

5537

HUMAN HEALTH RISK ASSESSMENT (HHRA)
TEMPLATE COMMENTS

General Comments

- A) The HHRA template is a good idea. It will limit any inconsistency between the HHRA Technical Memorandum (TM) and it will decrease the amount of time required to develop HHRA TMs in the future. EG&G will support this effort in any way possible.
- B) The Department of Energy (DOE), the Environmental Protection Agency (EPA) and the Colorado Department of Health (CDH) are currently going through comment resolution on a number of HHRA Technical Memorandums. There are currently four separate HHRA TMs that need to be submitted. Agreeing on a template for any HHRA TM is premature since there are currently no final HHRA TMs accepted by DOE, EPA and CDH. A HHRA template should be written for each HHRA TM only after an approved TM is established. Therefore, EG&G recommends that efforts to establish a template continue with all affected parties. This is particularly relevant in light of the recent developments spawned from Dr. Gilbert's presentation on statistics as well as EG&G's forthcoming recommendations to DOE regarding "risk at the source" and "hot spots".

Specific Comments

A) Section 2.0, "Contaminants of Concern"

- The Contaminants of Concern (COC) flowchart as outlined in this chapter needs to be updated to current methodologies. First, the background methodology as outlined is going to be changed through a joint EG&G, DOE, EPA and CDH workgroup. This change should occur within the next 2-3 months pending receipt of Dr. Gilbert's work. Lastly, the evaluation of Special Case COCs is being closely scrutinized. It is unknown how EG&G, DOE, EPA and CDH will evaluate these Special Case COCs in the future.

It is recommended that the COC template be put on hold until the background comparison methodology and the Special Case evaluation methodology are approved by DOE, EPA, and CDH.

B) Section 3.0, "Exposure Scenarios"

- The most appropriate current and future land uses at an Operable Unit (OU) are delineated in the OU-specific Exposure Scenario TM. The type of land use will drive the exposure scenarios to be evaluated in the HHRA. Currently, there are two types of land use at the Rocky Flats Plant - industrial use and controlled open space use. These exposure scenarios will be assessed. The future exposure scenarios to be used in the HHRA for these two land uses has to first be agreed to by DOE, EPA and CDH in the OU specific TMs. DOE is currently undecided on the future land use issue. EG&G recommends that DOE state a position on future land use at RFP and that the position be emphasized in the template. An OU that resides in each type of current land use needs to be evaluated.

Since no OU-specific Exposure Scenario TMs have been approved by DOE, EPA and CDH, it is recommended that the exposure scenario TM template be put on hold until an Exposure Scenario TM for each type of land use has been approved.

- In our current discussions on the OU specific exposure scenarios, it has been accepted that certain exposure pathways will contribute an exceedingly small portion of risk. Given this fact, this exposure route is excluded from the risk assessment. The Exposure Scenario template does not allow this judgement to be made since all complete pathways need to be assessed. This is an expenditure of resources that could be avoided.
- The Recreational User scenario should be deleted from the Conceptual Site Model. This exposure scenario is not mentioned in the text, and is not an exposure scenario in any OU specific TMs.
- In the "Intake Factor" tables, many values are the same for both the RME and AVG cases. This does not meet the intent of guidance - RME and AVG values should be developed.
- There should be a correlation between Body Weight and Intake (ingestion & inhalation) Rate. This correlation is not shown in many of the "Intake Factor" tables as one goes from the RME values to the AVG values. Also, there should be a correlation between Surface Area and Body Weight.
- Many of the AVG values cited in the "Intake Factor" tables are not referenceable. The source for these values should be referenced.
- The Dermal Absorption Factors and the Permeability Constants for all chemicals need to be evaluated on a chemical specific basis.
- AVG values need to be added for Office Worker and Construction Worker scenarios.

C) Section 4.0, Models

- Environmental transport models for the transport of volatile organics in the vadose zone to a basement needs to be included in the Modeling TM.
- There are computer models outlined in this part that are intended to be used for transporting contaminants in the environment; this is to make model use across the plantsite more consistent. This method for assuring consistency is not flexible, and it does not assure that OU-specific concerns are met. Model selection needs to take into account these OU-specific concerns. Instead of this tact, we propose adding a sixth evaluation criteria for use with each pathway (i.e., air, surface water, etc.) assessment. This sixth criteria would evaluate each model within a pathway with respect to a site-wide use criteria. This approach would be more flexible while fulfilling the same goal.

D) Section 5.0, Toxicity Assessment

- Only Reference Doses and Slope Factors published in IRIS and HEAST will be used in the Toxicity TM.