

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
Environmental Health Risk Assessment Program

INFORMATION PAPER

MCHB-TS-EHR

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SUBJECT: Toxicity Reference Value Maintenance Program

1. This paper defines the effort for the development and maintenance of toxicological reference values (TRVs) that are used within CHPPM ecological risk assessments. The goal of the project is twofold: (1) to eliminate duplication of effort across projects in general and (2) to ensure that the best available ecotoxicological benchmark sources are incorporated into a single protocol and set of available abstracts. This effort supports both site-specific projects and general consultations provided by the CHPPM on behalf of the Office of The Surgeon General (OTSG) pursuant to AR 200-1 (Environmental Protection and Enhancement).
2. The project began in 1999 as an attempt to standardize CHPPM's ecotoxicological database in order to improve the efficiency and quality of the risk assessments being conducted by CHPPM. The first project benefiting from the effort was the Resource Conservation and Recovery Act (RCRA) Permit Risk Assessment for the Anniston Chemical-agent Disposal Facility at Anniston Army Depot, Alabama. This project includes the development and documentation of TRVs for several different environmental endpoints: aquatic toxicity, sediment toxicity, soil toxicity, mammalian and avian toxicity via oral exposures, and mammalian toxicity via inhalation exposures. It is expected that additional endpoints may be added in the future. These endpoints include those most often used in Army risk assessments and all the endpoints being evaluated in risk assessments being performed by the Environmental Health Risk Assessment Program (EHRAP).
3. When the EHRAP is conducting risk assessments, the current TRV development protocol and the associated chemical-specific TRV abstracts can be used for that particular risk assessment. The standard abstracts and protocol can also be modified, if necessary, to meet project-specific requirements. The benefit is that information is already available for the project personnel using the standard protocol. The materials are designed for use within the project report because they can be easily inserted in an appendix. This eliminates the need to re-develop toxicological assessments in every risk assessment, which can be time consuming.
4. The current goal of the TRV Maintenance Program is to centralize the toxicological development tasks within the EHRAP and to periodically update the TRV development protocol and the abstracts that document the results of protocol implementation for the current identified substances.
5. A parallel effort has been incorporated into this project. The combined effort of the Environmental Health Risk Assessment Program and the Health Effects Research Program to develop a standard, comprehensive approach to the development of wildlife TRVs for military-related substances, which has resulted in the publication of CHPPM Technical Guide (TG) 254 (Standard Practice for Wildlife Toxicity Reference Values). This TG provides guidance for the development of Wildlife Toxicity Assessments that provide a detailed summary of all relevant toxicological information and develops the current best scientifically defensible wildlife TRVs for specific military relevant substances. When these Wildlife Toxicity Assessments are completed, the results will be directly incorporated into the TRV Maintenance protocol and database. CHPPM's Wildlife Toxicity Assessments are designed to represent the state-of-the-art in the development of TRVs for those substances of most concern to the Army.

Mr. Matthew McAtee / 5-8552