



0048650

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

February 10, 1998

Mr. John D. Wagoner, Manager
U. S. Department of Energy
Richland Operations Office
P. O. Box 550
Richland Washington 99352



Dear Mr. Wagoner:

RE: Final Determination pursuant to Hanford Federal Facility Agreement and Consent Order (Agreement) in the matter of the disapproval of the Department of Energy's Change Control Form # M-41-97-01¹.

This letter follows a series of Agreement dispute resolution discussions, meetings, and associated actions between Washington Department of Ecology (Ecology) and U. S. Department of Energy (DOE) staff following the submittal of DOE's Change Request # M-41-97-01. Enclosed please find my final determination in this matter pursuant to Agreement Part Two, Article VIII, Paragraph 30(D).

I want to note my deep concern over recent reports documenting that DOE's radioactive tank waste leaks have now begun to contaminate waters of the state, and are on the move to the Columbia. This fact adds a very real sense of urgency to reestablishing an aggressive program directed at completing the interim stabilization of Hanford's tanks without further delay.

DOE and its contractors have taken an inordinate amount of time in moving forward to safely retrieve these extremely hazardous radioactive wastes. These wastes present a very real, and increasing threat to human health and the environment. The interim stabilization program is the most significant preventative measure we have relied on to protect the environment prior to initiating tank waste processing.

I am particularly concerned that to date DOE's efforts to identify, assess and develop sound requirements, and to resolve single-shell tank safety issues have been inefficient, and have resulted in excessive expenditures, and the continuing loss of tank wastes to the environment. As a result, we have seen Agreement interim stabilization program work repeatedly delayed.

¹ Letter, 97-EAP-530: George H. Sanders, Tri-Party Agreement Administrator, U. S. Department of Energy, Richland Operations Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, June 27, 1997 (This letter transmitted DOE change request # M-41-97-01).



Mr. John D. Wagoner
February 10, 1998

Ecology certainly agrees that DOE must ensure that safety issues associated with the interim stabilization program are adequately assessed and managed through the development and implementation of sound waste management and safety programs. However, this need is no excuse for the inefficient interim stabilization program safety issue identification and resolution we have observed to date. It has been these inefficiencies, and continuing expectations by DOE that Ecology will minimize DOE responsibilities through a seemingly endless extension of program schedules, which have led to this dispute.

DOE must act to resolve the deep-rooted and far reaching safety issue management deficiencies associated with its cleanup program, and must reestablish a continuing and aggressive tank interim stabilization program. Given this denial of Change Request Form # M-41-97-01, DOE stands in violation of Agreement milestone M-41-22. I have consequently asked my staff to recommend appropriate enforcement.

I assure you that Ecology remains committed to working with DOE in resolving Agreement interim stabilization program issues. However, the clear intent of my final determination is to establish that compliance with Agreement milestones that have been established in the past is a basic expectation that must be met. I look forward to continuing to work with you to ensure that cleanup of the Hanford site is not delayed, and that results from the expenditure of the public's cleanup dollar are maximized.

Sincerely,



Tom Fitzsimmons
Director

Enclosure (1)

cc: Tanya Barnett, Office of the Attorney General
Mary Lou Blazek, ODOE
Chuck Clarke, EPA Region 10
Hank Hatch, FDH
Linc Hall, LMHC
Jackson Kinzer, DOE-RL
Jim Owendoff, DOE HQ
Lloyd Piper, DOE-RL
Marilyn Reeves, Hanford Advisory Board
George Sanders, DOE-RL
Administrative Record.

C: M-41-22 Final Determination cover letter.doc

FINAL DETERMINATION

Final determination pursuant to Hanford Federal Facility Agreement and Consent Order, (Agreement) Part Two, Article VIII, paragraph 30(D): in the matter of the disapproval of the U. S. Department of Energy's (DOE) change control form # M-41-97-01¹

This determination concludes a series of Agreement dispute resolution discussions, meetings, and actions by Washington Department of Ecology (Ecology) and DOE staff (the parties) following DOE's submittal of its Agreement Change Request # M-41-97-01. As such, this constitutes my final determination in this matter pursuant to Agreement Part Two, Article VIII, paragraph 30(D). This determination has been made following review and consideration of Ecology's Administrative Record in this matter.

I. Background and Milestone History

The DOE's 149 Single Shell Tanks (SSTs) hold some 54 million gallons of extremely hazardous high level radioactive mixed waste (HLW) generated largely during the fifty plus years of Hanford operations as a nuclear weapons material production complex. Approval of the Hanford Federal Facility Agreement and Consent Order on May 15, 1989 signaled the federal government's recognition that its activities are subject to the requirements of federal and state hazardous waste law, and the beginning of the largest hazardous waste cleanup effort in the nation.

Design and construction of the DOE's SSTs provide only one barrier between DOE's HLW and the environment, a violation of both the federal Resource Conservation and Recovery Act (RCRA), and Washington state's Hazardous Waste Management Act (HWMA). This fact, together with the knowledge that: (i) the SSTs are nearly 30 years beyond design life, (ii) that these tank wastes pose a substantial threat to the environment and the public health, and (iii) that many SSTs have already begun to leak their contents to the environment, provided the impetus to establish an enforceable compliance schedule governing the removal of "pumpable" tank liquids. This initial Agreement compliance schedule was documented as major milestone series M-05-00. Though also including a series of interim requirements, the basic M-05-00 commitment was as follows:

"M-05-00"	Complete single-shell tank interim stabilization. Complete single-shell tank interim stabilization activities (removal of pumpable liquid from those 51 single-shell tanks not yet stabilized) for all single-shell tanks except 241-C-105 and 241-C-106. All 149 tanks, including 241-C-105 and 241-C-106 will be interim stabilized and interim isolated by September 1996.	Sept. 1995"
-----------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------

¹ Letter, 97-EAP-530: George H. Sanders, Tri Party Agreement Administrator, U. S. Department of Energy, Richland Operations Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, June 27, 1997 (This letter transmitted Change Request # M-41-97-01 dated June 10, 1997).

Agreement Milestone M-41-22 Dispute
February 10, 1998.

Though established as a hazardous waste management compliance requirement, this M-05-00 commitment reflected the DOE's own schedule for interim stabilization², taking into consideration the need to resolve technical and safety issues at the tank farms.

Since establishment of this initial Agreement requirement, we have seen DOE and DOE contractor interim stabilization efforts struggle year after year due to inefficient safety issue management systems, and at times, unilateral DOE actions that halted required program work. Difficulties most often have centered on safety concerns (typically the potential presence of flammable gas, ferrocyanide, and/or problematic organic compounds) at tanks not yet interim stabilized. The parties have never wavered from the shared commitment to ensure that cleanup activities are conducted safely. However, Ecology has been increasingly frustrated over the years by DOE's inefficiency in identifying and quantifying safety issues, in developing necessary and clear requirements, and in moving to issue resolution within a reasonable amount of time. The results of DOE's inordinately slow and costly progress include increased risk (from tank leaks) to the environment and the public, and a long history of requests for Agreement compliance schedule modification and program delay.

The following tabulation lists principal Agreement modifications, and associated actions, which have led to the current dispute. It is offered both as partial documentation of the difficulties DOE has experienced in managing its interim stabilization program, and as demonstration of the extent to which Ecology has supported the need to ensure safe conditions throughout the cleanup process.

1. **September 7, 1990 (DOE Change Request # M-05-90-02):** First modification of the Agreement interim stabilization program following its establishment. This modification revised interim milestone M-05-02 ("Interim stabilize an additional 5 single-shell tanks: Sept. 1990") by decreasing the required number of tanks to 4. This change was requested due to "...ferrocyanide and flammable gas safety concerns", and slower progress than had been planned. Ecology approved this request.
2. **May 3, 1991 (DOE Change Request # M-90-03):** Second modification of the Agreement interim stabilization program. This modification revised all M-05-00 series interim milestones, thereby delaying virtually all interim stabilization projects in order to allow additional time for safety reviews regarding flammable gas, ferrocyanide, and organic salts. Agreement major milestone M-05-00 (completion by September 1995) was not modified by this change. However, all interim milestones were modified, including decreasing the number of tanks to be interim stabilized in 1991 from 9 to 4. Ecology approved this request.

² DOE's interim stabilization program has been underway since the 1970s.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

3. **September 9, 1991 (DOE Change Request # M-05-91-01):** This request proposed modification of Agreement interim stabilization program milestones M-05-03 through M-05-09 (the remainder of the series in effect) due to continuing technical and safety issue resolution difficulties. Ecology and the U. S. Environmental Protection Agency (EPA) disapproved this request due to failure for timely submittal, and failure to show good cause. Ecology's response noted in part:

"We recognize that resolution of the outstanding safety issues will be a complex and difficult undertaking. However, this does not preclude meeting the near term interim stabilization milestones by concentrating physical activities on tanks without these complications. *[Agreement interim stabilization milestones were not tank specific]* Furthermore, these safety issues are the subject of ongoing work and it should be anticipated that the later interim stabilization milestones will benefit from these activities. As such the request for change based on this is premature and does not meet the requirement for a timely change request pursuant to Article XL of the HFFACO.

The above points to a need for DOE to expand project scoping activities to an adequate level so that all details are taken care of in time to meet commitments. For the case of the SSTs interim stabilization program, meeting future interim milestones will be facilitated by timely and adequate discovery of safety concerns, compliance problems, and equipment shortfalls in time for appropriate corrective action. In particular, it is disconcerting to have received this change request shortly after the conclusion of negotiations on the previous SSTs interim stabilization change request."³

DOE's September 9, 1991 Change Request (# M-05-91-01) was withdrawn by DOE's letter dated December 17, 1991.⁴

4. **August 19, 1993 (DOE Change Request # M-05-93-02B):** Fifth modification of the Agreement interim stabilization program. This modification revised Agreement interim milestone M-05-05 ("Interim stabilize an additional 11 single-shell tanks Sept. 1993") by delaying the due date from September 1993 to January 1994. This change was requested in order to allow time for the completion of Agreement negotiations then in progress covering the restructuring of the interim stabilization program. However, progress had slowed to the extent that DOE conceded that it was unable to meet this milestone's requirements. Ecology approved this request.

³ Letter: Timothy L. Nord, Hanford Project Manager, Washington Department of Ecology, to Steven H. Wisness, U. S. Department of Energy, Richland, WA, October 2, 1991.

⁴ Letter: Steven H. Wisness, Hanford Project Manager, Department of Energy, Richland Operations Office, to Paul T. Day, Hanford Project Manager, U. S. Environmental Protection Agency, and Timothy L. Nord, Hanford Project Manager, Washington Department of Ecology, December 17, 1991.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

5. **January 25, 1994 (DOE Change Request Number M-41-93-01):** Sixth modification of the Agreement interim stabilization program. This Change Request was one of a number of major Agreement modifications negotiated in large part in response to growing public frustration over DOE Tank Waste Remediation System (TWRS) slow progress, and Tank Waste Task Force calls to "get on with cleanup".

This modification delayed the entire Agreement interim stabilization program to allow DOE additional time to resolve tank safety issues, including those associated with the presence of flammable gas, ferrocyanides, and organic salts. The negotiated agreement included requirements covering actions needed to resolve TWRS tank safety issues. The overall major milestone completion date (now M-41-00) was delayed from September 1995 to September 2000. Ecology approved this request.

6. **February 16, 1995 (Change Request # M-41-94-02):** Eighth modification of the Agreement interim stabilization program. This modification delayed Agreement schedules for interim stabilization of tanks in DOE's "U" tank farm in order to accommodate ongoing DOE safety reviews. Ecology approved this request.
7. **September 4, 1996 (Change Request # M-41-96-02):** Twelfth modification of the Agreement interim stabilization program. This modification delayed Agreement interim stabilization program activities and all remaining interim milestones due to "...the need to institute flammable gas controls on a number of single shell tanks."⁵ Among new (revised) interim milestones established on approval of this change request was milestone M-41-22, the subject of this dispute. This major revision of the Agreement interim stabilization program was approved by Ecology recognizing that DOE's change request and associated Recovery Plan was proposed in order to address "...the safety analysis requirements for the tanks, as well as the additional preparation time needed for the equipment and administrative controls due to the flammable gas concerns."⁶ See also following comments on DOE's December 12, 1995 letter regarding "CREATION OF DANGER".⁷ Ecology approved this request.

⁵ Letter, 96-WSD-216: George H. Sanders, Tri-Party Agreement Administrator, U. S. Department of Energy, Richland Operations Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, September 9, 1996. This letter transmitted Agreement Change Request # M-41-96-02, Revise M-41 Interim Milestones due to Flammable Gas Issue, September 4, 1996, and DOE's HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER, RECOVERY PLAN, M-41-00, "INTERIM STABILIZATION", also dated September 4, 1996.

⁶ Ibid.

⁷ Letter, 95-PRI-235: Jackson Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, December 12, 1995.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

8. **February 27, 1997 (Change Request # M-41-96-03):** Thirteenth modification of the Agreement interim stabilization program. This modification delayed the start of interim stabilization of 2 tanks under interim milestone M-41-21 due to a DOE stated need for further (flammable gas) associated safety analysis.⁸ Ecology approved this request.

II. Principal Intervening Actions, Publications, and Documents

1. **November 5, 1990: Public Law 101-510, Section 3137 "Safety Measures for Waste Tanks at the Hanford Nuclear Reservation" (The Wyden Amendment):** The Wyden Amendment was enacted due to a growing concern over DOE (Hanford site) tank safety issues, and associated DOE and DOE contractor waste management practices. In particular, the Wyden Amendment requires DOE to identify, monitor, report on, and to otherwise control waste management activities at those tanks which "...contain most necessary conditions that could lead to worker (onsite) or offsite radiation exposure through an uncontrolled release of fission products...". This list of tanks became known as the "watchlist".

Many early DOE difficulties in addressing tank safety issues and interim stabilization program activities resulted from attempts to interpret and otherwise comply with these requirements. Unfortunately, DOE efforts often took long to develop and resulted in cumbersome management systems and associated program delays.

2. **December 12, 1995: DOE Invokes Agreement "CREATION OF DANGER" Provisions:** The fact that Hanford tank wastes generate flammable gasses as they age (most notably hydrogen) has been studied, and has been a factor in tank farm equipment design and operations for many years. Unfortunately, decision-making in regard to potential flammable gas issues in recent years has unnecessarily slowed the Agreement interim stabilization program. Most notable among these delays was a November, 1995 DOE work stoppage when it decided to adopt a very conservative "blanket" approach imposing administrative controls (work restrictions) on all 177 Hanford (TWRS) tanks. In doing so, DOE invoked Agreement Article XXXII "CREATION OF DANGER"⁹ which provides that: "If any Party determines that activities conducted pursuant to this Agreement are creating a danger to the health or welfare of the people on the Hanford site or in the surrounding area or to the environment, that Party may require or order the work to stop."

⁸ Ibid.

⁹ Ibid.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

In invoking Article XXXII, DOE noted that "The additional flammable gas controls have imposed limitations on the RL's ability to continue work toward meeting several Hanford Federal Facility Agreement and Consent Order (Tri Party Agreement) milestones." *[Primarily those which were part of the interim stabilization program, and that these impacts]* "will require a milestone extension".

Ecology immediately questioned the appropriateness of this blanket work stoppage, and in resulting correspondence¹⁰ regarding tank cleanup efforts noted that:

"We at Ecology are very concerned over the impacts your current actions will have on reaching that objective. To date we find ourselves essentially forced to accept your actions in the face of an extreme lack of information from USDOE (e.g., the basis for placing Hanford tanks under additional control, how these decisions were reached, and what your plans are to safely continue work required to meet our objectives as agreed to under the Tri-Party Agreement).

While we support safe management of Hanford tank wastes, we are struggling to understand your recent decision to place flammable gas and organic safety administrative and access controls on all tanks (all those not already on the "watch list"). Though we are in receipt of your December 12, 1995 letter asserting creation of danger (pursuant to Tri-Party Agreement Article XXXII), we have neither agreed with this claim or granted any relief from (TPA) work requirements. ... Unless Ecology concurs in the work stoppage and agrees to an extension of schedule, existing tank milestones will remain in effect (See Article XXXII, paragraph 107)."

On January 8, 1996, Ecology forwarded follow-on inquiries to DOE regarding the impacts of the flammable gas controls on TWRS work, and the process for resolving safety issues so that Agreement required work could be performed.¹¹ This letter questioned the need for imposing these very conservative restrictions on all TWRS tanks (including very low risk tanks). It also inquired as to associated impacts to cleanup budgets and work schedules. DOE's response¹² did little to assure Ecology that DOE's tank safety issues were being effectively addressed.

¹⁰ Letter: Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, to Jackson Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, December 22, 1995.

¹¹ Letter: Toby Michelena, TWRS Project Manager, Nuclear Waste Program, Washington Department of Ecology, to Jackson Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, January 8, 1996.

¹² Letter, 96-TSD-010: Jackson Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office to Mike Wilson, Manager, Nuclear Waste Program, Washington Department of Ecology, March 15, 1996.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

Subsequent to invoking the Agreement's CREATION OF DANGER clause, DOE proposed that a number of the affected tanks be added to the flammable gas watch list (FGWL). This proposal drew criticism and substantial comment, including that of Hanford's Chemical Reactions Subgroup (CRS/TAP) which concluded that it did not support the technical work associated with adding tanks to the FGWL. The CRS/TAP noted that "It is therefore our unanimous, technical opinion that the presented study does not represent an adequate technical basis for supporting addition of specific tanks to the FGWL."¹³

During the first six months of 1996, Ecology staff repeatedly voiced their concern that a valid technical basis for invoking creation of danger did not exist, and our concern over inefficient, or in some instances non-existent DOE safety issue resolution procedures. DOE retracted its recommendation to add tanks to the FGWL on June 31, 1996.¹⁴

3. **Increasing concern over DOE management systems, their effectiveness, and associated high costs:** In the months following retraction of DOE's proposal to add tanks to the FGWL, DOE and contractor efforts to move the interim stabilization program forward continued to struggle. Program costs escalated and requests for delay continued. Concern by entities having oversight responsibility over DOE activities grew as well. For example, the Defense Nuclear Facilities Safety Board (DNFSB)¹⁵ conducted a number of staff, and Board member inquiries into Hanford site management systems. Following one of these, DNFSB Chairman John Conway forwarded concerns to DOE's then Assistant Secretary for Environmental Management Alvin Alm including these observations on the inefficiency of DOE Hanford site management systems:

"...facility operations and maintenance are conducted in one of three modes:

- All drawings and labels are considered suspect. This results in extensive system walkdowns for even minor operations, which in turn results in frustrated workers and excessive costs.

¹³ Recommendations from the 18th meeting of the CRS/TAP, February 25, 1996.

¹⁴ Internal Memorandum: Jackson Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, to Stephen Cowan, Deputy Assistant Secretary, U. S. Department of Energy, Washington D. C., June 31, 1996.

¹⁵ The Congressionally established and funded Defense Nuclear Facilities Safety Board has independent safety oversight responsibility for DOE nuclear facilities and associated management practices.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

- Drawings and labels are supplemented by the knowledge of long-tenured employees who know which drawings are or are not reliable. This mode is only as reliable as the quality and continued presence of these key employees. In the last 2 years, Hanford has reduced its workforce by over 5,000 employees, many of whom took early retirement. This mode also breeds contempt for written instructions, which the workers know to be incorrect or incomplete.
- Work is conducted with trust in the correctness of drawings and labels. This is often a basic assumption of new or inexperienced employees, including subcontractor workforces. (In the last several years, Hanford has endeavored to "outsource" a variety of services to reduce costs and vitalize the local economy.)¹⁶

Associated concerns were noted in a resulting trade publication (Nuclear Remediation Week), which noted that:

"The DNFSB is also troubled by DOE's apparent inability to comply with milestones it has agreed to meet. The board is concerned that key milestones for stabilization of plutonium, tank waste remediation and spent fuel management will not be met."¹⁷

4. **July 25, 1997: DOE halts Agreement interim stabilization program work:** On July 25, 1997, DOE's Assistant Manager for its Tank Waste Remediation System forwarded fiscal 1998 work plan and budget preparation directives to its Project Hanford Management Contractor (PHMC), Fluor Daniel Hanford Inc.¹⁸ This unilateral action, taken by DOE in light of tightening Hanford site cleanup budgets, and the need to scrub interim stabilization program costs constitutes a flagrant violation of Agreement requirements. In it, DOE directs that "The PHMC shall place an immediate moratorium on startup of saltwell pumping on additional tanks, with the exception of assumed leakers (SX-104 and BY-106). ... The tank stabilization and isolation program shall be placed on a one year reengineering moratorium in FY 1998 to reduce the cost of saltwell pumping to as low as safely possible, with the goal of being \$500 to \$700K per tank."

As a result of this action, Hanford site FY1998 Agreement interim stabilization program funding was cut from near 15 to 4 Million.

¹⁶ DNFSB Staff Memorandum "Recent History of Configuration Management Problems at the Hanford Site and Contributing Causes": P. Gubanc and D. Ogg to G. W. Cunningham, DNFSB Technical Director, February 24, 1997.

¹⁷ Article, "DNFSB: Poor Hanford Management Threatens Safety": Nuclear Remediation Week, King Publishing Group, Washington D. C., Volume 4, Number 19, May 2, 1997.

¹⁸ Letter, 97-MSD-256: Jackson Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, to H. J. Hatch, President, Fluor Daniel Hanford Inc., July 25, 1997.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

This action was particularly disturbing in that within this same letter, DOE attempted to ascribe Ecology approval when it noted that DOE, PHMC, and Ecology management had met in mid June 1997, and that "The Management Team reached a general consensus that the optimum path forward is retrieving, treating, and immobilizing the tank wastes." Ecology management made it very clear at that June session that though retrieving, treating, and immobilizing Hanford's tank wastes is its highest priority, that fact in no way relieves DOE of its responsibility to meet other required elements of Hanford cleanup.

5. **January 15, 1998: DOE HQ assessment recognizes TWRS safety issue management problems:** This 60 day assessment of DOE Hanford site TWRS management practices was performed at the direction of Federico Peña, Secretary of Energy, by an 8 member independent team of nationwide senior DOE and management consulting firm experts.¹⁹ Three of the four Principal Findings of this report provided further confirmation of the inefficiencies which have plagued DOE's interim stabilization program, and which have led to this dispute. Specifically, these three findings were:

"**Finding 1.** Current TWRS management processes for addressing safety and technical issues lack sufficient rigor to consistently detect, manage, and resolve problems before they become major issues for the program. This lack of rigor is evident throughout several aspects of TWRS nuclear safety management processes."

"**Finding 2.** Processes for reviewing and resolving technical and safety comments are weak and have failed to address significant issues in several cases."

"**Finding 4.** Management problems identified in previous self-assessments persist."

6. **Urgency in the need to reestablish an aggressive SST interim stabilization program:** In November of 1997, Pacific Northwest National Laboratory (on behalf of the DOE) published two reports²⁰ documenting that DOE HLW from five of its tank farms have now begun to impact area groundwater. Discussions with DOE staff

¹⁹ REVIEW OF THE FEDERAL MANAGEMENT OF THE TANK WASTE REMEDIATION SYSTEM (TWRS) PROJECT at the Department of Energy's Hanford, WA Site, Delivered to Secretary of Energy Federico Peña and Richland Operations Office Manager John Wagoner, January 15, 1998.

²⁰ Results of Phase 1 Groundwater Quality Assessment for Single-Shell Tank Waste Management Areas S-SX at the Hanford Site, V. G. Johnson and C. J. Chou, Pacific Northwest National Laboratory, Richland Washington, November 1997, and

Results of Phase 1 Groundwater Quality Assessment for Single-Shell Tank Waste Management Areas T and TX-TY at the Hanford Site, F. N. Hodges, Pacific Northwest National Laboratory, Richland Washington, November 1997.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

indicate that HLW impacts from other area tank farms to groundwater have also been confirmed, and that additional reports are being prepared. Human health and environmental risks associated with these releases are poorly understood.

III. Procedural history of this dispute

On June 27, 1997, DOE submitted Agreement Change Control Form #M-41-97-01 to Ecology for approval.²¹ By this submittal, DOE requested the extension of Agreement interim milestone M-41-22, "START INTERIM STABILIZATION OF 6 SINGLE SHELL TANKS, 9/30/97". Under DOE's proposal, this milestone's compliance date would be delayed to March 31, 1998 "... due to continuing issues in resolving the flammable gas concerns for the Hanford tanks." Subsequent interagency meetings at the project manager level failed to result in agreement in this matter, and on July 16, 1997, DOE exercised its right to invoke dispute resolution under the terms of Agreement Article VIII.²² This dispute and discussions at the project manager level were subsequently extended by agreement through August 26, 1997.²³ However, these discussions also failed to result in resolution, and, on August 26, 1997, DOE elevated this dispute to the agencies' Inter-Agency Management Integration Team (IAMIT)²⁴ thereby extending the dispute through September 23, 1997.

On September 23, 1997, discussions between the IAMIT representatives indicated that the scope of discussions regarding change request M-41-97-01 should be expanded to consider impacts to the major (M-41-00) milestone: Complete Single Shell Tank Interim Stabilization.

²¹ Letter, 97-EAP-530: George H. Sanders, Tri Party Agreement Administrator, U. S. Department of Energy, Richland Operations Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, June 27, 1997 (This letter transmitted Change Request # M-41-97-01 dated June 10, 1997).

²² Letter, 97-MSD-259: George H. Sanders, Tri-Party Agreement Administrator, U. S. Department of Energy, Richland Field Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, July 16, 1997.

²³ TRI-PARTY AGREEMENT CORRESPONDENCE: EXTENSION OF DISPUTE RESOLUTION FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER MILESTONE M-41-97-01, approved by agency IAMIT representatives Jackson E. Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, and Michael A. Wilson, Manager, Nuclear Waste Program, Washington Department of Ecology, August 13, 1997.

²⁴ Letter, 97-MSD-271: George H. Sanders, Tri-Party Agreement Administrator, U. S. Department of Energy, Richland Field Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, August 26, 1997.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

The time period for discussion was consequently extended, first through October 28, 1997, and subsequently through December 16, 1997.²⁵

At this point in the dispute proceedings, Ecology and EPA requested that DOE forward executive management correspondence describing their view of the association between the M-41-97-01 request and the major milestone, and their proposal regarding dispute resolution. As a result, DOE's Deputy Manager, Lloyd Piper (on behalf of John D. Wagoner, manager of the Hanford site) forwarded correspondence dated October 24, 1997.²⁶

Within this correspondence, Mr. Piper noted that DOE "...has re-evaluated the status of completing Tri-Party Agreement Major Milestone M-41-00, "Complete Single Shell Tank Interim Stabilization" due September 2000. This evaluation indicated that the flammable gas issue associated with all 177 tanks and the Fiscal Year (FY) 1998 reduction in budget and scope for interim stabilization will cause a delay in the completion of the Tri-Party Agreement Major Milestone M-41-00." And that DOE "...proposes that the scope of the discussions on Change Control Form M-41-97-01 dispute be expanded to include the remainder of Tri-Party Agreement Major Milestone M-41-00." DOE then proposed that the entire Agreement interim stabilization program be renegotiated: "RL believes that a partnering effort similar to that of the Tri-Party Agreement Major Milestone M-44-00, Tank Characterization Program negotiations, would be appropriate in resolving the issues identified on this major milestone."

²⁵ TRI-PARTY AGREEMENT CORRESPONDENCE: EXTENSION OF DISPUTE RESOLUTION FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER MILESTONE M-41-97-01, approved by agency IAMIT representatives Jackson E. Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, and Michael A. Wilson, Manager, Nuclear Waste Program, Washington Department of Ecology, September 23, 1997, and

TRI-PARTY AGREEMENT CORRESPONDENCE: EXTENSION OF DISPUTE RESOLUTION FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER MILESTONE M-41-97-01, approved by agency IAMIT representatives Jackson E. Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, and Michael A. Wilson, Manager, Nuclear Waste Program, Washington Department of Ecology, October 28, 1997.

²⁶ Letter, 97-MSD-289: Lloyd Piper for John D. Wagoner, Manager, U. S. Department of Energy, Richland Operations Office, to Chuck Clarke, Regional Administrator, U. S. Environmental Protection Agency, Region 10, and Tom Fitzsimmons, Director, Washington Department of Ecology, October 24, 1997.

Agreement Milestone M-41-22 Dispute
February 10, 1998

This proposal was rejected by Ecology (as the lead regulatory agency for TWRS issues) on November 26, 1997.²⁷ Within this response Mr. Silver noted that: "I do not believe that such negotiations are warranted. In addition, I note the increasingly apparent importance of removing these radioactive mixed wastes from Hanford's failing single shell tanks without delay." And that "It would be inappropriate to simply abandon this agreed-to [*interim milestone M-41-22 Agreement dispute*] process, and begin renegotiating the entire major milestone series."

Consequently, at the parties' December 16, 1997 IAMIT meeting, DOE submitted its Statement of Dispute in this matter.²⁸ Ecology staff also provided its December 16, 1997 Statement of Dispute in this matter (concurrent with by the EPA).²⁹ The parties' representatives subsequently agreed to one final extension of dispute proceedings at the IAMIT level (to January 27, 1998).³⁰ Consideration of these statements did little to resolve issues between the parties, and after discussion at their January 27, 1998 meeting, Ecology's IAMIT representative informed DOE that the dispute remained unresolved. This dispute was consequently elevated for a final determination by the Director of Ecology.

This dispute has now come to me for final resolution.

IV. DOE Proposed Resolution of the M-41-97-01 (milestone M-41-22) Dispute

Under DOE's M-41-97-01 proposal to modify Agreement interim milestone M-41-22, the milestone's September 30, 1997 due date would be extended to March 31, 1998, due to continuing issues in resolving the flammable gas concerns for the Hanford tanks.

²⁷ Letter: Dan Silver for Tom Fitzsimmons, Director, Washington Department of Ecology, to John D. Wagoner, Manager, U. S. Department of Energy, Richland Operations Office, November 26, 1997.

²⁸ Letter, 97-MSD-299: George H. Sanders, Tri-Party Agreement Administrator, U. S. Department of Energy, Richland Operations Office, to Mike Wilson, Program Manager, Nuclear Waste Program, Washington Department of Ecology, December 16, 1997. This letter transmitted DOE's STATEMENT OF DISPUTE FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT) MILESTONE M-41-22, START INTERIM STABILIZATION OF 6 SINGLE-SHELL TANKS BY SEPTEMBER 20, 1997.

²⁹ STATEMENT OF DISPUTE, Washington State Department of Ecology and U. S. Environmental Protection Agency, December 16, 1997.

³⁰ TRI-PARTY AGREEMENT CORRESPONDENCE: EXTENSION TO DISPUTE RESOLUTION FOR HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER CHANGE REQUEST M-41-97-01, approved by agency IAMIT representatives Jackson E. Kinzer, Assistant Manager, Tank Waste Remediation System, U. S. Department of Energy, Richland Operations Office, and Michael A. Wilson, Manager, Nuclear Waste Program, Washington Department of Ecology, December 16, 1997.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

DOE has most often noted the need to finalize safety documentation (e.g., Safety Authorization, Basis for Interim Operation, Justification for Continued Operation) necessary prior to authorizing stabilization work.

During the course of this dispute, DOE has also noted impacts associated with reductions in interim stabilization program funding, and has proposed that this dispute be resolved through renegotiation of the entire interim stabilization major milestone (M-41-00) series.

It should also be noted that on December 16, 1997, DOE offered a revised M-41-97-01 Agreement Change Request Form³¹. This request proposed yet further delay of work under the Agreement's M-41-22 interim milestone in that it not only proposed extension of the milestone's September 30, 1997 compliance date (to March 31, 1998), but in addition, proposed that the parties reduce the number of tanks stabilized from 6 to 3. In submitting this (unsigned) proposal, DOE noted that "Subsequent to the submittal of Change Control Form M-41-97-01, safety assessments carried out for the remaining tanks to be interim stabilized indicate that additional safety controls and equipment will be required to proceed with interim stabilization activities. The extensive analyses and the resulting mitigation measures have significantly extended the schedule to meet M-41-22 even further than anticipated when Change Control Form M-41-97-01 was originally submitted."

V. Findings and Final Determination

Ecology has never wavered from the basic tenets that cleanup work at Hanford must be conducted safely, and that Agreement requirements must be established with consideration of associated safety issues. However, DOE, and DOE contractor management deficiencies have clearly contributed to their failure to meet Agreement milestone M-41-22 requirements as follows:

- DOE and its contractors have been deficient in identifying and assessing safety issues associated with the interim stabilization project, developing sound and timely safety requirements, obtaining and installing necessary equipment, and in moving Hanford tank safety issues to resolution within a reasonable amount of time.
- DOE's unilateral action to drastically cut interim stabilization program funding will, unless corrected, force widespread additional delay to (and violation of) additional required Agreement interim stabilization work.
- DOE and contractor management in this matter, coupled with recent information documenting that DOE's HLW has begun to impact area groundwater, adds a sense of increasing urgency to rectify management deficiencies and to reestablish an aggressive interim stabilization program without further delay.

³¹ Agreement Change Request # M-41-97-01, Rev 1., unsigned, dated December 12, 1997.

Agreement Milestone M-41-22 Dispute
February 10, 1998.

- During this (M-41-22) dispute DOE has not raised new issues justifying extension. In fact, as part of the Parties' September 1996 Agreement Revision (M-41-96-02 and its accompanying Recovery Plan), DOE noted that it had identified the equipment needed to allow interim stabilization to proceed:

"...For the purpose of this Recovery Plan, it is assumed all tanks will require an exhaustor for all or a portion of the time they are being pumped. Additional analysis will be done to determine when and if an exhaustor can be removed or if it will be required at all.

Therefore, approximately 10 exhaustors will be required for FY 97. This equipment to be installed will be classified as Defense in Depth per DOE Order 3009 and not Safety Class.

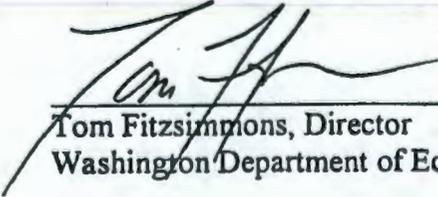
If RL elects to change the order of the tanks being interim stabilized, RL will notify Ecology of the change. The Recovery Plan is based on numbers of tanks and not specific tanks per se."

Despite this agreement, DOE failed to implement the Recovery Plan. In the course of this dispute DOE has presented no evidence that the plan could not be implemented, or that implementing the plan would threaten human health, worker safety, or the environment. Therefore, DOE could have complied with interim milestone M-41-22, and has not shown any valid reasons for not doing so.

Therefore I find that sufficient cause for extension of Agreement interim milestone M-41-22 does not exist, and that DOE stands in violation of this Agreement requirement.

In light of the Administrative Record and the findings outlined above, and in an effort to ensure the safe and timely interim stabilization of DOE's Hanford site HLW tanks, my final determination in this matter is as follows:

1. DOE's proposal (Change Request Form M-41-97-01) is hereby disapproved.
2. Appropriate enforcement action will follow.



Tom Fitzsimmons, Director
Washington Department of Ecology

2-10-98
Date