

***Final Tank Closure and Waste Management
Environmental Impact Statement for the
Hanford Site, Richland, Washington
(Final TC & WM EIS)***

**U.S. Department of Energy (DOE)
Foreword**

DOE appreciates the efforts of the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA), Region 10, which participated as cooperating agencies in the preparation of this *TC & WM EIS*. Although each had different roles as cooperating agencies, their involvement improved the quality of the National Environmental Policy Act (NEPA) process for this environmental impact statement (EIS).

Ecology began participating in the EIS development as a cooperating agency in 2002 and reconfirmed their participation in 2006 after signing the January 6, 2006, Settlement Agreement (*State of Washington v. Bodman*, Civil No. 2:03-cv-05018-AAM) (subsequently amended on June 5, 2008) ending litigation on the January 2004 *Final Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement, Richland, Washington*. Ecology's participation as a cooperating agency was important, among other things, to ensure that this *TC & WM EIS* meets Washington State Environmental Policy Act (SEPA) requirements. As a result of the 2006 Settlement Agreement, Ecology accepted additional responsibilities under a concurrent revised Memorandum of Understanding (MOU) to conduct quality assurance reviews of the groundwater and other technical analyses. Ecology also independently ran the models used in this EIS and verified DOE's results. Ecology's role as a cooperating agency supporting SEPA requirements is different from its role under the Hanford Federal Facility Agreement and Consent Order (also known as the Tri-Party Agreement [TPA]) or its role in implementing Washington State's Hazardous Waste Program at the Hanford Site. More-detailed information on Ecology's role can be found in the cooperating agency agreements in Appendix C, Section C.1.1, of this *Final TC & WM EIS*.

DOE appreciates Ecology's support in the development of this EIS and its participation in all the scoping meetings, public hearings on the *Draft TC & WM EIS*, and stakeholder interactions, as well as its support of the EIS schedule. This EIS is needed to support NEPA and SEPA decisions related to the TPA and 2010 Consent Decree (*State of Washington v. Chu*, Civil No. 2:08-cv-05085-FVS) milestone commitments. DOE also appreciates the efforts made by Ecology to understand the inventory, input assumptions, modeling results, and uncertainty analyses and to conduct the quality assurance reviews, contribute to analysis development, assist in presentation of analyses, and participate jointly in public involvement activities. Ecology has expressed both substantial areas of agreement and some areas of disagreement with DOE's Preferred Alternative selections in its foreword to this *Final TC & WM EIS*, consistent with the opportunity afforded to them under the provisions of the *TC & WM EIS* MOU between Ecology and DOE. For its part, DOE understands the state's perspective and will continue to work with them on the path forward at the Hanford Site.

Ecology's comments on the draft EIS can be found in the Comment-Response Document (CRD) (Volume 3 of this final EIS), Section 3, commentor number 498. Ecology and DOE have identified the need for additional secondary-waste-form development (see Chapter 7, Section 7.5.2.8, and Appendix M, Section M.5.7.5). Ecology has also focused on closure of the single-shell tanks; specifically, in Waste Management Area C. More-detailed information on Ecology's permitting process in relation to the NEPA actions can be found in Section 7.1.

DOE invited EPA to be a cooperating agency in 2002 and to participate in model development in 2006 after the January 6, 2006, Settlement Agreement was signed. EPA was not able to participate as a cooperating agency until 2010. Information on EPA's role as a cooperating agency can be found in Appendix C, Section C.1.2.

EPA's comments on the draft EIS as part of their responsibility under Section 309 of the Clean Air Act and DOE's responses can be found in the CRD, Section 3, commentor number 509, of this final EIS. DOE has made changes to this final EIS as a result of EPA's specific comments. EPA's foreword to this EIS indicates a limited timeframe for review of this final EIS. DOE appreciates EPA's focus on DOE's responses to their comments on the draft EIS.

EPA expressed concern regarding the impacts of sustained releases under Tank Closure Alternative 2B. To address this concern, DOE has added information regarding Alternative 2B to Chapter 5, Section 5.1.1.3.4, showing the potential impacts when discharges from the CERCLA [Comprehensive Environmental Response, Compensation, and Liability Act] cribs and trenches (ditches) are excluded. This was done to more clearly show the impacts of the proposed actions separate from the impacts attributed to the adjacent CERCLA cribs and trenches (ditches). For example, Figure 5-87 shows the hydrogen-3 (tritium) results under Tank Closure Alternative 2B, Case 3 (Case 3 excludes cribs and trenches [ditches]), indicating that the tritium concentrations peak two to four orders of magnitude below the benchmark in this case, which highlights that the primary concentration of tritium originates from discharges to cribs and trenches (ditches). In addition, the CRD, Section 2.7, discusses impacts of alternatives based on whether a proposed action being evaluated has occurred, and how mitigation strategies and environmental compliance vary based on those factors.

EPA had comments regarding the EIS modeling that was developed as an outcome of the 2006 Settlement Agreement. DOE believes that its detailed responses to EPA's comments on this specific issue address this EPA concern. EPA also expressed concern about DOE's disclosure of uncertainty relative to future use of the model. DOE believes that discussion of uncertainty, comparison of model results to field data, and disclosure of data and model limitations are important aspects of the analysis presented in this final EIS, as required under NEPA. More-specific discussion on this point can be found in the CRD, Section 2.4. In addition, the groundwater model development process was reviewed by a Technical Review Group (TRG). The TRG was formed to evaluate conversion of the groundwater model from previous models used on site (see the Summary, Section S.1.4.1, and Chapter 1, Section 1.6.1.2). For more information, the report titled *MODFLOW Flow-Field Development: Technical Review Group Process and Results Report*, dated November 2007, can be found on the *TC & WM EIS* website at <http://www.hanford.gov/index.cfm?page=1117&>.