

## PLANNED EVALUATIONS FOR APPROPRIATENESS OF ALLOWING INTENTIONAL MIXING OF CONTAMINATED SOIL UNDER THE LTR

### 1. BACKGROUND

Uncontaminated soil material is inevitably mixed with contaminated soil on many occasions, during the course of cleanup. This mixing is taken into account in the scenarios for evaluating the dose from residual material left at facilities undergoing license termination. While no specific regulation addresses mixing, intentional mixing of contaminated soil with non-contaminated soil is not generally permitted by the staff. However, there may be advantages financially or in exposure reduction to allowing intentional mixing, under certain limited circumstances.

This is a new issue that the staff has identified subsequent to SECY-02-0177 that identified the License Termination Rule (LTR) issues. Because it was identified late in the staff's analysis and preparation of this Commission Paper, only planned evaluations are provided at this time along with a schedule to provide the results of the staff's evaluations in a September 2003 Commission Paper.

### 2. ISSUE DESCRIPTION AND EVENTUAL DESIRED OUTCOME

2.1 Issue: The appropriateness of allowing intentional mixing of contaminated soil for meeting release criteria should be evaluated as an option under the LTR.

2.2 Desired Outcome: Decide whether it is appropriate to allow mixing of contaminated soil to meet release criteria (either restricted or unrestricted or both), and, if appropriate, recommend actions, such as new guidance to implement allowable mixing.

### 3. PLANNED EVALUATIONS

3.1 Evaluate existing and planned regulations and directives for remediation of contaminated facilities from international and national sources [e.g., International Atomic Energy Agency; U.S. Environmental Protection Agency (EPA); U.S. Department of Energy (DOE); U.S. Department of Defense (DoD); and individual States] to identify current policies and the bases for intentional mixing of contaminated soils.

3.2 Evaluate existing U.S. Nuclear Regulatory Commission (NRC) policies and experiences on rulemaking (especially the recent 10 CFR Part 40 proposed rule on unimportant quantities of source material and 10 CFR 40.51(e)); license terminations (e.g., AAR Manufacturing Group, Inc., Apollo); and other projects/issues (e.g., comments on New Jersey regulations, letter to Texas Department of Health, response to Wyoming on American Nuclear Corporation Gas Hills mill tailings site) for statements/guidance prohibiting or allowing intentional mixing of contaminated soils, to illustrate current NRC policies. It should be noted that the recent rulemaking concerning 10 CFR 40.51(e), sought public comment on the issue of dilution.

3.3 Evaluate experiences and available insights of other groups [e.g., EPA Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) closures; DOE; Corps of Engineers (for Formerly Utilized Sites Remedial Action Plan (FUSRAP) sites; and DoD (for Formerly Used Defense Sites, Closed, Transferring, and Transferred Facilities, and Base Realignment and Closures)] on policies and/or guidance provided on intentional mixing of contaminated soils.

3.4 Based on results of evaluations, determine the appropriateness of allowing intentional mixing of contaminated soil to meet release criteria of LTR.

3.5 If the staff determines that intentional mixing is appropriate, identify and recommend actions, such as new guidance and its bases, to implement allowable mixing.