Tri-Party Agreement

Hanford Update

SUMMER 2004

U.S. Department of Energy -- U.S. Environmental Protection Agency -- Washington State Department of Ecology

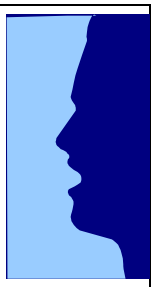
END STATES WORKSHOPS

The Revised Draft of the Hanford Risk-Based End States (RBES) Vision document was recently issued by the U.S. Department of Energy (USDOE), Richland Operations Office and the Office of River Protection. The Revised Draft RBES compares the cleanup end states in current baselines (proposed work activities) to land uses identified in the Comprehensive Land-Used Plan Environmental Impact Statement (CLUP-EIS) Record of Decision and the National Monument Proclamation. Suggested changes, or variances, to the current baseline activities are identified and discussed in this document. This draft, requested by USDOE Headquarters from all its sites, is not a decision document.

Parallel with revision of the draft RBES document, USDOE at Hanford, along with the U.S. Environmental Protection Agency and the Washington State Department of Ecology, are implementing an initiative to develop a three dimensional portrayal of the site (on the surface, in the soil, in the groundwater) once cleanup is complete and into the future. The goal is to enter into a dialogue with the public on their vision for Hanford end states to help shape future decisions. In addition, USDOE plans to use this dialogue to revise the RBES document accordingly.

The agencies plan to hold a series of three workshops in Richland, Washington at the Consolidated Information Center (CIC) at the Washington State University, Tri-Cities campus at 2770 University Drive, room 210. If you would like more information call Yvonne Sherman at (509) 376-6216. USDOE is planning a public meeting in the Tri-Cities in late September. Requests for evening public meetings in other locations will also be considered. You can obtain additional information on the RBES web site at http://www.hanford.gov/docs/rbes.

Public Comment Periods & Meetings



June 1 – July 16, 2004
Public comment period for proposed changes to K-Basin sludge/cleanup milestones.

July 12 – August 26, 2004
Public comment period for Research Development and Demonstration (RD&D) permit for the testing of a bulk vitrification treatment process for waste from selected nuclear waste storage tanks.

End States Workshops on …
June 23 – 24th
August 10 – 11th
September 14 – 15th

Hanford Cleanup Line

1-800-321-2008

Call the Hanford Cleanup Line for more information about these and other Hanford cleanup issues and activities.

Also in this issue ….

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Waste Treatment and Immobilization Plant Construction Update

Vitrification facilities continue to rise up from their foundations as massive and complex equipment arrives and is installed at the Waste Treatment and Immobilization Plant (WTP) site, marking continued progress in constructing what will be the world's largest radiochemical treatment facility. Scheduled for full operation in 2011, the WTP design work is currently 66% complete, while construction is 27% complete.

Foundations for the Pretreatment, Low-Activity Waste (LAW), and High-Level Waste (HLW) facilities are complete; and tall, thick concrete walls are being constructed in place. The Pre-treatment building's foundation, the largest of the three major WTP facilities, is nearly the size of four football fields—200 yards wide by 200 yards long. The eight foot thick foundation consists of 45,200 cubic yards of concrete laced with 7,200 tons of rebar and took six months to complete. When completed, the 119-foot tall facility will contain 109,000 cubic yards of concrete.

Numerous drain and process vessels are now at the construction site. The LAW facility sump collection vessels have already been installed. The HLW submerged bed scrubber vessel will clean melter off-gas, reducing particulates released to the environment and vaporizing excess water, to ensure the HLW facility meets all environmental permit conditions.

Fabricated on-site are four 375,000-gallon tanks for the Pre-treatment facility which will soon undergo hydrostatic testing to ensure they do not leak. Once the plant is operational, the stainless steel tanks will receive the wastes from Hanford's underground Double-Shell tanks via specially designed lined underground pipes.

The WTP craft workers have moved more than 122,000 truckloads of earth, placed more than 10,000 truckloads of concrete and installed more than 100,000 feet of piping and 19,000 tons of rebar. About 1,300 skilled craft workers and 2,300 professionals are currently on staff. At the peak of construction in 2005, more than 1,700 skilled craft will work at the construction site.

Construction of the fourth major facility, the Analytical Laboratory, is scheduled to begin this summer. The analytical lab will provide an adequate understanding of the process chemistry during its operation and to optimize the vitrification process and quality of glass production.

State of the Hanford Site Meetings

More than 300 people attended this year's "State of the Hanford Site" meetings held in four cities in March to discuss Hanford cleanup successes, challenges, and budget issues.

Much like past years, the agencies heard several common themes throughout the series of meetings. Import of waste from other locations for storage and/or disposal at Hanford remained a top concern for a majority of people. Issues related to that included discussions about the safety of transporting waste, terrorism concerns, and the belief that no more waste should come onto the Hanford site until what's already there is cleaned up.

Worker safety was another top priority, particularly at the Tri-Cities meeting. Workers discussed their concerns about tank vapor exposures and other safety issues with the decision-makers from the U.S. Department of Energy, U.S. Environmental Protection Agency, and Washington State Department of Ecology.

State of the Hanford Site meetings, now held for three consecutive years, provide the public with an open forum to talk about a broad range of Hanford issues.

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Hanford's Fiscal Year 2005 Budget Overview

In the last few years, the U.S. Department of Energy (USDOE) has fundamentally changed the way it does business in the Environmental Management (EM) Program. Long-term baselines and rigorous change controls are now used to establish near and long-term plans for Hanford cleanup.

These initiatives flow down to cleanup contracts in the form of contract performance incentives that are consistent with or accelerate Hanford Federal Facility Agreement and Consent Order (Tri-party Agreement [TPA]) milestones. Contractors develop detailed lifecycle baselines to achieve the performance incentives and have responsibility to manage their funds accordingly. The work is no longer re-baselined each year and annual budget requests flow from the baselines.

In February 2004, Secretary of Energy Spencer Abraham released the department's fiscal year 2005 budget request. The request for Hanford is about one-third of the department's total budget for EM:

Office of River Protection	$1.038 billion
Richland Operations Office	$1.027 billion*
Hanford Site Total	$2.065 billion

*Includes $56.5 million for safeguards and security and 13.7 M for regulatory support

Funding in fiscal year 2005 will support ongoing activities such as construction of the Waste Treatment and Immobilization Plant, continued retrieval of waste from single-shell tanks, ongoing removal and packaging of spent nuclear fuel, cleanup of the Plutonium Finishing Plant and continued cleanup along the Columbia River corridor. Tank closure activities may begin, provided a dangerous waste permit is in effect.

This year, USDOE held a half-day baseline workshop to provide members of the public, our regulators, stakeholders and members of the Hanford Advisory Board an opportunity to receive information about the baselines, as well as near and long-term cleanup activities. The TPA agencies also included budget and baseline information at the annual State of the Site meetings in Seattle and Kennewick, Washington and in Portland and Hood River, Oregon. All comments received from the public, stakeholders, the Board and others have been submitted to USDOE-Headquarters for consideration in the 2006 budget development.

Proposed Changes to K-Basin Sludge Treatment and Disposal

The Tri-Party Agreement (TPA) Agencies have completed negotiations on draft changes to the TPA on Spent Nuclear Fuel. The proposed changes revise milestones and schedules for K East and K West Basins sludge treatment and disposal, removal of the basins and cleanup of the soils underneath the basins.

The proposed changes identify a different approach the agencies believe better address worker and environmental risks. The changes include:

- Containerizing the sludge in the basins prior to treatment to minimize risk of release.
- Treating sludge for shipment off-site to the Waste Isolation Pilot Plant in New Mexico.
- Stabilizing some of the basins debris within a grout mixture and removing that stabilized debris along with the basins.
- Revising the schedule for removing the basins and cleaning up potentially contaminated soils under the basins.

The draft TPA change package is out for public comment period beginning June 1 through July 16, 2004. The agencies will consider all comments prior to finalizing the changes proposed. The change package is available on USDOE's website at: http://www.hanford.gov/tpa/changelist.htm

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New Deputy Designated Federal Official for the Hanford Advisory Board

Howard Gnann joined the U.S. Department of Energy's (USDOE) Office of River Protection (ORP) in July 2002. As a Senior Technical Advisor to the ORP Manager, he is responsible for helping reorganize the federal workforce and was the lead negotiator for the re-structuring of the Tank Farms and Waste Treatment and Immobilization Plant (WTP) contracts. By applying lessons learned from previous work experience, Howard was instrumental in guiding the change in culture and defining the lines of responsibility and accountability at ORP. In January 2004, Howard was appointed the Deputy Designated Federal Official for the Hanford Advisory Board. In this position, he is the official representative of the USDOE's Environmental Management program and serves as the USDOE liaison to Hanford's Advisory Board.

Howard has more than 30 years of nuclear facility design, construction and operations experience. Prior to working at ORP, he was a Deputy Assistant Manager at USDOE's Savannah River Site. Responsibilities included the daily management and organization of approximately 60 federal personnel involved in the processing and storage of legacy nuclear materials. Howard was a member of the negotiation team that re-structured the Westinghouse Savannah River Company contract into a more performance based approach. He also has experience in working in the Safeguards and Security organization for the Savannah River Site.

Howard spent three years in the commercial sector with Stone and Webster Engineering Corporation as a Senior Construction Supervisor. His responsibilities included the management of 15 engineers, technicians and administrative assistants surrounding the construction of the Feed and Withdrawal Facility which was one of several key facilities in the multi-billion dollar Gas Centrifuge Enrichment Plant in Portsmouth, Ohio. Howard's team was responsible for coordinating and monitoring firm-fixed price contractor work quality, cost and schedule performance, and safety. There he developed and implemented special procedures and reports to track overall project cost. Howard began his government career in 1972 with the Corps of Engineers as a Project Engineer. In 1970, he obtained his bachelors degree in Mechanical Engineering from Georgia Institute of Technology.

Nolan Curtis – Nuclear Waste Program, Program Administration Section Manager

Prior to joining the Department of Ecology, Nolan was the founder and principal partner of The Curtis Group, a professional services firm specializing in strategic development and executive management services for small business, non-profit, education, and community-based organizations. Nolan has over twenty years of experience in outreach and communications, strategic planning, and workforce development with Fortune 500, public agency, and private sector clients. Nolan has been a resident of the Tri-Cities since 1996, when he arrived from USDOE's Fernald Site to serve as a senior manager of communications for Fluor Corporation.

Nolan was a member of Fluor's Hanford proposal team, transition team, and served as Director Communications and External Affairs where he was responsible for management and coordination of all aspects of internal and external communications – policy, media relations, governmental affairs, corporate communications, and community relations. Later assignments included project management, case management, organizational assessment, and program administration functions for Fluor Hanford's Asset Transition program; local and regional business development, recruitment, and retention; administration of Fluor's intellectual property, technology transfer, and Entrepreneurial Leave of Absence programs; technical support for Hanford's Asset Disposition program; and, management of the Joint Information Center for Hanford's Emergency Operations Center during emergency/crisis operations.

Nolan is a graduate of California Institute of the Arts and Stanford University. He serves as an adjunct faculty member at City University (Tri-Cities) and is active in various professional and community organizations.

A Progress Report
FROM THE HANFORD ADVISORY BOARD

By Todd Martin
Chair, Hanford Advisory Board

The Hanford Advisory Board was established ten years ago to provide advice to the Tri-Party Agreement (TPA) agencies on Hanford cleanup and waste management. The Board includes representatives of local and regional government, Native American tribes, business interests, workers, the State of Oregon, environmental organizations, agencies, public interest groups, and the public-at-large. Todd Martin, representing Citizens for a Clean Eastern Washington, chairs the Board. Ken Bracken, Benton County, and Shelley Cimon, public-at-large, serve as co-vice chairs for the board. Principles adopted by the Board have helped to form a Northwest stakeholder vision of what the Hanford Site should be like in the future.

What should the Hanford Advisory Board be working on?

The Hanford Advisory Board (Board) has begun work on its priorities for the upcoming year. The process begins with the Board's annual Leadership Retreat where the Leadership Group develops a draft set of priorities for Board consideration in June. Subsequent to input from the full Board as well as the Department of Energy, the Washington State Department of Ecology, and the US Environmental Protection Agency, the Board will adopt its priorities in September.

This article highlights some of the high-level priorities developed at this year's Leadership Retreat for consideration by the full Board. If you have ideas for the Board's priorities, please email them to tholm@enviroissues.com.

The Board's leadership group has highlighted the following important cleanup decisions for presentation to the full Board in June.

> **Central Plateau**: Of central importance, both literally and figuratively, is the Central Plateau. Multiple decisions will be made in the next year on the cleanup approach for soil sites, groundwater and facilities in the Central Plateau. In addition, activities will be underway to decide how to complete cleanup of Hanford's high level waste tanks after the waste has been retrieved.

With hundreds of interrelated waste sites, approaching cleanup in the central plateau with an integrated strategy is

absolutely critical. The Board's leadership believes the Board should play a central role in helping shape an overarching Central Plateau strategy.

Columbia River: Along the Columbia River, the Leadership Group identified three pieces of work to be presented to the full Board for approval. First, the agencies will be considering the exposure scenario for waste sites along the river on which the final cleanup decisions will be based. At issue is what type of use the area will support (e.g. people living in the area, people recreating in the area, etc.).

Also along the Columbia River, the agencies will be making decisions on how to treat uranium contamination in the 300 Area groundwater. In addition, decisions on the reindustrialization of the 300 Area will impact cleanup approaches.

Groundwater: Although, specific sitewide groundwater decisions were not identified, sitewide groundwater is included in the priorities the Board will consider to ensure renewed focus on this important cleanup challenge.

Cleanup standards primer: The regulations governing Hanford cleanup are confusing and complex. The Leadership Group will recommend to the Board the development of a cleanup standards primer to educate agencies, Board members and other interested parties of the standards Hanford's cleanup actions are intended to meet. This document would not be technically detailed, but rather provide an accurate, concise and understandable summary of cleanup standards.

The Board's leadership does not intend the above priorities to be a comprehensive list of issues the Board tackles over the next year. Rather, it is to provide a focus and priority on the most important policy issues the Board foresees for the next year. As with all Hanford activities, unpredicted issues will arise that will require the Board's attention.

Again, both the Board and the agencies will consider the above list and a revised list of priorities will be adopted in September. If you have comments on which issues the Board should be tackling, please contact us by emailing: tholm@enviroissues.com.

How You Can be Involved

The next meeting of the Board will be held June 3rd and 4th in Kennewick. Public comment periods are provided during each day of the meeting. The Board encourages the public to attend its meetings and would like to hear from you about the issues and concerns you have about cleanup at Hanford. For more specific information on the June Board meeting, please contact Sharon Braswell at 509-376-8503.

Copies of consensus advice from the Hanford Advisory Board are available on the Hanford web page at: *http://www.hanford.gov/boards/hab/advice/adviceindex.htm* or by contacting EnviroIssues at 509-942-1906.

Send Comments to:
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Hanford Advisory Board
c/o Tammie Holm, EnviroIssues
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Richland, Washington 99352
Telephone: 509-942-1906
Fax: 509-942-1926
E-mail: *tholm@enviroissues.com*

To learn more about the Hanford Advisory Board:
www.hanford.gov/boards/hab/index.htm

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100 D Area Groundwater Cleanup Actions

The U.S. Department of Energy (USDOE) and the Washington State Department of Ecology, through an expanded pump-and-treat system, are aggressively addressing recently identified increased levels of chromium contamination in the central region of the 100-D Area. Last fall elevated chromium levels were found in groundwater along the shoreline adjacent to this area that exceed the State of Washington standard for protecting freshwater aquatic organisms. This segment of the river serves as a spawning bed for Chinook salmon. In February, USDOE directed its Groundwater Remediation Project contractor Fluor Hanford, to expand the existing pump-and-treat system (under the authority of the existing Record of Decision). This expanded system will be operational by the end of July.

The 100-D Area covers approximately one square mile on the Hanford site. Located near the horn of the Hanford Reach and downstream from the 100-N Area, this area was the site of two former plutonium production reactors and has been the focus of hexavalent chromium soil and groundwater cleanup since the mid-1990s. Chromium was used as a corrosion inhibitor in reactor piping. Hexavalent chromium, the highly soluble and thus mobile form of chromium, is a known human carcinogen and is toxic to fish. Concentrated solutions of this chemical leaked into the soil from storage containers and passed from the soil to the groundwater. Since hexavalent chromium does not bind to the soil, pump-and-treat is an effective treatment.

Since 1997, the USDOE has operated a continuous pump-and-treat system to reduce the amount of hexavalent chromium carried by the groundwater to the riverbed along the northeastern shoreline. In 2003, a passive system, an *In Situ Redox Manipulation* or ISRM barrier, was installed to address the southwestern portion of this plume. Work to extend the ISRM originally planned to address new groundwater contamination has been deferred until greater efficiencies can be demonstrated with this system.

300-FF-2 Operable Unit Record of Decision

The U.S. Department of Energy, Richland Operations Office (RL), U.S. Environmental Protection Agency (EPA), and Washington State Department of Ecology (Ecology), also known as the Tri-Party Agencies, have issued an Explanation of Significant Differences to change the 300-FF-2 Operable Unit Record of Decision (ROD). The ROD requires cleanup of nearly 56 waste sites through removal of contaminant soil, debris, and structures, treating waste as necessary, and disposal. (See map on next page)

An ESD is necessary when significant changes are necessary to a ROD. The 300-FF-2 ROD requires two significant changes, which are:

- Modify the soil cleanup level for uranium from 350 pico curies/gram (pCi/g) to 267 pCi/g
- Modify the cleanup levels for eight waste sites from industrial to unrestricted

The 300-FF-2 ROD required an engineering study to more accurately define the leachability and mobility of uranium in the 300 Area soils, and verify that the uranium soil cleanup level is protective of groundwater and the Columbia River. Any changes to cleanup levels require that an ESD be published. The engineering study was conducted over the last several years. It concluded the changes to the uranium distribution coefficient, in soil, was necessary based on site-specific data. This change required the uranium soil cleanup level to be lowered to 267 pCi/g because of the uranium mobility and leachability. Information on the study is contained in *300 Area Uranium Leach and Adsorption Project*, PNNL-14022, (available online at: http://www.pnl.gov/main/publications/external/technical_reports/PNNL-14022.pdf) and the data evaluation and calculations are contained in the *Protection of 300 Area Groundwater from Uranium-Contaminated Soils at Remediated Sites*, BHI-01667, available at DOE public reading room.

(*continued on next page*)

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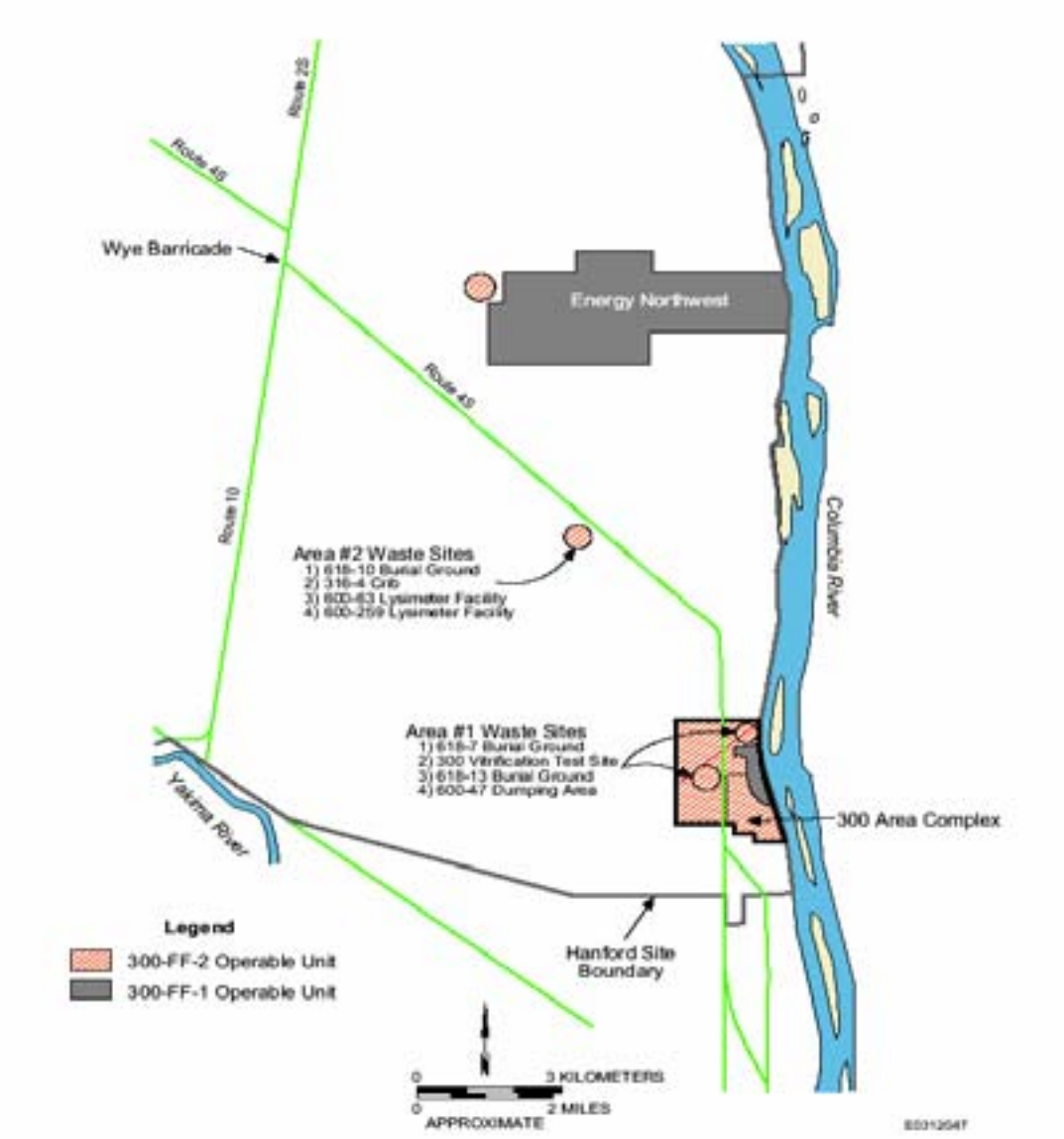
Cleanup of the 300-FF-2 waste sites is based on an industrial scenario, and the reasonably anticipated future land use for the 300 Area and surrounding vicinity remains industrial. However, further evaluation by the Tri-Parties since the 300-FF-2 ROD was approved, concluded that a change in cleanup levels would be appropriate for eight outlying waste sites in order to reduce the long term costs of institutional controls, and to allow other potential beneficial uses of these outlying areas. Cleanup levels for the eight waste sites would change from industrial to unrestricted, commonly known as a rural-residential scenario. The eight waste sites are: 1) 618-7 Burial Ground, 2) 300 Vitrification Test Site, 3) 618-13 Burial Ground, 4) 600-47 Dumping Area, 5) 316-4 Crib, 6) 600-63 Lysimeter Facility, 7) 600-259 Lysimeter Facility, and 8) 618-10 Burial Ground.

The complete ESD may be viewed at www.hanford.gov/spannounce.html. If you questions, please contact Mike Goldstein (EPA) at (509) 376-4919 or Chris Smith (RL) at (509) 372-1544.

300 Area Waste Site Groups Identified for Unrestricted Cleanup



Hanford Waste Treatment and Immobilization Plant (WTP) Construction Update

MARCH 2004

By the end of 2004, the WTP construction should be 30 percent complete.

Construction on the Analytical Laboratory is scheduled to begin this summer.

ORP

Hanford Happenings

8/10 – 11/2004 **End States Workshop on 200 Area**
Location: Richland, Washington

9/9 – 10/2004 **Hanford Advisory Board (HAB) Meetings**
Location: Seattle, Washington

9/14 – 15/2004 **End States Workshop on 300 Area**
Location: Richland, Washington

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