

**Response to Public Comments on Establishment of Schedules for the  
Cleanup of Several Types of Waste at Hanford  
(M-91-03-01 and M-16-03-03 Change Packages)**

April 2004

**1. Comments submitted by Ken Niles, Oregon Department of Energy**

**Comment 1:** We believe the proposed milestones fall short in some areas and additional work is needed. M-91 and M-16 are restricted in scope and fail to address the large amount of pre-1970 buried waste, both TRU and non-TRU. If these burial grounds must be exhumed for any reason, it is highly likely that they will result in the generation of a large quantity of TRU waste needing characterization and treatment.

**Response to Comment 1:** In June 2002, the Tri-Parties, following public comment, established Tri-Party Agreement (TPA) milestones (M-13 and M-15 series) to address the investigation and clean up of all 200 Area waste sites, including pre-1970 burial grounds. The first milestone in that series ((M-13-000) requires a Remedial Investigation/ Feasibility Study (RI/FS) work plan for all 200 Area Burial grounds and solid waste landfills be submitted December 2004. Pre-1970 burial grounds are being addressed through the CERCLA processes. Washington State Department of Ecology (Ecology) and U.S. Department of Energy (USDOE) currently are working to develop the Data Quality Objectives and an appropriate sampling and analysis plan to support that RI/FS work plan preparation.

In addition, enforceable schedules for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established in the 300-FF-2 Operable Unit Record of Decision. The ROD identifies a technical approach to develop the capability to retrieve, package, and treat, as necessary, waste generated from the exhumed pre-1970 burial grounds.

M-16-93 requires submittal of an implementation work plan for the acquisition of capabilities necessary to manage TRU and mixed transuranic (TRUM) waste generated through Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) actions. This work plan will specifically cover any TRU or TRUM waste that is generated as a result of a CERCLA decision to retrieve pre- 1970 buried waste.

**Comment 2:** Additional Tri-Party Agreement (TPA) milestones are needed to provide for characterization, retrieval, treatment and storage/disposition of all buried waste. By limiting the focus as M-91 and M-16 do, the agencies are left with many outstanding issues to resolve later. This makes it difficult to ensure that facilities are available when needed, and are of sufficient capacity and capability to handle all the wastes that may be sent to them. We encourage the Tri-Parties to immediately begin negotiation on these larger issues to ensure that the funding is available and the plants are built when needed.

**Response to Comment 2:** The TPA agencies developed the M-91 milestone series using the most current waste forecast information available at the time. We recognize there is a high degree of uncertainty associated with potential processing needs required by wastes generated through future CERCLA remedial actions and other clean up activities. Several TPA milestones (M-91-03 and M-16-93) were established to assess processing capacity and capabilities required for wastes generated through CERCLA and other clean up activities. These milestones have requirements for revisions in 2009, 2012, and 2013 to coincide with completion of investigations of the 200 Area waste sites and completion of retrieval of post-1970 contact-handled suspect TRU from the low-level burial grounds. M-91-01 requires the acquisition of capabilities to treat remote-handled (RH) TRU by 2012 that is

planned to provide processing capability for CERCLA waste, also. DOE will identify and seek needed funding.

**Comment 3:** The Tri-Parties should: Include milestones for quantification, retrieval and disposition of pre-1970 TRU waste and require the work to be fully funded;

**Response to Comment 3:** In June 2002, the Tri-Parties, following public comment, established TPA milestones (M-13 and M-15 series) to address the investigation and clean up of all 200 Area waste sites, including pre-1970 burial grounds. The first milestone in that series ((M-13-000) requires a Remedial Investigation/ Feasibility Study (RI/FS) work plan for all 200 Area Burial grounds and solid waste landfills be submitted December 2004. Pre-1970 burial grounds are being addressed through the CERCLA processes. Ecology and DOE currently are working to develop the Data Quality Objectives and an appropriate sampling and analysis plan to support that RI/FS work plan preparation.

In addition, enforceable milestones for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established. These milestones identify a technical approach to develop the capability to retrieve, package, and treat, as necessary, waste generated from the exhumed pre-1970 burial grounds. This cleanup work is part of 300-FF-2 Operable Unit Record of Decision.

M-16-93 requires submittal of an implementation work plan for the acquisition of capabilities necessary to manage TRU and TRUM waste generated through CERCLA Actions. This work plan will specifically cover any TRU or TRUM waste that is generated as a result of a CERCLA to retrieve pre-1970 buried waste.

**Comment 4:** Require DOE to aggressively obtain capacity to handle, characterize, treat and package wastes;

**Response to Comment 4:** Capabilities to treat contact-handled (CH) mixed low-level waste (MLLW) and certify CH TRU waste have been effectively demonstrated at Hanford; however, there is limited commercial or USDOE capability for the processing of RH or CH large container wastes. Due to this gap in processing capabilities, M-91 milestones were established requiring capabilities/facilities for processing of RH and large container TRU waste and MLLW and to support the processing requirements for waste generated during CERCLA clean up actions.

**Comment 5:** Focus on the highest risk wastes first; and

**Response to Comment 5:** The Parties believe the M-91 change package does place priority on addressing the highest risk wastes first through enforceable retrieval milestones. Records for waste retrievably stored in low-level burial ground 218-W-4C, the first burial ground required to be retrieved under milestone M-91-40, indicate that the plutonium inventory represents nearly three quarters of the plutonium inventory within all of the post-1970 retrievably stored suspect TRU waste burial grounds.

In addition, many of the containers within burial ground 218-W-4C contain soils exhumed from the 216-Z-9 Crib. These drummed soils contain approximately 40,000 grams of plutonium and volatile organic compounds, including carbon tetrachloride and its degradation products. Activities are currently underway to capture the releases of these compounds from vent risers within sections of 218-W-4C. Removal of these suspect TRU drums lessens the potential for releases to the soil column and potentially the groundwater.

**Comment 6:** Ensure regulatory compliant storage of all wastes.

**Response to Comment 6:** The M-91 change package includes a compliance schedule to retrieve retrievably stored suspect mixed waste and to place mixed waste into compliant storage.

## 2. Comments submitted by Todd Martin, Chair, Hanford Advisory Board

**Comment 1:** The proposed M-91 and M-16 TPA milestones should require aggressive schedules for characterization, retrieval, treatment and storage/disposition of all buried waste in compliance with regulations. The Board's input on the M-91/M-16 change package is rooted in this fundamental principle.

**Response to Comment 1:** In June 2002, the Tri-Parties, following public comment, established Tri-Party Agreement (TPA) milestones (M-13 and M-15 series) to address the investigation and clean up of all 200 Area waste sites, including pre-1970 burial grounds. The first milestone in that series ((M-13-000) requires a Remedial Investigation/ Feasibility Study (RI/FS) work plan for all 200 Area Burial grounds and solid waste landfills be submitted December 2004. Pre-1970 burial grounds are being addressed through the CERCLA processes. Washington State Department of Ecology (Ecology) and U.S. Department of Energy (USDOE) currently are working to develop the Data Quality Objectives and an appropriate sampling and analysis plan to support that RI/FS work plan preparation.

In addition, enforceable schedules for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established in the 300-FF-2 Operable Unit Record of Decision. The ROD identifies a technical approach to develop the capability to retrieve, package, and treat, as necessary, waste generated from the exhumed pre-1970 burial grounds.

M-16-93 requires submittal of an implementation work plan for the acquisition of capabilities necessary to manage TRU and mixed transuranic (TRUM) waste generated through Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) actions. This work plan will specifically cover any TRU or TRUM waste that is generated as a result of a CERCLA decision to retrieve pre-1970 buried waste.

Pre-1970 buried waste will be addressed as necessary through CERCLA processes. The change package does include capacity planning and reporting milestones for TRU and TRUM waste subject to CERCLA processes.

**Comment 2:** DOE, the Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) should ensure that the TPA:

Includes milestones for quantification, retrieval and disposition of pre-1970 TRU waste and requires the work to be fully funded;

**Response to Comment 2:** As noted in our previous response, the Parties believe the milestones in the TPA provide a strong framework to address pre-1970 transuranic contaminated waste. In addition, the issue of funding work required by the TPA is already addressed in the TPA.

**Comment 3:** Contains enforceable schedules for the shipment of TRU waste to WIPP;

**Response to Comment 3:** Although this draft Change Package does not include enforceable schedules for shipping TRU waste to Waste Isolation Pilot Project (WIPP), DOE is working to identify ways to accelerate shipping TRU off of the Hanford Site.

**Comment 4:** Focuses on highest risk wastes first;

**Response to Comment 4:** The Parties believe the M-91 change package does place priority on addressing the highest risk wastes first through enforceable retrieval milestones. Records for waste retrievably stored in low-level burial ground 218-W-4C, the first burial ground required to be retrieved under milestone M-91-40, indicate that the plutonium inventory represents nearly three quarters of the plutonium inventory within all of the post-1970 retrievably stored suspect TRU waste burial grounds.

In addition, many of the containers within burial ground 218-W-4C contain soils exhumed from the 216-Z-9 Crib. These drummed soils contain approximately 40,000 grams of plutonium and volatile organic compounds, including carbon tetrachloride and its degradation products. Activities are currently underway to capture the releases of these compounds from vent risers within sections of 218-W-4C. Removal of these suspect TRU drums lessens the potential for releases to the soil column and potentially the groundwater.

**Comment 5:** Is responsive to the Board's principles on shipment of wastes to Hanford (Advice #143, Principles 1, 2, 3, 4 and 6); and,

**Response to Comment 5:** The draft change package covers Hanford waste and forecasted waste to be generated at Hanford. Currently, shipments of TRU waste to Hanford are enjoined, i.e., banned. Should waste be identified to come to Hanford, the Parties will consider the issues identified in your previous advice.

**Comment 6:** Requires DOE to aggressively obtain remote-handled TRU capacity.

**Response to Comment 6:** Hanford continues to work with representatives from the WIPP to track the permit modification schedule that DOE believes will enable the disposal of Hanford RH TRU. Once the Waste Acceptance Criteria (WAC) are established (assumed to be no earlier than 2006), Hanford will incorporate these requirements into the RH TRU facility design criteria. We will explore opportunities to accelerate the start up of RH TRU operations prior to 2012; however, the majority of waste requiring processing in this facility is not forecasted to be generated until post 2007.

**Comment 7:** Regarding the safe storage of TRU, The TPA should contain milestones for characterization of CH- and RH-TRU suspect mixed waste from the 200 Area burial grounds;

**Response to Comment 7:** Milestones M-91-40 and M-91-41 require all retrievably stored CH and RH post-1970 suspect TRU waste be designated within 90 days of retrieval in accordance with State requirements. In addition to this state-required designation, TRU waste will undergo additional characterization to meet WIPP certification requirements.

**Comment 8:** Mixed hazardous and transuranic waste (TRUM) should be stored as Resource, Conservation and Recovery Act (RCRA) waste until it is treated to meet Land Disposal Restrictions (LDR) or shipped to WIPP for disposal in a timely manner; and, the TPA should not allow non-compliant storage of TRU waste.

**Response to Comment 8:** The M-91 change package includes a compliance schedule for retrieval of retrievably stored suspect TRU mixed waste, and placement of mixed waste into RCRA compliant storage until the waste is treated to meet LDR standards (when required) or the TRUM is certified for shipment to WIPP. The DOE and the Department of Ecology have a disagreement on the scope of the State's authority to require LDR treatment of mixed TRU waste at Hanford, but have agreed to submit that question to a federal judge for resolution. All newly generated TRUM is currently stored in RCRA permitted facilities.

**Comment 9: M-16 -** The Board advises DOE to provide a work plan describing what Comprehensive Environmental Response and Liability Act (CERCLA) waste will be generated through cleanup and how those wastes will be treated (RH and CH). Additionally, steps to acquire treatment capability and plans for disposition (shipment offsite or Hanford disposal) should also be included.

**Response to Comment 9:** Several TPA milestones (M-91-03 and M-16-93) were established to assess processing capacity and capabilities required for wastes generated through CERCLA and other clean up activities. These milestones require revisions in 2009, 2012, and 2013 that coincide with completion of the 200 Area waste sites investigations and retrieval of post-1970 CH suspect TRU from the low-level burial grounds. Milestone M-91-01 requires acquiring capabilities to treat and/or process post-1970 RH TRU by 2012 that will also allow processing capability for CERCLA clean up waste.

**Comment 10:** Lastly, the Board requests it and the public be kept informed and involved in discussions regarding priority shifts in site cleanup activities that may occur as a result of M-91 funding choices.

**Response to Comment 10:** Cleanup at Hanford sometimes involves trade-offs in scheduling. Priority decisions are intended to be made by fully considering relative risks, desired end states, and regulatory requirements. Helping to establish priorities is an important function of the Hanford Advisory Board (HAB) and every effort is made to provide timely information so that the HAB can contribute to these on-going evaluations.

### **3. Comments submitted by Gerald Pollet, Heart of America Northwest**

**Comment 1:** The lack of priority given to all buried wastes – not just TRU - and the spread of contamination from burial grounds has prompted us to call for the rapid investigation of the burial grounds, and retrieval and characterization of all buried wastes.

**Response to Comment 1:** Pre-1970 waste is addressed in other TPA milestones. USDOE plans to characterize pre-1970 waste under RCRA past-practice or the CERCLA processes to determine what, if any, remedial actions would be required before closing any facilities, waste site or burial grounds that contain this waste.

**Comment 2:** Of course, the notion of retrieving these wastes and then returning them to unlined burial grounds is legally unacceptable and defies common sense. To date, however, there has been no effort to include a requirement that retrieved wastes – regardless of classification or type after characterization - may only go into lined landfills with leachate collection and legally compliant monitoring systems. Indeed, USDOE's plans for new landfills and the Central Waste Complex contain no mention of receipt of post-characterization retrieved LLW quantities, and recent public statements by USDOE and contractor managers for Hanford disposal facilities indicate they plan to re-dump wastes back into unlined burial grounds.

**Response to Comment 2:** The M-91 change package contains enforceable schedules for US DOE to retrieve and designate retrievably stored wastes. Retrieved wastes designated as mixed are required to be stored in RCRA compliant facilities. Retrieved wastes designated as non-mixed can be stored in a facility meeting the regulatory requirements for LLW.

Some of the Hanford Solid Waste (HSW) EIS alternatives analyzed disposing of LLW generated during post-1970 suspect TRU retrieval in unlined trenches; however, the preferred alternative is to place this waste in lined trenches. In addition, USDOE and the regulators are evaluating the use of lined trench disposal through the Inter-Agency Management Integration Team Working Group process.

**Comment 3:** Following retrieval, neither the proposed new TPA changes nor any baseline of USDOE include proper remediation and closure of the active Low-Level Burial grounds. Indeed, USDOE-RL's baseline, adopted in 2003, shows that the unlined burial grounds would not be "closed" (i.e., properly capped to prevent migration after characterization of the releases to the soil and groundwater, and cleaning up the releases) until the year 2035!!

**Response to Comment 3:** Closure of the low-level burial grounds will be scheduled through the RCRA Part B permit. Some burial grounds may be in operation until 2035 (for example, trench 94 that is used for disposal of Navy reactor compartments). DOE's current plan is to integrate the closure of the currently operating low-level burial grounds with the CERCLA closure of 200-SW-2 Operable Unit (OU) (including inactive pre-1970 burial grounds). DOE must submit a work plan for the closure of this OU by December 2004. Whether the permitted burial grounds are closed individually through

the permit or integrated with the CERCLA OU, the public will have the opportunity to comment on the schedule and performance requirements.

**Comment 4:** These types of concerns led Heart of America Northwest and other public interest groups to propose to Washington Ecology a principle for these negotiations that the goal would be to ensure the retrieval and characterization of all buried wastes. It was agreed that this would be a goal for the negotiations, and stated in a memo/letter from Ecology director Tom Fitzsimmons to the Hanford Public Interest Network groups in January, 2003. However, this was never sought by Ecology as a goal in the negotiations with USDOE.

**Response to Comment 4:** The M-91 negotiations that Tom Fitzsimmons was referring to in your referenced letter, were those that took place, and ultimately failed in early 2003. As a result of those failed negotiations, Ecology issued the April 2003 Administrative Order pursuant to Ecology's RCRA/Hazardous Waste Management Act (HWMA) authority. Ecology's Order was narrower in scope than the issues originally involved in the earlier negotiations. These latter negotiations, on which you are now commenting, were focused on obtaining TPA milestones for the substance of the work required in Ecology's RCRA-based Administrative Order.

The disposition of other buried waste on site (i.e., pre-1970 waste) will be determined through other existing processes (permitting actions, RCRA corrective action or CERCLA), as currently contemplated in the Hanford Federal Facility Agreement Consent Order. Those existing processes are designed to evaluate multiple options for the investigation and disposition of those wastes.

**Comment 5:** The highest risk buried TRU wastes, of course, are the ones buried for the longest period of time. Those buried before 1971, however, are entirely ignored by the TPA and by this proposed new milestone. Thus, the TPA will continue to have two glaring holes: failing to address the highest risk TRU wastes buried; and, failing to have any timeline for investigation, retrieval, cleanup and closure of the massive "active" Low-Level Burial Grounds. Only TRU (all of which is "suspect" Mixed Waste) in those burial grounds (based on trusting USDOE to say where the TRU is buried and that there is no other TRU) are subject to be retrieved under the new proposed milestones.

**Response to Comment 5:** In June 2002, the Tri-Parties, following public comment, established TPA milestones (M-13 and M-15 series) to address the investigation and clean up of all 200 Area waste sites, including pre-1970 burial grounds. The first milestone in that series ((M-13-000) requires a Remedial Investigation/ Feasibility Study (RI/FS) work plan for all 200 Area Burial grounds and solid waste landfills be submitted December 2004. Pre-1970 burial grounds are being addressed through the CERCLA processes. Ecology and DOE currently are working to develop the Data Quality Objectives and an appropriate sampling and analysis plan to support that RI/FS work plan preparation.

In addition, enforceable schedules for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established in the 300-FF-2 Operable Unit ROD. This ROD identifies a technical approach to develop the capability to retrieve, package, and treat, as necessary, waste generated from the exhumed pre-1970 burial grounds.

M-16-93 requires submittal of an implementation work plan for the acquisition of capabilities necessary to manage TRU and TRUM waste generated through CERCLA Actions. This work plan will specifically cover any TRU or TRUM waste that is generated as a result of a CERCLA decision to retrieve pre 1970 buried waste.

The Parties believe the M-91 change package does place priority on addressing the highest risk wastes first through enforceable retrieval milestones. Records for waste retrievably stored in LLBG 218-W-4C, the first burial ground required to be retrieved under milestone M-91-40, indicate that the plutonium inventory represents nearly three quarters of the plutonium inventory within all of the post-1970 retrievably stored suspect TRU waste burial grounds.

In addition, many of the containers within burial ground 218-W-4C contain soils exhumed from the 216-Z-9 Crib. These drummed soils contain approximately 40,000 grams of plutonium and volatile organic compounds, including carbon tetrachloride and its degradation products. Activities are currently underway to capture the releases of these compounds from vent risers within sections of 218-W-4C. Removal of these suspect TRU drums lessens the potential for releases to the soil column and potentially the groundwater.

**Comment 6: USDOE's Own Documents Show the Significant Risk From TRU in Burial Grounds, and That the Older TRU Poses Significant Risks To Health and Environment:**

“There is a medium to high risk of Public Health and Safety impact due to groundwater contamination and causing radioactive and hazardous constituents to reach the Columbia River upstream of significant population centers....

**Response to Comment 6:** The purpose of these milestones is to remove waste from the burial grounds thus reducing any potential impacts to the public health, safety or groundwater contamination.

**Comment 7:** “Site workers are at risk of radioactive and hazardous contamination due to containers being stored underground past their design life and need to correct contamination spreads.” (HANFS-R960013 at Page 2, Sec. 22 and 23)

**Response to Comment 7:** DOE's health and safety professionals analyze the hazards associated with the post-1970 retrieval operation as part of the job hazard analysis process. This process includes a review of burial ground records to identify any contaminants of concern and based on this review, determines the level of personnel protective equipment required to be worn during retrieval operations. In addition to real-time industrial hygiene monitoring that is conducted during retrieval for carbon tetrachloride and tetrachloroethylene, a vapor extraction system that extracts volatile organics from the burial grounds has been operational since retrieval was initiated and will continue until Safety and Health professionals determine there is no additional need for this treatment system.

**Comment 8:** “The site is out of compliance with Hanford Defense Environmental Impact Statement Record of Decision that requires removal...” (HANFS-R960013 at Page 2, Sec. 25)  
Design life of containers is 20 years (HANFS-R960013 at Page 4).

**Response to Comment 8:** Post-1970 suspect TRU waste retrieval was initiated on October 17, 2003. This activity met the M-91-40 milestone and was in accordance with the preferred alternative for management of retrievably stored suspect TRU waste as described in the Hanford Defense Waste Environmental Impact Statement (EIS) Record of Decision.

**Comment 9:** Other RDSes discuss the annual rate of deterioration as exceeding 13% per year for barrels buried in the mid 1980's. Of course, the older barrels of TRU have deteriorated much faster – and, there is scant assurance that TRU was even disposed of in barrels prior to 1971.

**Response to Comment 9:** Burial ground records from 1970 and 1971 indicate that TRU waste was retrievably stored in containers. The design life of the containers was estimated to be 20 years; however, the actual life of the containers, based upon observed corrosion rates for drums in direct contact with soils, appears to be in excess of 40 years.

**Comment 10:** NEPA analysis required: RDS R960015 notes that the “activities” for Remote Handled TRU (RH-TRU), which is what USDOE is attempting to ship to Hanford without an EIS, “could require NEPA analysis prior to processing.” (at page 1):

“Some of the containers are reaching or have already exceeded their expected design life. Therefore, a threat exists to the environment and site workers...”

“Prior to operations of M-33 (complete disposition of all Transuranic Waste) facilities, both the soil and possible the groundwater could be contaminated.” (HANFS-R960015 at page 2, Sec 21 through 24).

**Response to Comment 10:** The State of Washington and other interested parties are in litigation with DOE concerning whether the DOE has complied with NEPA in regard to its decision to ship off-site TRU waste to Hanford for interim storage and processing prior to disposal at WIPP.

**Comment 11:** It has been established that Carbon Tetrachloride contamination is already spreading from Trench W-4, where TRU is “retrievably stored”, in the 218-W-4C Burial Ground. This spreading contamination poses significant health risks (vapor levels measured at 176 times the OSHA PEL and 176% above the lowest reported fatal concentration for humans) and is likely the source of increased contamination identified for two years in a nearby groundwater monitoring well. Trench 4 ceased operation in 1984 (Draft Hanford Solid Waste EIS, USDOE, April, 2002 at Figure D.6, page D.8). Thus, in significantly less than 30 years, the retrievably stored TRU containers have breached or spread contamination. USDOE now proposes to store RH-TRU, without lab analysis of hazardous waste constituents, and some waste streams of which, USDOE contractor records indicate, contain volatile organic hazardous wastes and other solvents and hazardous wastes (in addition to highly radioactive wastes and Plutonium). USDOE’s records indicate a likelihood that the TRU imported from ETEC and BCL will be stored for 20 years.

**Response to Comment 11:** Mixed waste imported from offsite would be managed in RCRA/HWMA compliant facilities. All waste, including RH TRU that is accepted for storage at Hanford is required to meet the Hanford Site Solid Waste Acceptance Criteria (WAC), which requires the generator to determine if there are hazardous components and if so, to designate the waste in accordance with state and federal regulations. Both state and federal requirements allow appropriate use of process knowledge to designate wastes. DOE will store any RH TRUM in compliant TSD facilities; DOE intends to retrievably store RH TRU in concrete vaults in the low-level Burial Grounds.

The carbon tetrachloride vadose zone plume is being investigated as part of an on-going CERCLA remedial investigation/feasibility study. Additional sampling and analysis is scheduled to be performed on trench substrates following suspect TRU retrieval to determine whether or not releases of contaminants to the environment have occurred, and if so, the nature and extent of the contamination and final correction of the problem. In order to minimize any potential worker exposure to carbon tetrachloride vapor during retrieval operations and to mitigate any possible releases of carbon tetrachloride to the environment, DOE initiated vapor extraction at Trench 4 in November 2003.

**Comment 12:** USDOE’s refusal to agree to enforceable milestones for the retrieval, treatment and processing of these imported wastes increases the likelihood that these wastes will be “stored” buried for over 20 years. Thus, based on the actual experience to date for TRU stored in Hanford burial grounds, it is probable that numerous drums and containers of ETEC and BCL TRU wastes will also breach or release wastes. Therefore: M-91 should specify that NO ADDITIONAL TRU will be “stored” in Hanford’s unlined burial grounds.

**Response to Comment 12:** DOE places RH TRU waste in concrete vaults in the LLBGs for interim storage. The M-91 Change Package does not directly address management of off-site non-mixed TRU waste.

**Comment 13:** FY 1997 Mission Planning Guidance and Unit of Analysis Sheet (#183, 185, 189):  
These USDOE budget documents establish high risk from failing to proceed with TRU retrieval:  
“If TRU waste retrieval operations do not occur, radioactive/hazardous waste will remain underground in deteriorating containers that have exceeded their design life potentially causing soil and eventually ground water contamination. There is a risk that ground water contamination could lead to radioactive/hazardous constituents reaching the Columbia River upstream of significant population centers....  
“There is increased risk to site workers...as the levels of contamination increase due to failing waste containers.” (MPG-17, USDOE, Sec. 4.4 and 4.5)  
“The waste has been buried in containers that were not intended to be in the ground for more than twenty years.” (MPG-16)(also MPG-17 for RH-TRU). FY 1996 Field Submission Activity Data



Sheets establish that USDOE has previously broken commitments to “accelerate” TRU retrieval. E.g.: pages 18 and 19.

**Response to Comment 13:** Enforceable milestones were established in the M-91 draft change package that requires retrieval of both CH and RH post-1970 suspect TRU waste from the LLBGs. Enforceable schedules for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established in the 300-FF-2 Operable Unit ROD. Also, there are additional TPA milestones (M-13 and M-15 milestone series) identified for the 200 Area Burial grounds and waste sites.

**Comment 14: Why the Proposed M-91 and Settlement are Not in the State of Washington’s or Public’s Interest, and Need to be Either Renegotiated as Detailed, or the Existing Administrative Order Should Continue and Be Expanded:** 1. The agreement and proposed new milestone relax requirements from the existing administrative order, which is in effect. The new Milestone would allow USDOE to opt out of significant regulatory requirements; and, it allows USDOE to continue federal litigation to challenge the fundamental underpinning of this portion of the TPA.

**Response to Comment 14:** The Administrative Order is not currently in effect. In accordance with the Settlement Agreement, Ecology withdrew Administrative Order 03NWPKW-5494, and DOE dismissed its appeal concerning the Administrative Order.

The legal authority issues regarding who controls and manages TRU and TRUM waste have existed for a long time. Consequently, the parties negotiated the M-91-03-01 TPA Change Package recognizing legal issues existed that required formal resolution. The Parties created a successful resolution to the management of TRU and TRUM by seeking a legal solution in federal court.

**Comment 15:** 2. USDOE reserves the right, in the proposed Milestones, to unilaterally decide to store Mixed TRU (and all TRU is legally Mixed TRU unless fully characterized) for decades without meeting basic standards for storage or treatment. Storage of untreated TRU was recognized by USDOE, in the WMPEIS, to pose serious safety risks. WA State and the Federal Court both acknowledged these documented risks in *The State of Washington, Columbia Riverkeeper, Heart of America Northwest. et al v. Abraham*. These risks have never been addressed, but USDOE is now saying they want to unilaterally be able to evade storage and treatment standards. The proposed milestone would allow USDOE to unilaterally claim waste is destined – eventually – for WIPP, and evade all hazardous waste safe storage and treatment requirements. As the State itself noted in the litigation, USDOE has already made this specious claim for numerous TRU wastes that may never legally be acceptable at WIPP. It is ludicrous for Washington State to sign an agreement, and call it a settlement, and relax requirements via negotiation... while explicitly allowing USDOE to continue to sue Washington State to challenge the State’s very authority to have safe storage of Mixed TRU. Washington needs to reject the proposed TPA change and to keep the administrative order in place without negotiated relaxations.

**Response to Comment 15:** Waste (including TRUM) that is accepted for storage at Hanford is required to meet the Hanford Site Solid WAC. The WAC incorporates state and federal requirements to demonstrate compliance with applicable storage regulations. Once the TRUM waste is demonstrated to meet the WAC, it is accepted and stored in compliant TSD facilities.

Once retrieved, TRU storage and management will be in accordance with DOE radioactive waste management rules. TRUM will be stored in accordance with DOE radioactive waste management rules, RCRA, and HWMA.

The DOE and the Department of Ecology disagree concerning the extent to which LDR storage prohibitions apply to TRU mixed waste at Hanford. As part of the Settlement Agreement, Ecology and DOE have agreed to submit the issue to a federal judge for resolution.

**Comment 16:** 3. We object to USDOE unilaterally deciding to eliminate an activity that had been called significant worker health and public risk reduction to pay for M-91. USDOE is now planning to eliminate the removal of the extremely radioactive Cesium and Strontium capsules stored in the B-Plant swimming pool (WESF). This old facility is at great risk, and the capsules pose a high risk to workers. USDOE had repeatedly acknowledged that moving the capsules to dry cask storage was a high priority. Now, to pay for M-91, USDOE is dropping this high priority work. In other words, USDOE has failed to request adequate funding to meet its compliance requirements – which, in and of itself, violates the TPA. This was done without ever identifying this cost and tradeoff in public comment documents. This lack of disclosure is unacceptable. Washington should take enforcement action if USDOE tries to fund one compliance activity by robbing another safety activity.

**Response to Comment 16:** There is no indication that storing the capsules at WESF poses an immediate high risk to workers. The driver for moving the capsules into dry storage was not based on the age of WESF, but on earlier feasibility studies that identified significant mortgage and life-cycle cost reductions from moving the capsules to dry storage and closing WESF.

Cleanup at Hanford sometimes involves trade-offs in scheduling. Priority decisions are intended to be made by fully considering relative risks, desired end states, and regulatory requirements. Information about such decisions is made available to the public through a number of forums such as the Hanford Advisory Board (HAB) and public meetings (e.g., Hanford State of the Site).

The dry storage capsule project proposal is not a TPA requirement; thus, any decision to delete the project would not violate the TPA. The HAB was informed of the proposal several months ago. Currently DOE has made no final decision.

**Comment 17:** 4. This proposed TPA milestone does NOT address highest risks first. In fact, the package admittedly goes after lowest risk wastes initially. There may be some good reasons for doing so to gain experience, but this approach is certainly not about tackling the highest risk wastes. To go after highest risks first, rather than the low hanging fruit, the TPA needs to require USDOE to:

- a. Retrieve, characterize and treat TRU buried before 1971;
- b. Retrieve, characterize and treat ALL buried wastes;
- c. Stop Dumping waste in unlined trenches within 90 days; and prohibit USDOE from “storing” more TRU in unlined trenches or in any noncompliant facility.
- d. Investigate the releases from all Low-Level Waste Burial Grounds starting in 6 months, and adopt a schedule for remediation and legal “closure” under RCRA and Washington’s Hazardous Waste Management Act, RCW Chapter 70.105.
- e. Ship TRU waste for disposal within the legal limits of RCRA and RCW 70.105 for storage after characterization or treatment. (Note that Idaho and Nevada both have enforceable agreements with schedules for shipment of TRU to WIPP).

**Response to Comment 17:** In June 2002, the Tri-Parties, following public comment, established TPA milestones (M-13 and M-15 series) to address the investigation and clean up of all 200 Area waste sites, including pre-1970 burial grounds. The first milestone in that series ((M-13-000) requires a Remedial Investigation/ Feasibility Study (RI/FS) work plan for all 200 Area Burial grounds and solid waste landfills be submitted December 2004. Pre-1970 burial grounds are being addressed through the CERCLA processes. Ecology and DOE currently are working to develop the Data Quality Objectives and an appropriate sampling and analysis plan to support that RI/FS work plan preparation.

In addition, enforceable schedules for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established in the 300-FF-2 Operable Unit ROD. This ROD identifies a technical approach to develop the capability to retrieve, package, and treat, as necessary, waste generated from the exhumed pre-1970 burial grounds.

M-16-93 requires submittal of an implementation work plan for the acquisition of capabilities necessary to manage TRU and TRUM waste generated through CERCLA Actions. This work plan

will specifically cover any TRU or TRUM waste that is generated as a result of a CERCLA decision to retrieve pre-1970 buried waste.

HSW EIS analyzed alternatives including disposing of LLW generated during post-1970 suspect TRU retrieval in unlined trenches; however, the preferred alternative is to place this waste in lined trenches. In addition, DOE and the regulators are evaluating the use of lined trench disposal through the Inter-Agency Management Integration Team Working Group process.

When the parties negotiated the M-91-03-01 TPA Change Package, worker and public safety, feasibility of performance, budget and ability to ship waste were all priorities. The parties weighed the priorities and circumstances surrounding TRU and TRUM waste management and balanced them against the complicating issue of legal authority that has been with these particular milestones since their inception. The resulting M-91 milestones reflect the best and most likely to be successful path forward for accelerating TRU and TRUM retrieval.

**Comment 18:** The M-91-03-01 change package would be a step in the right direction, if USDOE dropped litigation challenging the authority of the state and Tri-Party Agreement over the wastes covered, and challenging the fundamental underpinnings of the proposed actions and schedule. USDOE has resisted this effort every step of the way and delayed onset of TRU retrieval for years – just last spring, USDOE Headquarter (it is rumored) barred a similar change package from being signed. That resistance and delay must not be rewarded by Washington State with these new concessions.

**Response to Comment 18:** The legal authority issues regarding who controls and manages TRU and TRUM waste have existed for a long time. Consequently, the parties negotiated the M-91-03-01 TPA Change Package recognizing legal issues existed that required formal resolution. The Parties created a successful resolution to the management of TRU and TRUM by seeking a legal solution in federal court.

**Comment 19:** An administrative order is already in place requiring retrieval of suspect TRU buried in the Low-Level Burial Grounds after 1971. The proposed TPA changes, as negotiated, actually relax requirements from this administrative order. There is no justification that can be offered for agreeing to a relaxation of any standard or timeline while USDOE continues to attack the schedule and the right of the State to require these actions. This is not a settlement, so long as USDOE and the Administration continue to fight these standards in court. Historically, formal agreements between the affected governmental agencies are required to help ensure adherence to commitments for retrieval, characterization, treatment, packaging, storage and shipment of waste on the Hanford site.

**Response to Comment 19:** The Parties disagree with your statement that the draft TPA change package “relaxes” the retrieval requirements for the post-1970 retrievably stored suspect TRU waste. Both the draft change package and the Order require the CH retrievably stored waste to be retrieved by December 31, 2010. In addition, the change package lays out the sequence for retrieving this waste from the low-level burial grounds. The retrieval requirements of the change package are **exactly** the same for the Order for initiating (January 1, 2011) and completing the retrieval (December 31, 2018) of RH post-1970 suspect TRU waste.

**Comment 20:** The TPA change package unacceptably leaves no requirement for shipping waste to WIPP for geologic disposal (as required by federal law);and, there are no facilities at Hanford for storage or treatment of Remote-Handled TRU (RH-TRU); or approved criteria for characterization, packaging and shipment of RH-TRU waste to WIPP. The TPA, at minimum, must say that USDOE is not allowed to add more TRU to this backlog. Incredibly, USDOE plans to do just that. ( See Final Hanford Solid Waste Disposal EIS and litigation record referred to earlier)

**Response to Comment 20:** The M-91-03-01 TPA Change Package provides for storage and management of RH-TRU waste until the WIPP RH-TRU waste acceptance criteria are developed. It then requires retrieval actions that are necessarily reliant on WIPP RH-TRU WAC for management and treatment. DOE is working on the development of the WIPP Acceptance Criteria for RH-TRU and considered the current state of the criteria in negotiating the related milestones in this change package.

The M-91 change package does not directly address management of off-site non-mixed TRU. That issue is being addressed in litigation. The legal authority issues regarding who controls and manages TRU and TRUM waste have existed for a long time. Consequently, the parties negotiated the M-91-03-01 TPA Change Package recognizing legal issues existed that required formal resolution. The parties created a successful resolution to the management of TRU and TRUM by seeking a legal solution in federal court.

**Comment 21:** The Hanford Advisory Board's advice #143, issued February 7, 2003, identified 8 principles for application to M-91 TPA negotiations. Those principles still need to be incorporated into an M-91 Change Package:

- Complete waste characterization
- identification of impacts to adding more wastes to Hanford
- regulatory compliance
- enforceable schedules
- appropriate regulatory investigations of releases from burial grounds
- fully burdened costs of storage and treatment
- prioritizing characterization, retrieval, treatment of currently buried waste not barter the addition of more waste to Hanford for schedule change

**Response to Comment 21:** The eight HAB principles from Advice #143 and our responses are listed below:

1. Pre-1970 TRU waste is not covered in the change package (Advice #143, Principles 4 & 7). The Board has advised on previous occasions that retrieval of the pre-1970 TRU wastes should be a high priority. We reaffirm this advice. It is reasonable to assume that the older containers will have far greater deterioration. Every year of retrieval delay increases the risk that the contents of these older containers will escape into the environment, complicate cleanup, increase the risks to workers and increase the cost of cleanup.

**Response:** In June 2002, the Tri-Parties, following public comment, established TPA milestones (M-13 and M-15 series) to address the investigation and clean up of all 200 Area waste sites, including pre-1970 burial grounds. The first milestone in that series ((M-13-000) requires a Remedial Investigation/ Feasibility Study (RI/FS) work plan for all 200 Area Burial grounds and solid waste landfills be submitted December 2004. Pre-1970 burial grounds are being addressed through the CERCLA processes. Ecology and DOE currently are working to develop the Data Quality Objectives and an appropriate sampling and analysis plan to support that RI/FS work plan preparation.

In addition, enforceable schedules for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established in the 300-FF-2 Operable Unit Record of Decision. The ROD identifies a technical approach to develop the capability to retrieve, package, and treat, as necessary, waste generated from the exhumed pre-1970 burial grounds.

M-16-93 requires submittal of an implementation work plan for the acquisition of capabilities necessary to manage TRU and TRUM waste generated through CERCLA Actions. This work plan will specifically cover any TRU or TRUM waste that is generated as a result of a CERCLA decision to retrieve pre 1970 buried waste.

2. The change package does not provide schedules for TRU waste shipments (Advice #143, Principle 4).

**Response:** Although this draft Change Package does not include enforceable schedules for shipping TRU waste to WIPP, we are working to identify ways to accelerate shipping TRU off of the Hanford Site.

3. While the change package addresses the carbon tetrachloride burial grounds appropriately, it does not, in general, require retrieval of the highest risk waste first.

**Response:** The Parties believe the M-91 change package does place priority on addressing the highest risk wastes first through enforceable retrieval milestones. Records for waste retrievably stored in LLBG 218-W-4C, the first burial ground required to be retrieved under milestone M-91-40, indicate that the plutonium inventory represents nearly three quarters of the plutonium inventory within all of the post-1970 retrievably stored suspect TRU waste burial grounds.

In addition, many of the containers within burial ground 218-W-4C contain soils exhumed from the 216-Z-9 Crib. These drummed soils contain approximately 40,000 grams of plutonium and volatile organic compounds, including carbon tetrachloride and its degradation products. Activities are currently underway to capture the releases of these compounds from vent risers within sections of 218-W-4C. Removal of these suspect TRU drums lessens the potential for releases to the soil column and potentially the groundwater.

4. The change package does not include provisions covering the shipment of wastes to Hanford (Advice #143, Principles 1, 2, 3, 4, and 6).

**Response:** The Parties know of the Board's interest and long history with these issues. Currently DOE-HQ is taking a comprehensive look at waste issues across the complex. The draft change package covers waste at Hanford and forecast to be generated at Hanford. Currently, shipments of TRU waste to Hanford are enjoined (i.e., banned)

5. The ability for remote-handled (RH) TRU capacity must be developed as soon as possible and the delay of such a requirement by the change package is a concern to the Board.

**Response:** Hanford continues to work with representatives from the WIPP to track the permit modification schedule that DOE believes will enable the disposal of Hanford RH TRU. Once the WAC are established (assumed to be no earlier than 2006), Hanford will incorporate these requirements into the RH TRU facility design criteria. We will explore opportunities to accelerate the start up of RH TRU operations prior to 2012; however, the majority of waste requiring processing in this facility is not forecasted to be generated until post 2007.

**Comment 22: M91-03-01 Change Package: The change package fails to address key principles urged in the Board's advice, including complete retrieval, and, identification of impacts before adding more wastes to Hanford.**

The whole basis of the change package is being challenged, and USDOE reserves the right to undermine the most basic standards to avoid application of storage and treatment requirements for Mixed TRU.

**Response to Comment 22:** The M-91-03-01 TPA Change Package does address TRUM waste already at Hanford, not new offsite waste. The Change Request establishes enforceable compliance schedules for the retrieval, designation, and storage of all suspect mixed waste that is retrievably stored at Hanford. It also acknowledges that decisions regarding how much waste will be retrieved that was disposed of prior to May 6, 1970, will be the result of RCRA corrective actions, RCRA closures, and CERCLA response actions at a later date.

DOE is respecting the preliminary injunction ordered by Judge MacDonald (May 9, 2003) that prohibits DOE from making shipments of TRU waste to Hanford pending final resolution of National Environmental Policy Act (NEPA) litigation.

**Comment 23:** Even if the State wins in Federal Court, the Proposed Agreement gives USDOE the right to unilaterally avoid treating retrieved wastes and evade application of the safe storage requirements for hazardous wastes. The Hanford Advisory Board advised that any agreement must provide for all retrieved suspect Mixed Wastes, whether TRU or LLW, be treated and stored in accord with all applicable standards to ensure safety. In the WMPEIS, USDOE acknowledged that untreated MTRU posed significant risks when stored, and even after those risks were reduced through treatment, accidents, fires, transportation accidents, and earthquakes could result in offsite fatalities at Hanford.

**Response to Comment 23:** All retrieved post-1970 mixed waste will be stored in compliant TSD facilities prior to disposal. MLLW will be treated to meet Land Disposal Restriction Standards prior to disposal in a permitted facility. TRUM waste will be placed in compliant interim storage pending final certification and shipment to WIPP for disposal (or pending treatment, if required as a result of the pending litigation).

**Comment 24:** The relevant proposed changes to the TPA state that “DOE may choose” to issue its own certification that the wastes are destined for WIPP disposal “in lieu” of meeting the standards for storage and treatment. However, the proposed change package fails to provide any enforceable schedule for shipping the wastes offsite within the legal deadlines for storing wastes without treating them. The Proposed Agreement actually delays when USDOE must have Remote Handled TRU capacity (and fails to define what type of capacity) until 2012. Thus, wastes will sit for much more than a decade without having to meet standards for storage or treatment – while USDOE continues to attempt to add more of these wastes from offsite.

**Response to Comment 24:** The Parties negotiated the M-91-03-01 TPA Change Package recognizing there were legal authority questions that directly affect the control and management of TRU waste shipments, storage, treatment and certification. For the parties to create a successful resolution to the management of TRU and TRUM, the parties are respecting one another’s position while the legal authority questions are being resolved in federal court.

The M-91 TPA Change Package assures that actions will be taken so that storage of TRU waste complies with DOE regulations and storage of mixed TRU complies with RCRA and HWMA. Whether DOE transuranic waste must meet RCRA and HWMA standards for storage and treatment depends on the legal questions being adjudicated in federal court. Further, the parties acknowledge that for some period of time RH-TRU will remain at Hanford until WIPP waste acceptance criteria are developed for characterization and certification.

**Comment 25:** The HAB board has repeatedly advised that retrieval of the TRU wastes buried before 1971 should be a high priority. It is reasonable to assume that the older containers will have far greater deterioration and every year of retrieval delay adds a greater risk that the contents of these older containers will escape into the environment. Focusing on retrieval of the most recently buried and stored wastes do not reduce the highest risk first. Milestones for retrieval and treatment of the pre-1970 TRU should be included in this change package and this work should be funded.

**Response to Comment 25:** The Parties believe the M-91 change package does place priority on addressing the highest risk wastes first through enforceable retrieval milestones. Records for waste retrievably stored in low-level Burial Ground 218-W-4C, the first burial ground required to be retrieved under milestone M-91-40, indicate that the plutonium inventory represents nearly three quarters of the plutonium inventory within all of the post-1970 retrievably stored suspect TRU waste burial grounds.

In addition, many of the containers within burial ground 218-W-4C contain soils exhumed from the 216-Z-9 Crib. These drummed soils contain approximately 40,000 grams of plutonium and volatile organic compounds, including carbon tetrachloride and its degradation products. Activities are currently underway to capture the releases of these compounds from vent risers within sections of 218-

W-4C. Removal of these suspect TRU drums lessens the potential for releases to the soil column and potentially the groundwater.

In June 2002, the Tri-Parties, following public comment, established TPA milestones (M-13 and M-15 series) to address the investigation and clean up of all 200 Area waste sites, including pre-1970 burial grounds. The first milestone in that series ((M-13-000) requires a Remedial Investigation/ Feasibility Study (RI/FS) work plan for all 200 Area Burial grounds and solid waste landfills be submitted December 2004. Pre-1970 burial grounds are being addressed through the CERCLA processes. Ecology and DOE currently are working to develop the Data Quality Objectives and an appropriate sampling and analysis plan to support that RI/FS work plan preparation.

In addition, enforceable schedules for the retrieval of pre-1970 transuranic contaminated waste in the 618-10 and 618-11 burial grounds were established in the 300-FF-2 Operable Unit Record of Decision. The ROD identifies a technical approach to develop the capability to retrieve, package, and treat, as necessary, waste generated from the exhumed pre-1970 burial grounds.

M-16-93 requires submittal of an implementation work plan for the acquisition of capabilities necessary to manage TRU and TRUM waste generated through CERCLA Actions. This work plan will specifically cover any TRU or TRUM waste that is generated as a result of a CERCLA decision to retrieve pre-1970 buried waste.

**Comment 26:** The requirements for M-91 TRU retrieval have been in place for nearly one year, and have been under discussion for several years. USDOE should have identified these compliance costs in its annual budget submission for FY 2004, 2005 and out years. By failing to do so, USDOE again failed to comply with the requirements of TPA paragraphs 148 and 149, and prevented the public and regulators from commenting on the adequacy and priorities in USDOE-RL's budget submissions. Ecology's failure to determine or disclose if there were budget impacts from M-91 can not be entirely laid to USDOE's lack of disclosure, since several entities including the HAB inquired as to costs and tradeoffs, and Ecology was in a position to disclose and oppose this action earlier.

**Response to Comment 26:** Last October when the tentative agreement was signed, DOE directed its contractor to prepare a baseline change request that realigned the work scope to reflect those proposed changes. The baseline change request continues to be worked; however, DOE has been able to achieve the M-91-03-01 commitments within established funding targets.

#### **4. Comments submitted by Anthony Johnson, Chairman, Nez Perce Tribal Executive Committee**

**Comment 1:** The Tribe understands that the M-91 change package addresses retrieval of all RSW, designating whether or not it is mixed waste (i.e., has hazardous waste component in addition to radionuclide component). The change package also addresses compliance schedules for waste that requires treatment, safe storage and preparation of TRU waste for shipment to WIPP. The Nez Perce see this is another step forward in processing 200 Area waste and hastening removal of TRU waste from Hanford. It is clear, in addition, that it is not in the realm of the M-91 milestones to address disposal.

**Response to Comment 1:** You are correct about the scope of activities covered and not covered by the proposed M-91 and M-16 TPA milestones.

**Comment 2:** It also appears to us that these milestones do not address any possible future designation and disposition of tank waste as TRU waste. If some amount of tank waste can be handled as TRU, we would like a clearer understanding of what framework regulates its disposition.

**Response to Comment 2:** The Department of Energy is working closely with the Washington State Department of Ecology to ascertain what is necessary to proceed with retrieval and packaging of

Hanford Tank waste determined to be Transuranic mixed waste (TRUM). The permitting process will include an opportunity for public comment. In addition, the M-45 milestone series addresses closure of the SSTs. The tank TRUM retrieval activity would be an interim step in achieving the applicable M-45 milestones.

**Comment 3:** At the present time the transport of off-site TRU to Hanford is halted and in litigation. If it should resume after settlements between the Tri Parties, we understand it would be processed in the same manner as Hanford TRU waste. We repeat a primary concern from the ERWM letter to Mr. Keith Klein in January 2003 regarding bringing off-site TRU to Hanford. The Nez Perce remain deeply concerned that the WIPP is not currently licensed to accept remote-handled TRU, and we expect to be kept informed of the status of that licensing effort.

**Response to Comment 3:** The volume of RH TRU waste that could be received from off-site generators for interim storage and certification would be processed in conjunction with over 200 m<sup>3</sup> of RH TRU that are forecasted to be generated from Hanford clean up activities. Hanford continues to work with representatives from the WIPP to track the permit modification schedule that DOE believes will enable the disposal of Hanford RH TRU. DOE will keep your program staff informed of our progress on this effort.

**Comment 4:** Having shared these comments, the Tribe wishes to acknowledge the efforts the Tri-Party agencies have exercised to deal with these waste issues, and we hope the matters still in litigation will be settled in a manner fair to all. Ultimately, it is the health and fate of the Columbia River and its resources that the Tribe wishes to protect.

**Response to Comment 4:** The Parties share your desire to expeditiously resolve the litigation in a fair manner that facilitates the treatment and disposal of wastes generated from clean up activities at Hanford.

## 5. Comments submitted by Nancy Koenig

**Comment 1:** I'm writing for the record regarding the proposed changes for the cleanup of buried wastes at the Hanford site (M-91, M-16). Acceleration of cleanup sounds good. But, is it real? And, of course the Department of Ecology should have authority to regulate what happens in Washington State!

**Response to Comment 1:** The M-91 draft Change Package was designed to accelerate retrieval of CH suspect stored Transuranic (TRU) waste, treat legacy MLLW, and acquire treatment capabilities sooner for RH and large containers of TRU and MLLW. When this draft Change Package is finalized, there will be enforceable schedules for retrieving and designating retrievably-stored suspect TRU waste and treating MLLW.

DOE and the Department of Ecology have a disagreement on the scope of the State's authority over TRUM, but have agreed to submit that question to a federal judge for resolution.

**Comment 2:** I am concerned that the workers shown in the photo on the first page of the notice are not wearing protective gear. One worker appears to be standing in water. Are workers being protected? These are wastes you cannot see or feel! (*reference: fact sheet photo*)

**Response to Comment 2:** Before retrieving any waste from the burial grounds, workers and safety and health professionals identify hazards associated with that work. The photo shows workers retrieving contact-handled suspect TRU waste from one of the low-level burial grounds. Based on the pre-work hazard analysis DOE determined that no protective clothing was required. Also, one of the individuals in the photo is an industrial hygienist whose job it is to ensure that the work is done safely.



**Comment 3:** Will any of these actions result in more contaminated water? Both Groundwater and Columbia River Water? Will any of these actions result in downwind air pollution? Will wastes be solidified?

**Response to Comment 3:** The work associated with the M-91 and M-16 draft Change Packages will not further contaminate ground or surface water nor produce levels of air pollution that exceed state and federal regulations. The purpose of these milestones is to remove waste from the burial grounds thus reducing any potential impacts to the environment.

The waste retrieval operations are expected to result in non-liquid waste. Solidification is one potential treatment for liquid wastes, therefore, it is not expected that retrieval operations will result in a significant amount of waste being solidified. For newly generated waste or waste in storage, the method used to treat wastes will depend on the characteristics of the waste and the regulatory requirements for treatment and disposal of that waste. Based on current characterization data, macroencapsulation (e.g. grout) of the waste prior to disposal will likely be the required treatment option for a large percentage of the MLLW in storage or forecasted to be generated in the future.

**Comment 4:** There's been so much waste of dollars – we need to get on with the task at hand!

**Response to Comment 4:** The Tri-Party Agreement agencies are committed to cleaning up the Hanford Site. As of March 1, 2004, 2221 drums of waste were processed and shipped offsite to the Waste Isolation Pilot Plant in New Mexico.

## **6. Comments submitted by Calvin Rinne**

**Comment 1:** I applaud your coordinated efforts to address the environmental risks at Hanford posed by the radioactive elements classified as TRU beginning in 1970. It seems that those same elements, generated before 1970, pose the same environmental risks. If this approach is right for TRU, then it should be right for the elements that this classification defines, without respect for generation date. Conversely, if the approach for treatment of pre-1970 TRU (forgive the term, you know what I mean) is good enough, then the same should be good enough for post-1970 TRU. I urge the Agencies to agree on what is the right approach, and to follow that approach consistently.

**Response to Comment 1:** Pre-1970 waste is addressed in other TPA milestones. USDOE plans to characterize pre-1970 waste under RCRA past-practice or the CERCLA processes to determine what, if any, remedial actions would be required before closing any facilities, waste site or burial grounds that contain this waste.

**To view the final approved Tri-Party Agreement change forms click on the following links:**

[Approved Change Form Number M-91-03-01 "Modification of Hanford Federal Facility Agreement and Consent Order M-91 Series Provisions"](#)

[Approved Change Form Number M-16-03-03 "M-016 Submission and Implementation of a Work Plan for Acquisition of TRU and TRU Mixed-Waste Management Capabilities to Support CERCLA Actions at the Hanford Site"](#)