

Charter for Independent Merit Review Panel for C-Farm Risk Assessment

1.0. Introduction

This charter describes the approach, organization, management, and deliverables associated with the Independent Merit Review Panel (Panel) for the C Farm Risk Assessment (Assessment).

CH2M Hill Hanford Group, Inc. (CH2M Hill) is completing the initial development of a risk assessment model to support retrieval of waste from Single Shell Tank C-106 (C-106), closure of C Tank Farm and compliance with DOE Order 435.1.

This charter will be in effect for Fiscal Year (FY) 2003 activities. If it is determined the Panel should continue its activities into FY 04, this charter will be revised and reissued.

The objective of the Panel is to provide independent third party review of the Assessment Model. The result of the review will be summarized in a report and provided to CH2M Hill manager (Manager) responsible for the Assessment. Additionally, as requested by the Manager, the Panel may be requested to consider other specific issues on this topic as part of their review.

The Panel is intended to be a merit review panel, not a technical peer review panel. Merit reviews are expected to consider programmatic and other non-technical aspects of projects, in addition to technical issues. Recommendations of a Merit review panel are considered advisory.

2.0. Background

The U.S. Department of Energy (DOE) is currently proposing to accelerate cleanup of the Hanford Site by 20 years, or more. Key to accelerating cleanup is accelerating the retrieval of waste from the Single Shell Tanks (SST) and closing those tanks. Successfully accelerating the closure of the SST requires a defensible risk assessment model that can be used to answer the central question of "Are we protective of human health and the environment?"

The Hanford Site contains 177 High Level Waste (HLW) underground storage tanks (63 % of all DOE tanks) located in 18 tank farms on two separate areas (200 East Area and 200 West Area). These tanks store approximately 201 million L (53 million gal) of waste containing about 200 million curies of radioactivity. There are 149 of the older (some nearly 60 years old) SST (approximately 80% of all DOE SSTs), each consisting of a reinforced-concrete vault with a single carbon steel liner. Sixty-seven of these tanks are known or assumed to have leaked to the soil (approximately 98% of all DOE tanks that

have leaked). The 28 newer tanks each have two carbon steel liners; none are known to have leaked.

Under the TPA, retrieval of all Hanford Site SST is to be completed by FY 2018 and closure by 2024. Closure of the Hanford tanks will occur under DOE Order 435.1 and the Washington State *Hazardous Waste Management Act* and its implementing “Dangerous Waste Regulations” (WAC-173-303).

Closure of the Hanford tanks and the surrounding soil is greatly complicated by the number of failed tanks as well as an estimated 3.8 million L (1 million gal) of tank wastes that are now in the surrounding vadose zone and groundwater.

The above facts make clear the need for a risk assessment model that has credibility with the public and the regulatory authorities involved in approving tank closure actions. Key to obtaining that credibility is an independent third party review of the model.

3. Scope Of Work

A risk assessment process and a preliminary risk model have been completed. A central element of the model development to date has been that the model application is iterative and will be updated as the waste from tanks is retrieved and additional field and waste characterization data become available. Further, the ability to generate quantitative estimates of risk for comparison to major environmental requirements and guidelines is complete. However, additional work is required before the model is ready for use by DOE and Ecology.

It is expected the Panel will provide a review of the current development status and future plans. As time and funding allow, the scope and order of the review will be:

- Programmatic model development and application process
- C –Farm Model conceptualization
- Sufficiency of the technical data base used to support the development
- Need for additional data and analysis
- Reliability and uncertainty of C-Farm model results
- Comparability of Exposure scenarios to other comparable applications

4. Washington State Department of Ecology & U.S. EPA

The Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA) shall be provided the opportunity to review and concur with the scope of the review and the Panel membership. Ecology and EPA shall also be provided with the materials provided to the Panel,

at the same time they are provided to the Panel, to allow Ecology and EPA the opportunity to provide comments to the Panel.

5. Stakeholders

Interested stakeholders shall, upon request, be provided with the materials provided to the Panel, at the same time they are provided to the Panel, to allow them opportunity to provide comments to the Panel.

6. Administration

The U.S. Department of Energy, Office of River Protection (ORP) and CH2M Hill shall select Panel members with concurrence by the Washington State Department of Ecology (Ecology). The activities of the Panel will be coordinated by the Manager or his designee.

It is anticipated the Panel will meet once and not more than twice to perform its review and issue its report. Any meeting will have clear objectives, scope, and schedule, to facilitate maximum results and enhance efficiency. The Manager, or his designee, and the Panel will, jointly, develop the agenda for a Panel meeting.

Panel meetings will be held in an open forum that encourages stakeholder, regulatory, and Tribal Nation participation.

The Manager, or his designee, will act as the point of contact for the Panel, manage Panel costs, and provide support to the Panel as necessary.