Hanford

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SAFETY ANALYSES FOR ENVIRONMENTAL RESTORATION ACTIVITIES AT HANFORD

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ABSTRACT

This report summarizes the approach and methods used to conduct and prepare safety analyses documentation of environmental restoration (ER) activities performed by Westinghouse Hanford Company. The ER safety analyses assignment includes several objectives: 1) providing safety input as an aid to the activity direction and decision process, thereby enhancing operational safety; 2) complementing rather than replicating analyses in the environmental documentation; and 3) creating a positive environment for authorization of the activity through an approved safety analysis document.

A multidisciplinary team approach is used to identify the real and potential hazards, evaluate the proposed decisions to determine if hazards are altered or added, recommend controls and operating limits, and suggest prudent ALARA actions that will enhance the safety of the activity. This approach is an iterative process that continually assesses progressive decisions against the baseline or any newly identified hazards. Administrative and design based controls mitigating the hazards are identified as part of the activity decision process rather than just providing a review of the activity. Key analyses and decisions are documented in meeting minutes pending incorporation in a final document.

Both qualitative and quantitative analyses are employed to support decisions. In the early planning stages of the activity, assumptions and qualitative analyses are used to support the decisions. Later, as more detail becomes available, quantitative analyses are used to validate or revise early assumptions and support final decisions.

The final stage of the safety analysis is to incorporate the information and analyses in a document that will support authorization of the activity. This information is organized and structured in an appropriate format. The format is used only to arrange information and not to determine what information is needed. The document is then reviewed, edited, approved, cleared for public release and issued. This synopsis provides a graded approach to the development of ER safety analyses.

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