

Ohio EPA
Division of Environmental Response and Revitalization
Assessment, Cleanup & Reuse Section, Remedial Response Program

TECHNICAL DECISION COMPENDIUM

Title: Human Health Cumulative Carcinogenic Risk and Non-carcinogenic Hazard Goals for the DERR Remedial Response Program

Date: 21 August 2009

Key Words: Risk goal, hazard goal, excess lifetime cancer risk, cumulative risk, remediation goals, hazard index

Purpose: The purpose of this decision document is to identify the human health cumulative excess lifetime cancer risk goal and the non-cancer hazard goal for the Remedial Response Program and the Federal Facilities Section of the Division of Environmental Response and Revitalization (DERR).

Background: To date, the DERR Remedial Response program has utilized the acceptable exposure level, or "risk goal", defined within the National Contingency Plan (NCP) for site enforcement and cleanup decisions. The NCP defines the acceptable excess upper lifetime cancer risk as generally a range between 1E-6 and 1E-4, with a point of departure of 1E-6 for determining remediation goals. For non-carcinogens, the cumulative hazard index (HI) should not exceed 1.

Many Divisions and Programs within Ohio EPA are currently operating using a fixed human health risk goal, rather than the risk range provided in the NCP. The Division of Hazardous Waste Management and the Division of Surface Water have adopted a fixed carcinogenic risk goal of 1E-5. In addition, the DERR Voluntary Action Program (VAP) has a carcinogenic risk goal for the development of generic numerical standards of 1E-5 and a non-cancer hazard index of 1 for all land uses. The use of a risk range for the cumulative carcinogenic risk goal by DERR Remedial Response has caused some confusion among internal and external stakeholders, and has contributed to some delays in the cleanup of sites.

Decision: The DERR Remedial Response program has adopted a human health cumulative excess lifetime carcinogenic risk goal of 1E-5 and a cumulative non-cancer hazard goal equal to a hazard index (HI) of 1, for all receptors and land uses. These goals are to be used as both the level of acceptable excess cancer risk or non-cancer hazard and for the development of

remediation goals for a site.

The defined risk and hazard goals should be applied as a *goal*, recognizing the need to retain flexibility during the evaluation and selection of remedial alternatives.

Rationale: The adoption of a single risk goal will help ensure consistency in site evaluation, remedy selection, and site cleanup, and is within the NCP acceptable risk range.

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