^Solid Waste EIS - DOE

From: gerry pollet [gerry_pollet@hotmail.com]
Sent: Thursday, June 12, 2003 12:42 AM
To: hsweis@rl.gov
Cc: office@heartofamericanorthwest.org

Heart of America Northwest com...

Michael Collins,
Manager,
Revised Draft Hanford Solid Waste EIS

Dear Michael,

Please use the attached version of our main comments for the official version of comments from Heart of America Northwest and Heart of America Northwest Research Center. The initial version of this document sent to you earlier today as an attached Word document with our main comments had an uncorrected error including the signature and cc page from draft advice of the Hanford Advisory Baord that was inadvertenlty pasted in. This document has the same name, and there are no other changes other than removal of the error pages at end and a note that the section before the end included material from a draft of advice presented to the HAB.

The other three attachment appendix documents that were sent remain unaffected, and I am not resending them.

Thank you, and I am sorry about any confusion from our typographical editing error.

Gerald Pollet,
Heart of America Northwest
206-382-1014
1305 Fourth Ave. #208
Seattle, WA 98101
office@heartofamericanorthwest.org

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Comments of Heart of America Northwest, Heart of America Northwest Research Center on Revised Draft Hanford Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement (RD-HSWEIS)

Submitted June 10, 2003
To the U.S. Department of Energy (USDOE)

Part I: Formally Designating Hanford to be a National Radioactive Waste Dump - A Citizens' Guide to the Decisions That USDOE Intends for the HSWEIS to Justify:

In 2000, USDOE imported 232,000 cubic feet of radioactive wastes to Hanford and dumped them in unlined soil trenches with no leachate collection and without legally compliant groundwater or soil column monitoring systems. This was enough waste to cover two football fields in radioactive wastes to a height that would bury a six and a half foot tall player in radioactive waste.

1 *You and I can not dump our kitchen garbage in unlined soil trenches, it is illegal. Our local governments can not dump our municipal garbage in unlined soil trenches, it is illegal. USDOE must immediately stop dumping deadly radioactive wastes – which it has frequently allowed to illegally contain hazardous and toxic wastes – in Hanford's massive unlined trenches. These trenches are typically over 1,000 feet long. They are contaminating ground water and will continue to do so. They contain wastes with unknown hazardous substances, subjecting the burial grounds to state and federal hazardous waste laws. Yet, USDOE has illegally expanded trenches and added new ones since state law forbade expanding or building new unlined soil disposal trenches over a decade ago.*

We call for USDOE to end dumping in unlined trenches by December, 31, 2003. It can and must be done. USDOE proposes, on the contrary, to keep using unlined soil trenches indefinitely and to formally designate Hanford as a national radioactive waste dump after issuing a final version of this EIS.

Here is a summary of some of the decisions that USDOE plans to issue as soon as the new version of the Hanford Solid Waste EIS is finalized. These decisions will be made in one or more "Record of Decisions", for which USDOE managers have said that the Assistant Secretary of Energy has set a deadline of July 31, 2003 to have issued.

Most significant, USDOE wants to use a tremendous amount of land for 'mega' trenches for burial of Low-Level Radioactive Waste (LLW) and Mixed Radioactive and Hazardous Wastes (Mixed Wastes), to support two very controversial proposals to import and bury waste from other nuclear weapons and research sites through the year 2046. USDOE admits that current and future ground water contamination from wastes in Hanford's soils will violate cancer risk and drinking water standards for thousands of years – creating an irreversible and irretrievable commitment of our State's valuable ground water resource. USDOE uses this designation to seek to avoid cleanup of soil and ground water. Here is a quick guide from Heart of America Northwest to what USDOE proposes and how USDOE would make Hanford a National Radioactive Waste Dump under plans proposed in the EIS:

a) import and burial of 12.7 million cubic feet of radioactive **LLW** and **Mixed Waste** from other nuclear weapons and nuclear research sites. At minimum, this is 70,000 truckloads of radioactive waste that will be shipped to Hanford.

These landfills for imported LLW and MW would run through 2046. Yet, Hanford soil and groundwater are supposed to be cleaned up by 2018, and all other USDOE sites before then. Clearly, the intent is to use Hanford as a National Nuclear Waste Dump for new wastes from weapons and nuclear development activities for the next four decades.

News articles often describes these wastes as radioactive "trash". This is not your household trash:

What is Low-Level Waste? "Low-Level Waste", despite the name, includes highly radioactive wastes (such as reactor innards and weapons production materials) that can be as hot or hotter than Spent Nuclear Fuel;

Mixed Waste, is radioactive and contains a huge array of various hazardous wastes. These hazardous wastes may include the powerful solvents that USDOE used to mobilize Plutonium and Uranium in weapons production. These solvents continue to mobilize Plutonium and other radionuclides in the soil after disposal – even radionuclides that USDOE models predict will not move much through the soil from where they were discharged or buried. Other hazardous wastes mixed with low-level wastes are ignitable, explosive, persistent and bioaccumulative, carcinogenic and mutagenic, and toxic. USDOE has failed to assess what hazardous wastes have been disposed in the existing burial grounds, and what the impact of those hazardous wastes will be on ground water and future exposed persons.

b) Not vitrify 75% of the liquid **High-Level Nuclear Waste** from the High-Level Nuclear Waste Tanks.

68 of the 177 massive High-Level Nuclear Waste tanks have leaked over a million gallons of waste, and USDOE deliberately discharged another million gallons of these deadly wastes to the soil when it ran out of tank space in the 1950s. (There are 149 Single Shell Tanks. To date these are the only ones that have leaked, but all the tanks are past their design lives and corroding). Some of the waste constituents from tank leaks have reached ground water and are moving inexorably towards the Columbia River. Until November, 1997, USDOe denied that tank leaks would ever contaminate ground water.

USDOE is currently required by the Hanford Clean-Up Agreement (or, "Tri-Party Agreement", or "**TPA**") to vitrify ALL the tank wastes. The waste is supposed to be split into a large amount of glassified **"Low Activity Waste"**, and a smaller portion of **"High Activity Waste"**. The High Activity is the only waste that would be sent to the National High-Level Waste geologic repository at Yucca Mt., if it ever opened (and if it has room). But, the current TPA requires the Low Activity glassified waste to be stored in a retrievable glass form, rather than permanently disposed in the soil at Hanford. USDOE intends to change this to *permanently bury the LAW in these shallow landfills - without glassifying most of it*. This will tremendously increase both the amount of waste in the landfills and their impact to groundwater; i.e., Technetium alone from the tank wastes increases the contamination of groundwater by 20%. (In a related decision, the impacts of which USDOE fails to consider in this EIS, USDOE is seeking to not vitrify the Technetium with the HAW for permanent isolation from the environment).

2 The National Environmental Policy Act (NEPA), which requires the preparation of environmental impact statements for government actions that may have a significant impact on human health or the environment, requires USDOE to consider the impact of its already adopted plan not to vitrify most of the waste from the High-Level Nuclear Waste Tanks. The consideration and disclosure to the public of those impacts is required to be part of this EIS, based on which USDOE intends to decide to bury the ILAW (Immobilized Low Activity Waste) in massive shallow landfills. Landfills for the LAW waste will, USDOE states, be either part of a system of landfills, or in the same landfills, with other Mixed Wastes. *Either way, the cumulative impacts on ground water and future potentially exposed individuals and environmental receptors must be considered in this EIS. USDOE fails to do this. Instead, USDOE is attempting to piecemeal the disclosure* – making the decision first to bury the waste in a system of landfills, and only later to disclose what the impacts are from not having vitrified the LAW waste from the High-Level Nuclear Waste tanks.

Even in vitrified glass form, the decision to use shallow landfills to bury LAW Tank Wastes is predicted by USDOE in the revised draft HSWEIS to cause the

bulk of the ground water contamination after several thousand years that will require restricting all use of the State's ground water for a large, but undisclosed, area between Hanford's Central Plateau and the Columbia River.

c) Import of Plutonium Wastes to Hanford: "Transuranic" wastes (**"TRU"**). **"Remote Handled"** TRU is Transuranic waste that is as hot as, or hotter than High-Level Nuclear Waste or Spent Nuclear Fuel. At the surface of the container, these Remote handled wastes give off over 200 millirem of radiation per hour – enough to give a person 20 full body x-rays per hour. If an adult is exposed to 200 millirem of radiation every year, their risk of a fatal cancer would be over 4 in 1,000. The risk of cancer in children is 5 to 10 times greater from the same dose.

The Draft EIS calls for import of **Remote-Handled** Plutonium Transuranic wastes, which we (Heart of America Northwest, Columbia Riverkeeper, Sierra Club and Washington Physicians for Social Responsibility, along with Washington State) continue to sue to stop. The federal court for the Eastern District of Washington has granted a preliminary injunction to halt shipments of TRU wastes to Hanford due to USDOE's failure to consider the impacts of, and alternatives to, its plans to ship TRU to Hanford.

Hanford has no facility for safe storage of these wastes, no facility to even do lab analysis of the hazardous wastes in the drums of RHTRU (making storage even more dangerous, and HoA has documented that USDOE has failed to follow legal requirements to designate the wastes as Hazardous Waste). These wastes will come from large weapons plants, like Lawrence Livermore National Lab and Nevada Test Site, in addition to the two sites that USDOE issued a decision in September, 2002 to start shipping to Hanford (The nuclear weapons and fuel development facilities at the ETEC site in California and the Battelle Columbus Lab in Ohio).

In the course of this litigation, USDOE has adopted the formal position that it is exempt from the application of the safe storage and treatment requirements of federal and state hazardous waste laws (RCRA and Washington's Hazardous Waste Management Act) for the Mixed Waste TRU it ships to Hanford, or has already stored at Hanford. However, all previous analyses of potential impacts from fires, earthquakes, storage and transportation of TRU have assumed that the TRU was treated as Mixed Waste, greatly increasing its stability, before prolonged storage or transportation. The revised draft HSWEIS fails to consider the impacts of USDOE's declared position that it will not treat these wastes.

3 The revised draft HSWEIS is totally inadequate to fulfill the requirements of NEPA, which USDOE had previously failed to meet before attempting to ship TRU from ETEC and Battelle to Hanford. Not only does it fail to address the impacts from not treating the TRU, and from not operating in a manner that

assures that all TRU is stored as if it is Mixed Waste unless fully characterized and proven not to have hazardous wastes present, the revised draft fails to meet numerous commitments made in the USDOE's 1997 Waste Management
3 Programmatic EIS and subsequent TRU Record of Decision for site wide and project specific NEPA reviews of the impacts of transporting TRU to Hanford and storing or treating the TRU at Hanford. Most obviously, the USDOE fails to consider the alternative of transporting the wastes only once – to the WIPP disposal facility for TRU, in New Mexico – and treating and processing the TRU there before disposal, instead of first transporting untreated and uncertified TRU to Hanford for prolonged storage.

d) Dump different wastes together in massive landfills at Hanford, regardless of the nature of wastes, and not improve operations for tracking where wastes are dumped in landfills.

All landfills are not alike: USDOE wants to dump all the waste together, regardless of the vast differences in the types of waste. Different chemical and radionuclide wastes require different covers and different liners to most effectively prevent waste migration, exposure to off-gasses, prevent deterioration of liners, etc.... USDOE ignores the public and Tribal Future Site Use Working Group and Exposure Scenario Task Force values by proposing to expand the footprint used for disposal outside the 200 West and East Areas, permanently setting much more land as unavailable for future use by Tribes or the public. USDOE tries to say the impacts to groundwater are not very bad from the landfills by:

1) modeling the impact to groundwater at a point far outside the fence line or away from the edge of the burial grounds - this is an illegal change in the point of compliance as advocated by the Bush Administration to relax standards;
2) failing to include the cumulative impact of the existing burial grounds, and USDOE's plan to do NOTHING to clean them up and clean up the groundwater under them, while modelling the impact of adding more waste in
4 new mega trenches;
3) failing to close the unlined LLW burial grounds by the end of this year, to start the cleanup of the contamination spreading from these illegal burial grounds - and, allowing dumping in unlined trenches to continue at an accelerated pace for several years!
4) failing to install legally adequate groundwater and soil column monitoring around the burial grounds - which would require installation of over 120 new monitoring wells (USDOE uses the lack of data to crazily claim no impact, and then say this proves there won't be an impact from the new trenches. Most of the monitoring wells do not reach groundwater any more, and more go dry every year. You can't monitor groundwater without the well reaching the groundwater); using a model for contamination that leaves out some of the most mobile and dangerous radionuclides, and totally ignoring the hazardous wastes and their role mobilizing other contamination as solvents (these

wastes include the powerful solvents that USDOE uses and used for Plutonium processing. Of course, they are really good at mobilizing Plutonium and other radionuclides in soil as well, which USDOE ignores. In fact, USDOE pretends that it has a good track record of keeping hazardous waste out of the Low-Level Burial Grounds);

5) failing to apply Washington State's standards for groundwater and for protection of public health from toxic waste sites, instead USDOE claims its new mega trenches and existing burial grounds are safe by substituting much weaker standards that allow for many times more cancer deaths than Washington state standards allow for landfills and toxic waste dumps;

4

6) ignoring the poisonous and carcinogenic Carbon Tetrachloride spreading from existing burial grounds, with release of vapors that are at levels which can be fatal. Carbon tetrachloride is present in the air in at least one of the Low-Level Burial Ground trenches, in an operating burial ground with open trenches just a few yards away, at levels that are nearly twice the lowest air concentrations known to be fatal to humans and 176 times the OSHA Permissible Exposure Limit for workers. USDOE fails to even propose to look for related chemicals that were disposed in the same places. USDOE ignores this in modeling impacts from its new massive mega trenches, as well as failing to disclose and consider the impacts from its existing trenches.

e) USDOE plans to continue dumping radioactive waste in the unlined soil trenches of the Low-Level Burial Grounds for an unspecified number of years; and, fails to consider the reasonable alternative of closing the unlined soil trenches by the end of this year with retrieval and cleanup of wastes pursuant to a schedule issued by Washington Ecology on April 30, 2003.

All alternatives proposed in the revised draft HSWEIS would continue to dump radioactive waste in Hanford's unlined Low-Level Burial Ground (LLBG) trenches for an unspecified number of years. USDOE officials have stated that they foresee moving away from this illegal disposal in 2007, but USDOE fails to even make a commitment to that date in the EIS.

Continued use of the unlined LLBG trenches requires USDOE to consider and disclose the impacts of such action in a new revised Hanford Solid Waste EIS.

Washington Ecology, in its Notice of Deficiency for the Low-Level Burial Ground RCRA permit application and in its administrative order of April 30, 2003 provided USDOE with a tremendous amount of help in identifying potential health, safety and environmental impacts from the continued use of the burial grounds, along with a virtual guide to current conditions that should have been used in this EIS.

USDOE is required to consider the impacts of current conditions and continued operations in the unlined burial ground trenches – and failed to do so.

f) Construction of treatment facilities for Mixed Waste at Hanford.

USDOE does disclose the lack of treatment capacity for the Mixed Waste at Hanford. USDOE proposes to use the T-Plant, the oldest nuclear weapons production plant in the world for unspecified treatment processes for Mixed Wastes.

Use of this ancient plant is not acceptable - it is so old that it could never meet modern standards for pollution control and safety. USDOE fails to disclose the inventories of different Mixed Waste types that will require different forms of treatment. Just what technology would be used is the real question. Incineration? Incineration remains the USDOE's primary choice for treatment of certain Mixed Wastes, including those with PCBs. USDOE fails to consider any of the impacts from treatment processes for specific wastes and the likelihood of accidents or releases due to fires and earthquakes or equipment failures. For TRU wastes, in the Waste Management PEIS and WIPP SEIS II, USDOE predicted that numerous offsite public cancer fatalities would result from treatment at Hanford, treatment accidents or earthquakes while waste was stored at a specially designed treatment or storage facility. However, USDOE fails to even consider such a facility at Hanford, and fails to consider the impacts of these reasonably foreseeable events if T-Plant is used.

g) USDOE's proposal to remove 12,000 barrels of untreated Mixed Wastes from the Central Waste Complex (CWC) and bury it in the Hanford Clean-Up waste landfill (Environmental Restoration Disposal Facility, or "ERDF").

USDOE is also pushing the regulators to allow it to move 12,000 barrels out of the Central Waste Complex (CWC) and bury them in the ERDF landfill without waiting to consider the impacts and public comment from the EIS. They have issued a "EE/CA" proposed action to bury the stored wastes from the old 183-H radioactive evaporation basin, with a comment period and action schedule that would not allow the public to consider the cumulative and related impacts in the EIS. This is a huge portion of Hanford's stored wastes, and USDOE wants to bury it to make room for receiving more.

These wastes have never been properly analyzed for hazardous wastes and what treatment should be required before burial. Of course, the treatment and burial issues are supposed to be the topic of this EIS, but the waste will be on its way to burial before the EIS is finalized and comments considered, under the current schedule. (Opening another potential legal challenge to the EIS).

5 USDOE fails to consider the impact of reasonably foreseeable fires or earthquakes involving wastes, especially TRU, stored now or proposed to be added to, the CWC. The CWC is really nothing more than light metal sheds with concrete floors. The WMPEIS and WIPP SEIS II predicted that an earthquake at Hanford would cause a release of Plutonium and other radionuclides from TRU imported to Hanford and stored in a designed storage facility, resulting in offsite fatal cancers. USDOE seeks to add more room for imported TRU by removing waste to ERDF without any consideration of the impacts of using CWC for storage of TRU.

h) The decision to truck over 70,000 truckloads of LLW, MW and Plutonium (TRU) wastes to Hanford.

6 USDOE has never considered the specific and cumulative risks and impacts from over 70,000 truckloads of radioactive waste along the actual routes and considering the actual wastes.

USDOE plans to ship these wastes: up Interstate 5 from California to Hanford through Medford, Salem, Eugene, Clackamas and Portland, Oregon; and, through the dangerous and narrow Columbia Gorge, with tunnels and high wind conditions; across the Blue Mountains of Eastern Oregon with two of the most dangerous interstate highway (I-84) mountain passes in the U.S. and high winds and dust storms; and, through downtown Spokane, Washington on Interstate 90.

USDOE's failure to consider the risks and impacts of the actual routes it will use was exemplified by its failure to consider that dozens of the bridges on Oregon interstate highways that are proposed routes are weight restricted and listed as "failing" by the Oregon Department of Transportation. When USDOE trucked TRU from Ohio and California to Hanford in December, 2002, its contractors received route restrictions that would have sent them off the interstates for hundreds of miles through local communities, past schools, over narrow and less protected bridges, and where emergency response capabilities were far more limited. However, USDOE has never considered these actual conditions along Oregon highways when calculating risks from routine exposure to the wastes or in the event of accidents or terrorist attacks. USDOE failed to even disclose that its contractors are free to use I-90 through Spokane as well as the Oregon routes, and to consider the risks and impacts from that route.

USDOE flat out attempted to mislead the public and States of Washington and Oregon in claiming that it has analyzed the risks from a terrorist attack on truck shipments to Hanford, especially for Remote Handled TRU containing Plutonium (or RH LLW or MW)– which any terrorist would view as a rolling "dirty bomb' delivered to an urban location for them by USDOE. USDOE acknowledges that there is a serious risk of attack. Instead, USDOE in a meager one paragraph in a appendix claims that the risk from a Spent Nuclear Fuel cask accident in an

urban setting bounds this risk. However, this is neither realistic, nor does USDOE meet the legal requirements of making available the report and assumptions used. Indeed, analyses of a shipboard fire with a Spent Nuclear Fuel cask in an urban port convinced a federal judge to bar shipments through an urban port setting without USDOE completing a specific EIS. The results of those analyses show a fire may reach temperatures exceeding 2000 degrees in a tunnel or ship, releasing much of the contents, and causing hundreds of fatal cancers and evacuation of a major urban area. Of curse, it is likely that untreated RH-TRU will more easily release Plutonium and radionuclides to the air than Spent Fuel rods in a Spent Fuel cask. Furthermore, in this revised draft EIS, USDOE only analyzed the potential impact from a single drum of Mixed Waste being released from an accident and fire in an urban setting, and used ridiculous assumptions (such as the maximum exposed individual being 100 meters away from a truck accident on an interstate highway in an urban setting).

This EIS may be thick - mostly due to the need to reproduce and respond to the thousands of comments calling last year's version inadequate - but, this new version is clearly NOT legally adequate.

7 Public Comment Stifled and Inadequate: Finally, USDOE acknowledged that its published closure date for the comment period (which was May 26, Memorial Day) is illegal under NEPA. We warned USDOE that its proposed cut off of comments on a legal holiday was an illegal attempt to cut short the comment period, by trying to require that comments had to be received by the Friday preceding the 45th day (creating a 42 day comment period on a massive document about decisions that are momentous). On April 14 USDOE announced the dates for hearings and cities, with far less than 30 days notice to the public for hearings. This precludes citizen groups from mailing a Citizens' Guide or other comment guide with any decent analysis and announcing the dates and locations of hearings. Indeed, USDOE with just two weeks before the start of hearings, USDOE had not set locations, so we could not mail them to the public even if we had analyzed the document enough to produce a more detailed guide. This is clearly an attempt by USDOE to avoid large turnout of the public at the hearings, and avoid publicity of the plans to make Hanford a National Radioactive Waste Dump. The Hanford Advisory Board and numerous citizen groups have formally requested USDOE to extend the comment period and change the dates of hearings to allow for mailing of notice and guides. If the State told USDOE that failure to meet the minimum notice provisions of the Hanford TPA Community Relations Plan would result in the State finding that the EIS is legally inadequate for the State to use in permit decisions, then USDOE would get the message and provide adequate notice and comment period. The public can urge the State to do so. Only after the hearings had ended did USDOE announce a meager extension of the comment period to June 11th. This appears to have been done so late to avoid having hearings scheduled after the public would have had time to receive informative notices in the mail and benefited from the review of the EIS by EPA and Washington Ecology and the

Hanford Advisory Board. Indeed, EPA and Ecology's comments were never available to the public before the end of the comment period. Washington Ecology should reject this EIS as inadequate for State Environmental Policy Act purposes based on both the public involvement inadequacies as well as the numerous substantive inadequacies.

E-0055 (contd)

Part II:

Overview and Conclusion: USDOE must withdraw and reissue a revised Hanford Solid Waste EIS for public comment, after removing the contractor with a conflict of interest:

1. Public Comment Inadequate to Meet Requirements of Either NEPA or SEPA:

The U.S. Department of Energy (USDOE) responded to the outpouring of criticism of its first draft of the Hanford Solid Waste Environmental Impact Statement (HSWEIS), issued in 2002, by acknowledging that it was not legally adequate and withdrawing the draft. This new draft is still incomplete and inadequate to support any of the proposed decisions.

USDOE failed to provide adequate opportunity for public review and notice to the public of the proposals and content of this draft. The comment period was marred by repeated failures of USDOE to live up to reasonable notice and review expectations, including
8 legal minimum standards.

The intent of USDOE has been repeatedly stated in public forums to issue Records of Decision (RoDs) on the proposals made in this EIS to increase waste shipments to Hanford by July 31, 2003. This predetermination, was in, and of, itself, illegal. It revealed that USDOE had already decided to make Hanford a national radioactive waste dump for Low-Level Radioactive Wastes (LLW), Mixed Low-Level Radioactive and Hazardous Wastes (Mixed Wastes), and Transuranic Wastes (TRU, including Mixed and extremely radioactive "Remote Handled TRU"). Indeed, USDOE representatives and notice mailings stated that USDOE had already decided to use Hanford's soil to dispose or "store" of these wastes from other nuclear weapons production and research facilities regardless of the specific and cumulative impacts on the ground water, public safety, long-term human health, the Columbia River and the environment.

These statements made a sham out of the National Environmental Policy Act (NEPA) process and were specifically designed to discourage public comment on the fundamental issues, and the fundamental impacts of USDOE's proposed actions. There is no doubt that the statements in USDOE's notice, at hearings and at public meetings discouraged public comment on what the proposed actions and reasonable alternatives to them. For this reason, amongst scores of other reasons, the EIS is legally inadequate for either NEPA or State Environmental Policy Act (RCW Chapter 43.21C) purposes.

The initial announcement of the comment period was for a mere forty five days, which would have been cut short by attempting to end the comment period on a legal holiday. This was a blatantly illegal effort to exclude comments, and shorten the comment period. USDOE failed to meet the legal requirement to restart the comment period with adequate notice and republication in the Federal Register. This was just one of the major flaws in the notice and comment process for the revised draft HSWEIS.

Because of the tremendous impact on the Northwest, the complexity of issues and scope of issues, that were supposed to be covered, USDOE had provided for ninety day or more comment periods on the scope of this EIS, and on the first draft. To meet USDOE's own schedules to issue Records of Decision and start shipments (or expand shipments), USDOE chose to have only a forty five day comment period on this revised draft HSWEIS. This deprived the public of the opportunity to fully review the massive document, and to have the benefit of hearing or reading the reviews of the key Hanford regulators (Washington Ecology and U.S. Environmental Protection Agency (EPA).

9 It was not prepared in compliance with National Environmental Policy Act (NEPA) processes. For the reasons detailed below, we advise DOE to withdraw the EIS, and to reconfigure the entire Hanford EIS process. The Board advises the regulatory agencies to find the document inadequate to meet NEPA and the Washington State Environmental Policy Act (SEPA) requirements.

2. USDOE's commitment and legal obligations to Hanford Site Wide EIS broken:

USDOE is required by NEPA to integrate all related Hanford specific Environmental Restoration and Waste Management actions into a Hanford Sitewide EIS to determine the cumulative impacts from the wastes that already exist at Hanford, and all proposed Hanford cleanup actions and decisions. Only after the aggregate risks and impacts from all Hanford site wastes, and proposed actions for Hanford wastes, are known, can DOE analyze the impacts of adding additional off-site wastes (and facilities for treating, storing and disposing of those wastes).

10 DOE committed in the Waste Management Programmatic Environmental Impact Statement (WM PEIS) to a sitewide NEPA review for site impacts in implementing the decisions under the PEIS. The HSW EIS fails to analyze all of the site level impacts and hence is not the sitewide analysis as DOE committed to.

USDOE is legally required to present the actual conditions in the Hanford burial grounds, waste release sites and facilities, and analyze the impacts of those conditions on human health and the environment. The revised draft Hanford Solid Waste EIS totally fails to present the actual conditions, and the risks from those conditions. NEPA requires that alternatives for cleanup and mitigation or elimination of those risks be presented in this EIS.

HSW EIS still does not address all existing Hanford wastes, nor does it integrate the assessment of the Environmental Restoration wastes with the tank wastes.
The EIS asserts (page 3.52) that it analyzed the cumulative impacts from "all wastes intentionally disposed of on the Hanford site since the beginning of operations and waste forecast to be disposed of through cleanup completion." USDOE, however, fails to disclose the known risks and releases from Hanford's Low-Level Burial Grounds; and, fails to consider as a preferred (or, at minimum, reasonable alternative) the schedule for retrieval of wastes and remediation of burial grounds put forward by Washington

Ecology in its April 30, 2003 Adminstrative Order and Director's Determination. Furthermore, USDOE has already adopted a decision to not vitrify most of the waste in Hanford's 178 High-Level Nuclear Waste Tanks; and, is actively considering "closing" tanks without fully retrieving waste and remediating leaks ("clean closure"); and is actively proposing to leave most of the technetium in the immobilized wastes from High-Level Waste Tanks, ***this assertion is clearly false***.

3. **USDOE's contractor for this EIS has a conflict of interest and stake in the decisions that USDOE proposes to make based on this EIS – requiring withdrawal of the EIS and revising it with a credible, independent contractor:**

11

USDOE chose to use Battelle as a contractor to draft major portions of this EIS, and to respond to comments – including responding to comments directly relating to the following areas for which Battelle has a clear conflict of interest and stake in the outcome of proposed decisions by USDOE based on the EIS:

- Battelle's own generation of waste at Hanford – which makes it a "responsible party" and "liable person" under the federal Superfund law and state Model Toxics Control Act (MOTCA – Chapter 70.105D, RCW);
- disposal of wastes;
- whether offsite generators should be charged the long-term, fully burdened costs of disposing of wastes;
- violation by USDOE and its contractors of RCRA and Washington Administrative Code requirements for establishing financial assurance for closure and monitoring of landfills;
- efforts to export waste from Battelle's Columbus and West Jefferson, Ohio facilities to Hanford;
- transportation risks and impacts from shipping Battelle's Remote Handled Low-Level and Remote Handled Transuranic, Low-Level and Mixed Wastes and, similar wastes from other sites, to Hanford;
- failure of offsite and on-site generators to properly track, characterize and label hazardous wastes shipped to Hanford's Low-Level Burial Grounds for disposal, …

This list names just a few of the numerous areas that Battelle was delegated responsibility for analyzing, writing and responding to comments regarding, and for which Battelle has a direct conflict of interest.

Battelle's self interest and financial interests are evident in other USDOE documents and decisions, including, in the September, 2002, Federal Register Notice of the amendment to the Record of Decision for TRU Waste to authorize shipment of TRU from Battelle Columbus Lab (BCL) to Hanford, and in court filings by USDOE (both declarations and briefs, including the declaration of Assistant Secretary of Energy Jessie Roberson) in response to the complaints brought against USDOE for violating NEPA by the State of Washington and citizen groups, including Heart of America Northwest.

In those documents, USDOE claims that Battelle has a contractual and financial interest in having USDOE ship waste offsite to Hanford, so that the Battelle West Jefferson and

Battelle Columbus Labs can be redeveloped for private purposes of Battelle. In the Site Treatment Plan for BCL, BCL and USDOE stated that Battelle cancelled its Part B permit for its own "cost savings" permits, precluding storage of Mixed Wastes and necessitating their shipment to Hanford or other sites.

It is clear that a financial stake in a decision whose outcome is affected by the considerations in an EIS includes the private interest in redevelopment of property for other purposes following removal of wastes. Thus, whether or not USDOE owns the wastes at Battelle's sites, Battelle has a clear interest in decisions by USDOE to allow for the shipment of those wastes to Hanford, as well as interest in the decision as a liable party and generator. As specified below, Battelle interests are an impermissible conflict of interest under NEPA implementation regulations of the Council on Envrionmental Quality, Federal Acquisition Regulations and Department of Energy Acquisition Rules.

11 Further, Battelle's willful failure to disclose this conflict of interest irreparably harmed the public's right to comment on the draft EIS.

Battelle is in violation of USDOE regulations that require contractors who prepare an environmental statement to execute a disclosure specifying that they have no financial or other interest in the outcome of the project. 10 CFR 1021.310, 40 CFR 1506.5 (c). In the HSWEIS, Battelle certified that it had no financial or other interest in the outcome of the referenced EIS. HSWEIS at 7.20. Battelle misrepresented its interest in the outcome of the HSWEIS Record of Decision as both a liable person and potentially responsible party under CERCLA (42 USC 9601 et seq.) and Washington's Model Toxics Control Act (RCW 70.105D) as a generator of waste that has been, or may potentially be, released to the environment at the Hanford site, and which is the focus of this EIS. Battelle has a significant financial interest in continuing to generate waste at Hanford and to be allowed to dispose of it as cheap as possible in Hanford's soil - which this EIS is supposed to evaluate and consider alternatives to.

In addition to violating USDOE and NEPA's regulations on public disclosure, Battelle engaged in fraud in that making a material misrepresentation about its financial interest in the outcome of the HSWEIS to obtain the contract to prepare the HSWEIS. These are actionable under USDOE Debarment & Suspension regulations. 10 CFR 1036.305 (a) 1,3. Battelle played a major role in preparing the HSWEIS, especially in responding to comments, many of which were directly regarding Battelle's own interests in importing waste to Hanford for storage, treatment and disposal or prolonged storage prior to processing and disposal at Waste Isolation Pilot Project. NEPA requires the following actions by CEQ, EPA and USDOE that:

a) require that the HSWEIS be withdrawn;
b) the contract with Battelle be rescinded;
c) a new HSWEIS begun with a contractor who has no conflict of interest regarding potential outcomes and decisions to be based on the EIS;
d) forfeiture by Battelle of all fees and costs paid by the U.S. Department of Energy for work on this EIS;

e) imposition of civil and criminal penalties for fraudulently misrepresentation of its interest in the outcome of the HSWEIS 10 CFR 1036.305 (a) 1, 3..

Battelle's conflict of interest in preparing the HSWEIS clearly preclude their production of an objective or unbiased analysis of the issues. This conflict of interest had a material impact on the scope of issues in the HSWEIS, the analysis that was conducted in the HSWEIS, and other aspects of the execution of the HSWEIS and the subsequent meeting and comment processes. These are evidenced in the following:

? Battelle's private and contractual interest in exporting TRU waste to Hanford is the subject of litigation in federal district court brought by Heart of America Northwest, State of Washington, Columbia River Keeper, Sierra Club and Washington Physicians for Social Responsibility. Battelle is shipping this waste to Hanford as part of "the closeout of its nuclear materials research contract", because continued storage of these wastes would require construction of a new shielded facility licensed by the State of Ohio and the Nuclear Regulatory Commission. 67 FR 56990. This action is being taken as part of the Battelle's closeout of its nuclear materials research contract and cleanup of the "privately owned" West Jefferson facility. Id. Construction of new facilities to continue storage of TRU at West Jefferson would "be inconsistent with DOE's goal of early removal of radioactive waste from privately owned sites." Id.

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- "DOE no longer needs the facilities for nuclear research, and is contractually obligated to remove contamination so the labs can be used by Battelle without radiological restrictions." USDOE: "Defendants' Opposition to Motion for Preliminary Injunction" at 20; State of Washington, Columbia Riverkeeper, Heart of America Northwest, et al v. Spencer Abraham, Secretary of Energy, and U.S. Department of Energy, 2003, U.S. District Court Eastern District of Washington

? Battelle rejected the comments that the EIS consider the reasonable alternative of charging generators the fully burdened long term costs of disposal, and that the EIS have a preferred alternative (and, at minimum, for legal compliance, consider one alternative) that ends disposal of wastes in unlined soil trenches by the end of this year and bars continued use of Hanford soil for disposal of offsite wastes due to the cumulative impacts to groundwater, and other harm to health and the environment.

? Battelle failed to disclose that it has a substantial conflict of interest which may be the proximate cause of this draft EIS's failing to consider the route and waste specific potential impacts of transporting TRU, LLW and MW to Hanford.

? Battelle played a major role in preparing EIS, especially in responding to comments, many of which were directly regarding Battelle's own interests in importing waste to Hanford for storage, treatment and disposal or prolonged storage prior to processing and disposal at WIPP.

? The HSWEIS fails to disclose Battelle shipped Remote Handled LLW, as late as 2002, and fails to describe inventory and current conditions of burial grounds. The EIS fails to disclose the track record of Battelle and other offsite generators failing to properly characterize and manifest wastes prior to shipping and prior to disposal in LLBG. *This failure to describe actual conditions of LLBGs has been noted by Washington State and numerous other commentors as a significant failure of the HSWEIS to meet NEPA requirements. Battelle has a conflict of interest regarding disclosure of legal violations and their potential impact, as well as conflict of interest regarding any disclosure of impacts that would limit offsite waste. Mitigation requirements that should be imposed would significantly impact Battelle as a generator of waste.*

11 ? Battelle is both a liable person and potentially responsible party under the federal CERCLA (42 USC 9601 et seq.) and Washington's Model Toxics Control Act (RCW 70.105D) as a generator of waste that has been, or may potentially be, released to the environment at the Hanford site, and which is the focus of this EIS. Battelle has a significant financial interest in continuing to generate waste at Hanford and to be allowed to dispose of it as cheap as possible in Hanford's soil - which this EIS is supposed to evaluate and consider alternatives to. Heart of America Northwest and numerous other commentors, including the Hanford Advisory Board, have urged that this EIS consider the reasonable alternative of charging offsite generators the fully burdened long-term costs of disposal of waste. Currently, USDOE charges Battelle and other offsite generators only approximately 50% of the present costs of disposal. Heart of America Northwest and the Hanford Advisory Board have commented and advised USDOE and Washington Ecology that only fully characterized wastes should be shipped to Hanford, to the degree that any offsite wastes are shipped. This is a major issue of public concern regarding this EIS. However, Battelle has a major conflict of interest in that it seeks to ship to Hanford uncharacterized Remote Handled Transuranic and other wastes

Battelle failed to disclose that it has a major conflict of interest in preparing responses to the comments of the public, Members of Congress, Heart of America Northwest and the Hanford Advisory Board rejecting the comments that the EIS consider the reasonable alternative of charging generators the fully burdened long term costs of disposal, and that the EIS have a preferred alternative (and, at minimum, for legal compliance, consider one alternative) that ends disposal of wastes in unlined soil trenches by the end of this year and bars continued use of Hanford soil for disposal of offsite wastes due to the cumulative impacts to groundwater, and other harm to health and the environment. Consequently, all those involved in submitting public comments on the HSWEIS were deprived of a meaningful opportunity to exercise their rights under NEPA to submit public comments based on a discussion of all reasonable alternatives.

We request the Inspector General to investigate how this mismanagement of a major EIS, on which major decisions for the Northwest are proposed to be based, could have been allowed to proceed by Hanford management.

11 These conflicts of interest require the following actions by CEQ, EPA and USDOE :

1) require that the HSWEIS be withdrawn;
2) the contract for producing the HSWEIS with Battelle be rescinded;
3) a new HSWEIS begun with a contractor who has no conflict of interest regarding potential outcomes and decisions to be based on the EIS;
4) forfeiture by Battelle of all fees and costs paid by the U.S. Department of Energy for work on this EIS; and
5) imposition of civil and criminal penalties for fraudulently misrepresentation of its interest in the outcome of the HSWEIS. 10 CFR 1036.305 (a) 1,3.

4. **These flaws can not be overcome by merely addressing comments in a Final EIS. Thus, the EIS must be reissued for public comment after being completely redone by a credible, and independent contractor**:

Failure to completely revise and reissue a new draft EIS for comment will deprive the public of ever having the opportunity to comment on the impacts of current conditions, and the fundamental impacts of proposed landfills and treatment facilities – which have not been disclosed in the revised draft HSWEIS.

Example: The Public's Right to Comment on Impacts on Ground Water from Existing and Proposed New Landfills Has Been Denied:

15 Washington Ecology and EPA, for instance, have concurred with the analysis that this revised draft fails to provide the legally required minimum analysis of the impacts of proposed landfill sites, size, disposal quantities and design. Hundreds of commenters, the Hanford Advisory Board, Tribes, Heart of America Northwest, and the States of Oregon and Washington and U.S. EPA all urged USDOE to clearly disclose and consider the impact of the proposed landfill alternatives on groundwater meeting the standards in Sec. 3004 and 3005 of RCRA, Chapter 173-303 WAC, NEPA, MOTCA, SEPA, etc… requiring that the impact on ground water be analyzed under the facility and at the proposed facility boundaries. Without analysis of the impacts on ground water at the *current and proposed new* facilities' boundaries it is impossible to ascertain what the impacts are of:

- any proposal to continue to use a landfill (as all alternatives presume to continue to dump waste in unlined soil trenches for an undisclosed period of time);
- alternative designs for capping and closing landfills;
- alternatives for size and limitations on waste acceptance for any given proposed landfill;
- alternative locations for landfills; and,
- mitigation through operating restrictions, waste acceptance criteria and closure of the impacts on ground water from each new landfill.

Example:
Cross-Site Comparison of USDOE Low-Level Waste Landfills:
The Public Has a Right to Consider the Alternatives to Use of Hanford Low-Level Burial Grounds for Offsite Waste, Which USDOE Has Never Considered

16 Heart of America Northwest Research Center has embarked on an extensive, detailed **"cross-site comparison of USDOE's low-level waste landfills and alternatives"**, which conclusively shows that, amongst USDOE's landfill alternatives, the least environmental impact occurs if USDOE's offsite Environmental Restoration Program wastes are disposed in a lined, regulated landfill in Utah. That landfill, in Clive, Utah, operated by "Envirocare of Utah", has never released waste, has leachate collection systems and both ground water and soil column (vadose zone) monitoring that far exceed USDOE's low-level burial grounds, and is not located above drinkable ground water. Disposal charges at the Envirocare site include, as a permit condition, the costs of long-term monitoring and closure.

On the other hand, the Hanford Low-Level Burial Grounds are *unlined* soil trenches that:

- lack leachate collection;
- are not properly capped after waste is dumped in them;
- have no independent regulatory oversight and quality assurance to prevent illegal disposal of unknown wastes or hazardous wastes;
- do not have a legally compliant ground water and soil column monitoring system;
- are releasing hazardous substances to soil, air and ground water;
- are releasing the deadly poison and carcinogen, Carbon Tetrachloride, to air in one trench at levels that are twice the lowest concentration fatal to humans, and releasing to the soil and contaminating ground water;
- are not externally regulated;
- do not track the specific location of wastes that are dumped in them;
- lack a closure and long-term monitoring plan (and, the current EIS, which should have such a plan, fails to have a closure and monitoring plan);
- offsite generators pay less than 50% of the current costs of disposal, as estimated by USDOE's own studies, and none of the long-term, fully burdened costs of disposal for monitoring, remediation, and closure.[1]

USDOE has never considered in a programmatic environmental impact statement the use of a regulated, lined disposal site for disposal of its ER Program wastes, as an alternative to shipping these wastes to Hanford for burial in unlined trenches. Nor did it consider this

[1] SEE Letter of Secretary of Energy Spencer Abraham to U.S. Senate, 2002, committing to consider the long-term costs of disposal in all disposal decisions; SEE: "Commercial Disposal Policy Analysis for Low-Level and Mixed Low-Level Wastes", USDOE, 1999. I n 1999, USDOE charged offsite generators $14.05 per cubic foot ($495 per cubic meter) for LLW Category I disposed at Hanford, whereas the cost of disposal (including both variable and fixed costs) was $1,046 per cubic meter. This included no charges for the long-term monitoring or closure of the burial grounds. May 12, 1999, USDOE-RL Acting Assistant Manager for Waste Management Jay Augustenberg presentation to Hanford Advisory Board.

alternative in the revised draft HSWEIS, despite having been urged to do so in comments on the first draft of the HSWEIS.

The sole alternative to dumping waste in USDOE's unlined Hanford LLBG trenches considered in this EIS is dumping of waste in the unlined Hanford commercial LLW dump site, which is known to have released hazardous substances and to be contaminating ground water. This is unacceptable. Furthermore, USDOE fails to disclose the current conditions and contamination from the commercial LLW dump site at Hanford, despite the obligation to do so and consider the cumulative impacts from ongoing disposal in either the commercial or USDOE unlined burial grounds.

Incredibly, USDOE fails to report the potential and reasonably foreseeable impacts from waste already disposed at the commercial LLW dump site at Hanford and the future disposal operations – despite the fact that these impacts have already been analyzed and reported in the Draft EIS on the Commercial LLW Site issued by Washington Departments of Ecology and Health.

The credibility of the USDOE revised draft HSWEIS is undermined by both failing to cite and discuss the results of the Washington State EIS on the commercial dump site, and claiming that the combined cumulative impacts of all existing and proposed Hanford burial grounds will be less than the projected impacts on ground water and future exposed Native American or other individuals exposed to wastes from just the commercial LLW burial ground. The commercial burial ground halted disposal of liquids and potentially hazardous wastes, with regulatory oversight, long before USDOE did so for the Hanford LLBGs, and the commercial site inventory is much smaller than the Hanford LLBG inventories.

17 Also, incredibly, USDOE fails to adopt the approach of the Washington Departments of Ecology and Health in not issuing a final EIS on the disposal site until the investigation of releases is completed, and alternatives can be presented for changing operations, closure and remediation. *We urge USDOE to adopt the same approach and not issue a final EIS until the Hanford LLBGs are investigated for releases and inventoried for the wastes they contain, and alternatives for their closure and remediation can be presented – along with consideration of the cumulative impacts from all Hanford Low-Level Waste Burial Grounds.*

Continued operation of the commercial LLW site, and its continued impacts, is a USDOE solid waste decision – which it must consider given the existence of contamination releases and cumulative impacts to ground water.

The public has a legal right to comment on the fundamental impacts of proposed new landfills and decisions to double the amount of waste buried in Hanford's soil. ***Only if this EIS is withdrawn and reissued with a credible and legally adequate analysis of the impacts on ground water underneath, and at the boundaries of, the existing landfills and proposed new landfills will the public ever have the legally required opportunity to review and comment on the fundamental impacts of USDOE's proposed actions.***

Conclusion:

The Revised Draft Hanford Solid Waste EIS has been a mismanaged fiasco, driven by a deadline to issue a pre-determined, publicly announced, decision to increase the import of waste to Hanford. This imposed schedule left those revising the EIS with no ability to do the legally required minimum analyses that hundreds of commenters, two states, U.S. EPA, tribes, Members of Congress, newspaper editorials, Heart of America Northwest and the Hanford Advisory Board all advised USDOE to conduct and disclose.

The drive to issue a final decision and minimize comments led to a legally inadequate notice and comment period published in the Federal Register, and a failure to correct this inadequacy. The public was deprived of the right to know the comments from regulators and the Hanford Advisory Board before hearings and before the comment period closed. The mismanagement clearly began with a decision to have a contractor prepare much of the EIS, and given the job of responding to comments, relating to decisions in which it has a clear financial conflict of interest and stake in the outcome of decisions that will rely on the EIS.

The Hanford Solid Waste EIS must be withdrawn and revised with the legally required disclosures of actual conditions, impacts of from current conditions (e..g, the burial grounds) and all proposed and related actions, cumulative impacts, transportation route impacts and risks; alternatives to import of waste… and the numerous other deficiencies cited in these comments and the comments of regulators and numerous other parties.

The analysis and performance of the EIS, including responding to comments, can not be done by USDOE's current contractor, Battelle, which has a clear stake in the outcome of decisions and a conflict of interest.

Part III

Additional Deficiencies and Inadequacies of the Draft Hanford Solid Waste EIS:

5. **Inadequate Scope:**
Failure to include Clean-Up (Environmental Restoration Program) Wastes and alternatives to shipping offsite ER Program Wastes to Hanford:

18 The Waste Management Programmatic EIS (USDOE, 1997) (WMPEIS) was admitted to be legally inadequate for failure to include Environmental Restoration (ER) program wastes which would be transferred to sites such as Hanford for disposal as part of the Waste Management Program. USDOE violates both NEPA and commitments made pursuant to litigation over the WMPEIS to consider:

- the impacts of transfers of ER wastes to Hanford;
- the chemical and radiological properties of ER wastes proposed to be shipped to Hanford;
- cumulative impacts from adding ER wastes to: a) Hanford's own existing and future wastes requiring disposal; and, b) USDOE's Waste Management Program wastes.

USDOE's current practice, and proposed decisions, to transfer ER Wastes from other Superfund sites to Hanford, including TRU wastes from ER Programs at other sites, is illegal and must be halted:

19 USDOE has been illegally transferring wastes to Hanford from Superfund sites at other USDOE facilities and privately owned Superfund sites. In the revised draft HSWEIS, USDOE proposes to illegally authorize continued and expanded use of Hanford's Low-Level Burial Ground trenches for disposal of offsite LLW and "storage" of offsite TRU from such Superfund sites; and, to illegally dispose of offsite MW from such Superfund sites.

Section 9621of Superfund (CERCLA) prohibits transfer of offsite wastes from other Superfund sites to Hanford.

42 USC 9621(d)(3) prohibits transfer of a hazardous substance, pollutant or contaminant from any other Superfund site to facilities that are not operating in compliance with the requirements of RCRA (Section 3004 and 3005[2]) and state hazardous waste laws[3] for liners, leachate collection systems, ground water monitoring, etc….

Transfers are only permissible if it can be positively certified (by EPA) that the landfill is not releasing any hazardous waste into ground water, surface water or soil; and, all

[2] 42 USC 6924 and 6925.
[3] E.g.: Chapter 173-303 WAC and WAC 173-303-665.

releases from all other facilities at the entire site "are being controlled by a corrective action program" under RCRA.[4]

In May, 2002, EPA confirmed that Hanford LLBGs are releasing carbon tetrachloride to soil – at levels that are immediately dangerous to human health.

Ecology, in its Notice of Deficiency to USDOE (January, 2003) for the Low-Level Burial Grounds has found that it is likely that releases of Carbon Tetrachloride are the source of elevated organic carbon measured in ground water wells near the LLBGs.

No source control or corrective action has occurred at either the LLBGs or the Single Shell Tanks which have released hazardous substances to soil and ground water.

The three examples above are a token of the examples of violations of the requirements of Sections 3004 and 3005 of RCRA and of releases of hazardous substances from the very burial grounds that USDOE proposes to add offsite Superfund wastes to; and, of examples of violations of the requirements of 42 USC 9621(d)(3)(B).

We expect USDOE to immediately cease all import to Hanford of LLW and TRU from any Superfund site, and to acknowledge the applicability of 42 USC 9621(d)(3).

Of course, the citizen suit provisions of Superfund may be invoked to halt such transfers to Hanford, and the failure to consider this standard will be evidence of willful violation.

WM PEIS lacks authority for (Environmental Restoration) ER wastes
The Hanford Advisory Board warned DOE in its review of the first draft of the EIS in advice #133 that:

> *"The draft HSW-EIS assumes the 2000 Record of Decision (ROD) selecting Hanford as a specific site for disposal of Department of Energy (DOE) complex low level waste (LLW) and mixed low level waste (MLLW) was fully supported by the Waste Management Programmatic Environmental Impact Statement (PEIS) analysis. As shown by public comment on the PEIS, the states, Tribes, and other stakeholders did not find the PEIS analysis sufficient to support selection of Hanford as a disposal site for DOE complex-wide waste."*

USDOE entered into a court approved stipulated order regarding the failure of the WMPEIS to address wastes produced from its Environmental Restoration programs. Those wastes may now comprise a majority of certain waste types proposed to be shipped to Hanford for disposal without consideration of alternatives or programmatic impacts. In further review of this draft, we find that the HSW-EIS continues to assert as authority the decisions under the PEIS for LLW and MLLW. The PEIS clearly states in section 1.7 that though the PEIS initially included wastes from both on-going waste management operations and from environmental restoration work, that the environmental restoration waste was withdrawn from review and hence coverage by the PEIS. The PEIS clearly

[4] 42 USC 9621(d)(3)(A) and (B).

states that the character, composition and potential impact of these wastes were not analyzed in the PEIS:

> *"If DOE had sufficient information about the ER transferred wastes, it would analyze their impacts in the same manner as the impacts of the WM wastes are evaluated in the WM PEIS. Unfortunately, DOE still does not have sufficient information on the volume or contaminant composition of these wastes to perform a meaningful impact evaluation at this time." Page 1-42*

> *"Additionally, very little information is available to DOE about the composition of environmental wastes. This prevents the Department form evaluating the impacts of managing these wastes at this time." Page 1-42*

DOE did not analyze the impacts of RCRA and CERCLA ER wastes from sites in the PEIS. Consequently, the PEIS provides no authority or basis for decisions about what to do with these wastes.

Reasonable alternatives with greater environmental and health benefits exist for ER waste disposal. Proposals to dispose of such wastes now require a thorough analysis of the whole range of reasonable alternatives, including alternatives at the originating sites, at regulated and lined commercial sites such as Envirocare in Utah, other DOE sites, or waste minimization, treatment and volume reduction (including the reasonable alternative of charging the generators the fully burdened cost of disposal). The HSW EIS makes no such analysis and hence fails to meet the minimum requirements under NEPA for consideration of a reasonable range of alternatives for this portion of the proposed actions.

6. The HSW EIS analyzes a limited portion of the wastes from Hanford cleanup and Waste Management Programs. It artificially excludes many major and minor related wastes, which are located in close proximity to the wastes considered.

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Tiering off of the WMPEIS, this EIS was legally required to consider the entire spectrum of Waste Management Program wastes at Hanford and the addition of ER program and offsite wastes to the Hanford Waste Management Programs' wastes:

The revised draft HSW EIS fails to consider the impacts of the following wastes[5], and the cumulative impacts from these wastes:

1. Previously leaked tank waste,

[5] This includes failure to consider the impacts from treatment facilities and failure to consider reasoanable alternatives for treatment, storage and disposal fo these wastes, as well as the impacts on ground water or human exposure or the environment from these specific wastes. A glaring example is USDOE's failure to consider and disclose in the HSWEIS the benefits of vitrification of LAW wastes from the High-Level Nuclear Waste tanks in comparison to the proposed actions to use alternative treatments prior to disposal; or, the reasonable alternative of continuing with the current decision for having ILAW waste retrievably stored instead of being buried in shallow landfills.

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2. Residual waste DOE proposes to leave in tanks,
3. Wastes in related ancillary equipment and piping,
4. Hazardous or mixed wastes buried in the Low-Level Burial Grounds, and releases from the burial grounds;
5. Waste currently uncharacterized and stored in the PUREX tunnels,
6. Wastes from dismantling and disposing of various facilities, and
7. Wastes from dismantling the vitrification and treatment plants.
8. U.S. Ecology low-level waste disposal facility.
9. U.S. Navy compartments;
10. Possible wastes associated with processing and disposal of the cesium and strontium capsules; and,
11. Transuranic wastes (TRU) proposed to be imported; and, TRU "stored" or already buried on site.

All of these wastes and their impacts are co-located with, and inseparable from, the impacts of the wastes analyzed in the HSW EIS. The HSW EIS unreasonably fragments the evaluation of impacts from other Hanford cleanup decisions. DOE recently conducted scoping on a Tanks Retrieval and Closure EIS. The Tank Waste Supplementsl EIS is scheduled for issuance this fall. The HSW-EIS includes wastes from disposal of immobilized low-activity high-level waste (ILAW) from treatment of Hanford's tank wastes resulting from these processes.

It proposes to analyze the impacts from ILAW now, despite a decision by USDOE to attempt to change the composition and form of this waste to a less protective form in analyses to be done later. It is unclear which of the ILAW analyses were used to aggregate with the analysis done using the Systems Assessment Capability (SAC). And the risk analysis is all dependent on use of the as yet unvalidated and unproven SAC; and, on the Prior Performance assessments for LLBGs, which (as shown in our Review of the Performance Assessment) is indefensibly inadequate (i.e., failed to even considier the presence of hazardous wastes).

ILAW in glass and retrievably stored.
DOE analyzed how to treat tank waste in the Tank Waste Remediation System EIS. The Tri-Parties were strongly advised by the public at large, its own Tank Waste Task Force and the Hanford Advisory Board to immobilize tank waste in the most durable possible form – glass. Additionally, the public and the Board advised the Tri-Parties that due to the uncertainties in the long term waste glass performance, to retrievably store, not dispose of the ILAW at Hanford. DOE committed to precisely these decisions in the TWRS EIS. Later, DOE changed the decision on retrievability to disposal in a Supplemental Analysis. The impact of this must now be disclosed and the reasonable alternative of retrievable vitrified glass fully considered in this EIS.

Should DOE proceed with decisions from the HSW EIS, DOE will be bound to a performance standard equivalent to glass for whatever waste form is used, and to limitation on the composition to those previously identified. This is the analysis presented in this EIS, and to substitute any waste form that has greater impacts willnot be

permissible. It is inappropriate and a violation of NEPA for DOE to knowingly assess the potential impacts of the waste disposal while simultaneously planning to change the form, character and content of the waste form in some other process.

The HSW-EIS attempts to make decisions about the location and design of disposal cells for LLW, MW and ILAW without considering the cumulative impacts of the wastes that USDOE has left out of the EIS, and without considering the actual nature of the wastes to be disposed.

7. Even the inadequate analysis done shows USDOE's proposed landfill actions will exceed regulatory limits

The HSW EIS considered a limited range of alternatives and exposure scenarios. DOE should immediately drop any alternative, which does not meet this minimum standard of liners and leachate collection systems for all waste disposed to soil starting this year. No alternative was considered to end use of unlined trenches by the end of this year. A much broader range of alternatives is needed which fully comply with environmental regulations, and which do not release contamination to the Hanford environment.

DOE asserts on page 5.244 that "By the time the waste constituents from the action alternatives are predicted to reach groundwater (hundreds of years) the waste constituents would not superimpose on existing plumes and would not exceed the benchmark dose, because the existing contaminant plumes will have migrated out of the unconfined aquifer by then." This is highly doubtful. The existing contamination plumes are the leading edge of contamination entering the aquifer from the vadose zone.

The analysis in the HSW EIS clearly shows that DOE intends to allow widespread contamination of the groundwater from the actions DOE proposes in the HSW EIS. The projected impacts of these actions exceed regulatory limits for all alternatives at locations near the proposed sites, and near the Columbia River for a significant subset of the population. This is unacceptable. The Tri-Parties should recognize that this risk is driven in large part by volatilization of uranium isotopes in the scenario used. The standard EPA exposure scenarios do not adequately consider or evaluate this pathway. The regulators should also note that the analysis is highly dependant on the use of an untested and unproven model.

DOE uses as its benchmark in the HSW EIS the DOE 25 millirem all sources limit. This dose, however, is not the legally controlling standard for cleanup decisions or for permitting of Mixed Waste facilities. EPA has formally determined that exposures of 25 millirem per year at Superfund Clean-Up sites are *"not protective of human health and the environment"* because exposure would result in risks of cancer far in excess of the allowable range under the National Contingency Plan[i],

DOE fails to consider either the specific EPA or Washington Model Toxics Control Act carcinogen risk standards for radionuclides, or the State and Federal ground water protection and cleanup standards, which also apply. These standards require that ground

water be remediated to allow for beneficial use, presumed to be drinking water and irrigation. Instead, USDOE attempts to declare the ground water irreversibly and irretrievably committed to being contaminated and restricted from use for "thousands of years" (and fails to disclose the extent of such restrictions). This EIS must be reissued for comment showing how the proposed actions, and cumulative impacts, relate to these relevant and controlling standards.

8. Ground Water Compliance and analysis points:

The HSW EIS analyzes the potential impacts to groundwater at a line one kilometer away from the proposed disposal sites. This is inadequate and unacceptable. DOE must prevent the release of the contaminants to the subsurface or the groundwater. DOE must analyze the potential impacts at the edge of, and under, the disposal sites in the vadose zone and groundwater. Additionally, DOE must analyze the potential worst case impacts from overlapping releases. The analyses in this EIS do not provide the regulators the information they minimally require to permit RCRA or CERCLA waste disposal facilities for these wastes. As the wastes proposed for disposal are RCRA and CERCLA wastes, both agencies have permit authority over these facilities, and DOE may not act alone in siting the facilities.

Ground Water Analysis inadequate

21 DOE asserts that the parameters used in its models are conservative. The numerical models used have not been validated, and are in conflict with site observations on the movement of wastes. EPA requires that site specific parameters be used in models. The parameters used in the model do not appear to reflect the best site knowledge of these parameters.

The EIS asserts on page 5.248 based on the models used, that there will be no impact from uranium in groundwater in 200 East for the ten thousand year period studied. Uranium is already impacting groundwater in the 200 East Area at levels above the Maximum Concentration Limits.

No model to date predicts the already observed waste impacts in groundwater from the Hanford tank farms, or the lateral movement of wastes through the soils. In Table D.4-5 of the WM PEIS, DOE notes that there are 12 orders of magnitude of uncertainty in the risk predictions via the groundwater pathway for the Hanford site.

The models used for this EIS do not narrow this uncertainty. The HSW EIS claims to analyze uncertainty. This analysis does not address uncertainty in the conceptual models used, or the six areas identified in the WM PEIS table. Instead, it substitutes an evaluation of the model's parametric sensitivity for an uncertainty analysis. The HSW EIS does not disclose the large changes in results between the first 25 runs of the model and the runs used to support the HSW EIS. These differences are large and are a portion of the uncertainty.

22 DOE lacks basic knowledge about subsurface fate and transport. DOE has been repeatedly embarrassed by the failure of models to withstand the tests of time. The Board has little confidence that DOE can predict the future impacts or risks from its proposed actions with any certainty. Lacking such analysis capability for impacts to the soil and groundwater immediately beneath the proposed waste disposal facilities, DOE lacks the basic information required to make decisions about the sizes, locations or designs of these facilities.

Actual contamination from both the commercially operated and USDOE operated Low-Level Waste Burial Grounds are neither disclosed nor predicted from USDOE's model used for this EIS.

DOE must not take credit for the vadose zone soils or the groundwater as a buffer against the movement of contamination. Federal and state laws require liners and leachate collection and capping after filling a trench, utilizing a defense in depth approach to prevent the release of contaminants during the operational phase of the burial ground and closure that is protective for so long as the wastes remain inherently dangerous.

DOE may not irreversibly and irretrievably commit groundwater

23 In section 5.15, DOE asserts a broad and unspecific claim to irreversibly and irretrievably commit an unspecified amount of groundwater with unspecified levels of contamination for an unspecific and unlimited time.

Groundwater is a State resource, not a Federal resource. DOE lacks authority to make such a claim. Further, both State and Federal law for environmental cleanups require the protection of groundwater.

If it were allowed, this irreversible and irretrievable commitment claim might be used by DOE to argue that groundwater cannot be used for drinking water, and hence is not a basis for cleanup decisions under RCRA and CERCLA. This is contrary to both the intent of the National Environmental Policy Act for protecting the environment for future generations, and the environmental laws. It ignores the State and Federal environmental requirements that cleanup be based on the highest beneficial use of groundwater. And, it does so to dispose of waste from RCRA and CERCLA cleanups of other sites around the nation.

More over, DOE notes in its response to Hanford Advisory Board advice #133 that the irreversible and irretrievable commitment of groundwater claim was made only because of the existing contamination, which is subject to the Tri-Party Agreement. USDOE ignores that it is required by NEPA to consider:

a) the impacts of disposal decisions and practices to date which have contamianted ground water,
b) the impacts in the future from its Waste Management disposal practices;
c) the cumulative impacts of all related decisions on ground water;
d) the reasonable alternatives of programs to remediate ground water and compare those impacts with current plans of USDO to not remediate ground water

Rather than claim that there is an irreversible and irretrievable commitment of ground water from past releases, USDOE is bound by NEPA and by the requirements of MOTCA, RCRA, WA Hazardous Waste management Act and CERCLA to consider programs that will restore ground water to beneficial use. There is no need or justification for DOE to make an after the fact claim for commitment of groundwater for an environmental release. The only purpose such a claim could serve is to provide a basis for not cleaning up the contamination. This is improper.

To site a disposal facility of the nature DOE proposes, DOE must design the facility to prevent the release of contaminants to the soil and groundwater. Should the facility release these contaminants in the future, such releases are subject to cleanup under the environmental laws and regulations. This means that USDOE must abandon use of any standard that is less protective than the cleanup standard for hazardous substance releases under MOTCA, and the applicable ground water protection standards (i.e., Drinking Water Standards and MCLs).

24 DOE must to the greatest degree practicable reclaim or remediate groundwater and prevent its contamination. DOE may not use Hanford's groundwater or the Columbia River for waste disposal. Additionally, DOE must mitigate these impacts both to meet NEPA requirements and to avoid or fulfill the Natural Resource Damage provisions under CERCLA. It is inappropriate and unacceptable for DOE to use an EIS as a vehicle to supplant environmental cleanup laws and regulations.

9. The HSW-EIS should integrate all waste site analyses to determine the full cumulative impacts.

The Hanford Advisory Board advised DOE in advice # 133 that "The cumulative impacts of related major actions, on site and complex-wide, are not adequately addressed in the draft HSW-EIS. The draft frequently incorporates other documents by reference only. In addition, the Board questions the consistency of the draft HSW-EIS with the PEIS. In order for the HSW-EIS to be a credible, bounding document, it must show how much waste in all forms Hanford is slated to keep. It should also state how much will be exported and how much new waste will be accepted."

The new draft of the EIS does not remedy this problem. For any decision in this EIS to have meaning, all overlapping impacts from Hanford origin wastes must be analyzed simultaneously. The impact of leaked tank wastes and related activities is to be analyzed separately in the Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site (Tanks EIS). The impacts of these wastes are coincident with the impacts of the wastes analyzed in the HSW EIS.

The second draft of the HSW EIS adds consideration of the ILAW. This adds several new problems. DOE has already chosen NOT to vitrify 70% or more of this waste, yet

the impact analysis in the EIS is based solely on vitrified waste. DOE is actively pursuing alternative waste forms for this waste changing both the composition and character of the waste stream. These decisions will be made later, and may drastically alter the cumulative risks from the wastes analyzed in the HSW EIS. These proposals are under active consideration, analysis and testing. These are directly related actions under NEPA. DOE improperly separates the decisions about the form and character of the waste to the Tanks EIS to be done later, while claiming to analyze the impacts from the wastes resulting from those decisions now in the HSW EIS.

Additionally, DOE cites itself for authority under DOE Order 435.1 to redefine this waste as low-level waste rather than high-level waste. Whether DOE has such authority is currently in dispute in the courts. Until DOE can define the cumulative impact of the tank wastes, DOE must do a worst case analysis.

10. TRU waste inadequately considered: Decisions to import TRU, treat TRU, or leave TRU in soil can not be based on this inadequate EIS.

The HSW EIS does not fulfill DOEs previous commitment to consider all TRU waste as being potentially mixed waste until "definitive characterization" analysis demonstrates otherwise.

25 The EIS does not include analysis of necessary facilities for characterization, processing, treating and storing TRU waste and TRU mixed with hazardous waste (TRUM). It is highly likely that TRU waste exhumed at Hanford will be TRUM and will require processing or treatment prior to storage and shipping. The HSW EIS impact analysis for TRU waste is inadequate and does not meet DOEs previous commitments.

In the WM PEIS, DOE decided to dispose of TRU waste at WIPP. The WM PEIS presumed that TRU waste would be treated at the sending sites prior to shipment. The WM PEIS did not fully analyze and did not decide to store TRU waste at Hanford. And, Hanford lacks the necessary facilities to do such work.

The WMPEIS predicted that storage and treatment of offsite TRU, especially in the event of reasonably foreseeable accidents or earthquake, would result in offsite public cancer fatalities – up to 200 in the event of an earthquake (analysis presumed the TRU was already treated, which lowers impacts, before shipment to Hanford). None of these impacts, or necessary facilities for Remote Handled, oversize and Mixed TRU, are disclosed or considered in the HSWEIS. Yet, the HSWEIS states that it could be the basis for decisions to import TRU to Hanford. It should instead be shipped directly to WIPP. If treatment facilities do not exist at other facilities, a separate EIS should be prepared for the location, design and construction of such facilities at sending sites, or at WIPP.

WMPEIS commitment to further NEPA review prior to importing TRU to Hanford:

"Although DOE intends to select sites for waste management activities based on the WMPEIS, the WMPEIS will not be the basis for selecting specific locations for facilities

at sites, EOE will consider the results of relevant existing or new sitewide or project-level NEPA analyses…"
WMPEIS at both 8-56 and 8-67

Clearly, USDOE has chosen where to store TRU at Hanford prior to undertaking the promised and legally necessary new sitewide or project level NEPA analyses. USDOE admits that importing the TRU to Hanford necessarily entails decisions to stor in specific locations, without any consideration of the impacts from storing these wastes in these locations, i.e., on land use and future site use plans, emergency response plans, cumulative impacts from potential releases in burial grounds, radiation exposure to workers at T-Plant to the Central Waste Complex or in the unloading of casks.

Significance of commitment to do further NEPA for site specific location is shown by WMPEIS discussion of earthquake scenario impact. At Hanford, USDOE admits that it will store some of the TRU in "butler" buildings, which would not survive an earthquake.

PEIS at 8-44:
WMPEIS accident analyses and consideration of impacts were based on assumption that the waste was already treated!!! In event of earthquake, accident analysis assumed storage facility collapsed "which results in a significant airborne release of TRUW".

"In light of the stable nature of treated TRUW, this set of assumptions may be conservative."

This accident scenario (earthquake) results in 200 cancer fatalities, and the annual frequency of such an occurrence is <1E-5 (one in one hundred thousand, which is credible).

Also see 8-34 on cancer incidence from treatment, with commitment to further NEPA review since site chosen will determine number of offsite cancers.

Comparison of Impacts: Transportation and On-Site

The WMPEIS shows the claim of no impact from transport of TRU to Hanford to be false: there are significant probable impacts contrary to US' assertion of no harm from either transport or onsite radiation releases.

Preferred alternative in WMPEIS compared to new plan of USDOE:
WMPEIS Table 8.16-2:
Truck Radiation Fatalities: less than or equal to 4
Truck Non-Radiation Fatalities: less than or equal to 3

Impacts: Treatment
Failure to consider impacts, alternatives and mitigation prior to decision. Shows need for Supplement Analysis and new EIS. Rebuts US' claim that impacts of storing and treatment at Hanford are minimal / insignificant. US has duty under NEPA to do site specific to consider mitigation, even if can rely on WMPEIS for choice of Hanford.

WMPEIS Page 8-44; Sec. 8.4.3.2 Assumes incineration of TRU for treatment methodology prior to disposal, if choose, or are required, to treat.

"Under Regionalized Alternative 2, treatment accidents would result in two cancer fatalities in the offsite population at Hanford."

"Under Regionalized Alternative 3, treatment accidents would result in two cancer fatalities in the offsite population at Hanford."

Both Regionalized Alternative 2 and 3 were predicted to result in 5 fatal cancers in workers at Hanford, versus 1 at LANL and 1 at INEL.

Earthquake during treatment:
WMPEIS predicts 7 latent cancer fatalities whereas WIPP SEIS II "predicts up to 30 LCFs in the offsite population."
This is due to different assumptions and analysis methods between the two EISes.

Waste Management Programmatic EIS (WMPEIS) regarding: Risk from earthquake accident during storage of TRU: 200 Cancer Fatalities amongst Public at Hanford:

"The number of latent cancer fatalities in the offsite population ranged from 6 at ORNL and INEL to 200 at Hanford…" Page 8-44.

Assumptions:
1. Dedicated TRU storage facility: Does not exist at Hanford. Imported TRU being stored in three locations: a) unlined burial grounds for Remote Handled TRU; b) parking lot outside T-Plant in a cement shielding container for Remote Handled TRU contaminated with PCBs (violates requirement for weekly inspection of PCB drums); and, c) metal storage buildings comprising the "Central Waste Complex".
2. Waste was treated before storage: USDOE asserts that it need not treat the waste for hazardous components; and, there is no facility at Hanford to characterize the Remote Handled TRU or to treat it.

PEIS at 8-44:
WMPEIS accident analyses and consideration of impacts were based on assumption that the waste was already treated!!! In event of earthquake, accident analysis assumed storage facility collapsed "which results in a significant airborne release of TRUW".

"In light of the stable nature of treated TRUW, this set of assumptions may be conservative."

This accident scenario (earthquake) results in 200 cancer fatalities, and the annual frequency of such an occurrence is <1E-5 (one in one hundred thousand, which is credible).

Also SEE: discussion of WMPEIS admitting that additional NEPA review is needed for site specific location decisions, i.e., storage.
"Although DOE intends to select sites for waste management activities based on the WMPEIS, the WMPEIS will not be the basis for selecting specific locations for facilities at sites, EOE will consider the results of relevant existing or new sitewide or project-level NEPA analyses…"
WMPEIS at both 8-56 and 8-67

Treatment dose at Hanford WMPEIS Volume II, Table II-5,3-4
Offsite Maximum Exposed Individual (MEI) under Regionalized TRU Alternatives 2 or 3 = 6.8 E-3 Rem. This equals 6.8 mrem/year.

EPA limit for NESHAP release to air is 10 mrem/year. Based on EPA and NRC radiation standards, 6.8 mrem per year would result in approximately 1 to 2 fatal cancers in every 10,000 adults exposed. EPA now acknowledges that the same dose from a carcinogen will result in 3 to 10 times more cancers in children than in adults (EPA draft fuidelines for cancer risk assessment, released March 3, 2003.
http://epa.gov/ncea/raf/cancer2003.htm).

Doses of 100 millirem per year would result in 20 fatal cancers per ten thousand exposed adults, as calculated by NRC (2 in 1,000; or, 2E-3)[ii]. NRC estimates that an annual dose of 200 mrem/year would result in an estimated 4 fatal cancers per 1,000 exposed adults.[iii]

EPA has formally determined that exposures of 25 millirem per year at Superfund Clean-Up sites are not "protective of human health and the environment" because exposure would result in risks of cancer far in excess of the allowable range under the National Contingency Plan[iv], which is from one in a million to a cancer risk of no more than one in ten thousand. Furthermore, numerous states, including Washington, have laws and standards that require cleanup of landfills or other sources of public exposure from releases if the cancer risk from exposure is greater than one in one hundred thousand from all combined carcinogens, and one in a million from any single carcinogenic source.[v]

Treatment: USDOE has not determined that it will not treat to meet LDRs, despite waiver of LDRs in WIPP Land Withdrawal Act. Permit requirements are still unknown and may require substantially similar treatment.

WMPEIS at 8-34: Treatment at Hanford has significant impacts and USDOE committed to Consider Mitigation Measures:

"The greatest number of estimated cancer incidences resulting from treatment of TRUW to meet LDRs occur in the offsite populations at LANL and Hanford under Regionalized Alternative 2 and Hanford under Regionalized Alternative 3… thermal treatment of waste that contains… Plutonium 238 at Hanford, which as previously mentioned, would require special mitigation measures."

"LANL, Hanford and WIPP are the only sites that have an estimated incidence of at least one cancer in the offsite population as a result of radiation exposure… Specific mitigation measures would be evaluated in sitewide or project-specific NEPA review."

That NEPA review should have occurred for this project, since the significant impacts will be determined by WHERE the treatment occurs.

Rebuttal to USDOE Claim that accidents during storage and treatment and movement to WIPP are fully considered in WMPEIS:

WMPEIS acknowledges that it only calculates transport accident impacts for post-treatment waste movement. USDOE refuses to treat these wastes, and they will be shipped to Hanford prior to characterization or treatment. Impacts before treatment of the waste have never been analyzed and are likely to be far greater (that is one reason for treatment, i.e., to remove or destroy volatile or flammable chemicals, and to stabilize Plutonium so that it is not readily dispersible).

<u>Rebuttal to US Claim that it can store in LLBG and not consider impacts from Mixed Waste and need not meet RCRA requirements: Shows significant change in plan:</u>

WMPEIS says assume all TRU is Mixed Waste until characterization.
No characterization of these wastes has occurred.
US' proposed storage and plan, per Reply of US to State, is a major change in the assumptions of the WMPEIS, since the WMPEIS assumed and asserted that all TRU would be stored as, and assumed to be, Mixed Waste.

"DOE assumed that all TRUW is mixed waste. This assumption is conservative and consistent with practice in the field, where TRUW is managed as mixed waste unless definitive characterization has been performed to establish that there are no hazardous constituents present."[vi] WMPEIS Section 8.2.1.1, page 8-10.

As stated earlier, USDOE now claims it is exempt from all RCRA and state requirements for treating Mixed TRU prior to storage, while buried in Hanford soil, or prior to disposal. This violates the fundamental assumption made for management of TRU in the WMPEIS – without consideration of the impacts or the reasonable alternative of maximizing treatment for environmental benefits regardless of legal requirements.

Thus, USDOE is changing the major mitigation for storage of the TRU from BCL and ETEC and other sites, by now asserting that it does not have to consider or act as if the TRU is Mixed Waste. Unless there is a new EIS considering the impacts of storage under these new circumstances (i.e. without attempting to be RCRA compliant in the Low-Level Burial Grounds and on the T-Plant pads where waste can not be inspected), then USDOE should be bound by the characterization of these wastes as Mixed Wastes, and the legally binding mitigation commitments to classify, and manage, the wastes as Mixed Wastes. There has been no "definitive characterization" to establish that these wastes are

not hazardous wastes pursuant to RCRA or hazardous or dangerous wastes pursuant to Washington's Hazardous Waste Management Act, RCW Chapter 70.105.

Reasonable alternative action to be considered:
The HSW EIS should analyze the current waste conditions in the burial grounds; impacts of those conditions; and actions to remedy them in accordance with Ecology's April 30, 2003 order relating to retrieval of all TRU and characterization and treatment of retrieved wastes.

12. Full cost of imported waste must be recovered.

In 2002, Energy Secretary Abraham committed to Congress to fully consider in all disposal decision the long-term costs of disposal. He did so in rejecting –without consideration of the environmental and health benefits as required by NEPA - the reasonable proposal that USDOE charge its offsite generators the fully burdened, long-term disposal costs – instead of subsidizing their generation and disposal of waste by charging them barely 50% of the fixed and variable immediate costs of disposal.

It is no answer to say that charging a monitoring and closure surveillance fund fee to offsite generators requires Congressional approval. NEPA requries full ocnsideration of reasoanble laternatives, including those that might require Congressional approval. Further, it is clear that numerous Members of Congress have urged specifically that this step be taken, and it has been USDO which rejects it.

There is no doubt that charging the fully burdened, long-term costs has environmental benefits, including waste reduction, encouragement of pretreatment and consdieration of alternative regulated, lined disposal facilities that do charge closure and monitoring fees. Furthermore, we note that USDOE ignores the requirements in state hazardous waste laws for financial assurance for monitoring and closure costs from generators and operators of disposal facilities. This EIS must be revised to address these alternatives and their environmental benefits.

26 We repeat our prior comments and the Advisory Board's advice that the HSW-EIS consider the impacts on Hanford Cleanup from the costs of offsite waste (see consensus advice #79, #84, and #94). Charging generators the long-term, fully burdened costs of disposal (and treatment or storage), as the Board has advised (see consensus advise # 98), would encourage treatment and reduction in waste volumes. It would also reduce the impact of offsite waste on the ability of the Hanford site to meet TPA milestones and other compliance requirements. This costing method must be considered in the HSW-EIS.

DOE should not pay for or subsidize the treatment or disposal of waste from other sites using Hanford funds. DOE argues that no matter where the work occurs, that DOE funds it, and that as result, it makes no difference where the funding occurs. This is untrue. DOE has driven changes in Tri-Party Agreement milestones in the past arguing that there was insufficient funding at Hanford. We expect DOE will make similar arguments in the

future. DOE decisions about what actions are taken and where impacts occur is directly affected by where the funding is provided.

12. Lack of closure on previous EIS issues

DOE has not yet decided what treatment will be used for K-Basins sludges, or where these wastes will be disposed. DOE has stated that they will be treated and disposed as TRU waste at WIPP. The processing facilities for this waste are of similar character to those required for wastes evaluated in the HSW EIS and should have been analyzed in the HSW EIS. The Board advises DOE to include these wastes in the Hanford Sitewide EIS.

DOE previously identified questions on the mobility of plutonium as colloids, through microbial action and by chelation by humic and fulvic acids from vegetative decay in the 1975 Energy Research and Development Administration EIS on Hanford Waste Management Operations (ERDA-1975). These issues affecting the potential mobility of plutonium still need to be resolved.

Ecosystems

27 We are unable to find an ecological evaluation in the HSW EIS. Washington State's Model Toxics Control Act (MTCA) details a specific road map for ecological evaluations. This road map should have been used and was not. The EIS does not assess the sustainability of the ecosystems, nor of endangered species. The technical model used (SAC) does not include a terrestrial ecosystem impact component. Those modules were not included in the development of SAC, and as result, no evaluation is possible using SAC. The HSW EIS does not analyze the impacts from all burial grounds, or the impacts of contaminated groundwater on the hyporheic and riparian zones of the Columbia River, nor the impacts in the river on Salmon and other species.

Transportation

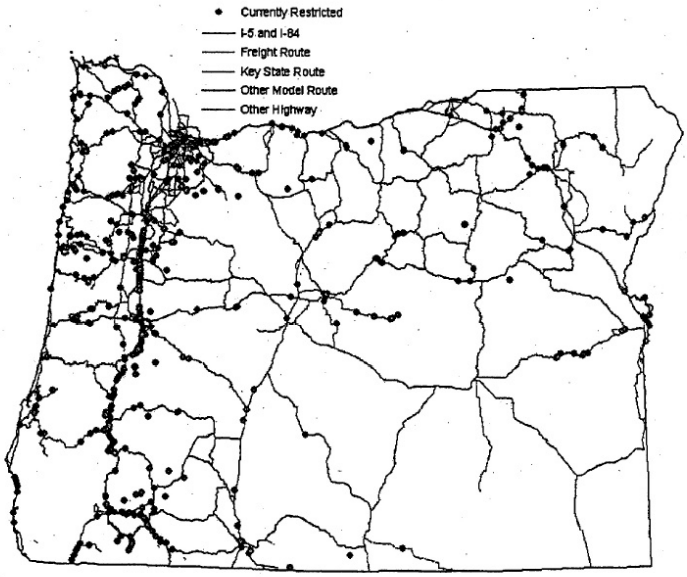
28

The Revised Draft HSWEIS does not include any new analysis of the risks or impacts of transporting wastes through Oregon and Washington, or along their specific cross-country routes. Instead, the revised draft HSWEIS only *extrapolates* figures based on the road miles in each state on the interstate highway routes that utilize Interstate 84 and 82 to the Washington border, and from there to Hanford. The WMPEIS included numerous statements that before any waste management decision to ship waste and before actual transportation would commence, USDOE would conduct site, route and waste specific analyses in an appropriate NEPA review. Simply showing the results of the existing hypothetical model for the hypothetical number of highway miles in Oregon and Washington for a preferred (but not legally binding) route, fails to meet this commitment and requirement. The model used was a 1982 analysis and 1990 data, which is woefully out of date.

Use of Interstate 84 requires passing over two of the ten most dangerous interstate highway mountain passes in the nation (E.g. Deadman's and Emigrant Hill). The Interstate 5 route not only exposes public along highly crowded urban highways, but the Siskiyou Mountains and the Columbia Gorge. USDOE has failed to consider the actual condition of highway bridges in Oregon. Oregon has unique design and structural flaws causing failure of many bridges.

In January 2003, the Oregon Department of Transportation's (ODOT) Economic and Bridge Options Team released a report outlining the deteriorating condition of Oregon's bridges, the *Draft Oregon Department of Transportation Economic and Bridge Options Report*. In this report, the ODOT indicated that there were 221 "critical problem bridges" on I-5 and I-84. Economic & Bridge Options Team, *Oregon Department of Transportation Economic and Bridge Options Report Draft*, Report to the Oregon Transportation Commission, 2 (January 15, 2003). Because many of the I-5 and I-84 bridges were built in the 1950s and were designed to be replaced after about 50 years, numerous bridges are cracking and weight restricted. *Id.*at 1. Consequently, trucks must be detoured through smaller communities, placing trucks on roads in small communities that were not built to accommodate such vehicles. *Id.*

Figure D-12. Roadway Network Included in the Statewide Model, with Currently Restricted and Cracked Bridges.



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The Oregon Model and Modeling Parameters
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For example, in March 2001, the small Oregon towns of Canyonville and Riddle (populations of approximately 1,500 persons each) experienced a surge in truck traffic when the Ford Bridge on I-5 was closed for emergency repairs. *Id.* at *iv*. For the duration of these repairs, Canyonville and Riddle experienced traffic surges of 1,800 trucks per day on their local streets. *Id.* Canyonville and Riddle's roads were not built to handle such large volumes of truck traffic. *Id.* Residents expressed concern for their safety and their children's safety. One resident stated: "I think the trucks are going through town way too fast. We have kids everywhere at lunch hour. I think that this is extremely dangerous. There's too much traffic." *Id.*

Detours of interstate traffic through small communities such as Canyonville and Riddle are only expected to increase. *Id.* at 1. In fact, small communities such as John Day, Juntura, Mt. Vernon, and Sauvie Island have already experienced what has been

referred to as the "Riddle Effect." *Id.* at *iv*, 1. Statistics from 2001 and predictions for 2010 confirm that the condition of Oregon's bridges is worsening and the threats to small communities are increasing. In 2001, ODOT had 68 bridges with load restrictions, conducted 18 emergency repairs, and had another 555 bridges under evaluation for cracking. *Id.* at 1. By the year 2010, ODOT expects that 30% of state bridges will have weight restrictions and corresponding truck detours. *Id.*

Oregon's bridge problems are not likely to be remedied in the near future. In the discussion of recommendations for how to fix the problem, the Bridge Options Team outlined how many bridges need to be repaired and replaced along with predicted cost. *Id.* at 4-8. To fix I-84, the ODOT would need to spend $314 million to repair 13 bridges and replace 53 bridges. *Id.* at 6. Similarly, to fix I-5, the ODOT would need to spend $836.8 million to repair 44 bridges and replace 149 bridges. *Id.* at 6-7. In sum, in order to fix its interstate system, the ODOT would need to spend $1.15 billion to repair 57 bridges and replace 202 bridges. *Id.*

USDOE was not aware of these weight restrictions and likelihood of detours when it sent its first three truckloads of TRU waste to Hanford in December of 2002. The trucks were all initially given overweight permits requiring the use of extensive detours off of the interstates (only the timely intervention of alert Oregon Office of Energy personnel averted this). The following declaration by Mr. Ken Niles, Administrator of the Oregon Office of Energy's Nuclear Safety Division, describes how on December 17th and 18th of 2002, three truck shipments of remote handled TRU were almost allowed to divert off the Interstate and use secondary roads. Declaration of Ken Niles, Administrator, Nuclear safety Division, Oregon Office of Energy, page 1, Case No CT-03-5018 (US District Court for Eastern District of Washington)(May 1, 2003).

THE HONORABLE ALAN A. MCDONALD

United States District Court
Eastern District of Washington

State of Washington, Columbia Riverkeeper, Heart of America Northwest, et al, Plaintiffs, vs. SPENCER ABRAHAM, Secretary of Energy; and the UNITED STATES DEPARTMENT OF ENERGY, Defendants	Case No.: CT—03-5018-AAM (Consolidated) DECLARATION of Ken Niles, Administrator, Nuclear Safety Division, Oregon Office of Energy

AFFIDAVIT OF KEN NILES

I, Ken Niles, do hereby affirm and state:

1. I am the Administrator of the Nuclear Safety Division of the Oregon Office of Energy.
2. In that capacity, I am responsible for oversight of the transportation of radioactive wastes to the Hanford Nuclear Reservation within the State of Oregon, and regularly consult with representatives of the U.S. Department of Energy (USDOE) regarding radioactive waste transportation issues.
3. Oregon has strict weight restrictions on numerous bridges on Interstates 5 and 84. These are the result of unique design and bridge deterioriation problems. Under the normal course of events, an overweight truck would receive an overweight permit, pursuant to which the truck could be routed onto secondary roads to avoid the weight restricted Interstate bridges. These detours may be quite extensive, and go through local communities and over secondary roads.
4. On December 17 and 18, 2002, I became aware that the three truck shipments of Remote Handled and Contact Handled TRU from ETEC in California, and Battelle-Columbus Lab in Ohio (BCL) to Hanford had been given overweight permits by the Oregon Department of Transportation. The permits were given without consideration to the nature of the cargo transported by the trucks, and were solely based on weight.

5. Based on the permits granted, the truck shipments from ETEC and the truck from BCL in Ohio were directed to use secondary roads and detour off of the Interstate highways.
6. Neither USDOE nor the contractor carrier fully considered the overweight status of the truck shipments and the routes that would be used.
7. After having the trucks from ETEC weighed, the State of Oregon was able to route them via the Interstate highway, rather than detouring on secondary roads. The truck from BCL was also re-routed to stay on the Interstate.
8. Detours off of Interstate 84 may be necessary for future shipments of BCL TRU wastes, or other TRU wastes from other sites, due to weight restrictions or bridge construction.
9. If detours off of the Interstate highways are required, additional considerations must be made by the State of Oregon for emergency response, weather holding areas and road conditions. Towards this end, I informed USDOE on December 30, 2002 via e-mail that if detours are necessary, we will seek to have the trucks held at the State border to await an escort.
10. Oregon's secondary roads are not as well maintained as the Interstate highways, they are narrower; detour routes go through small communities and past schools; and, emergency response capability is more limited than on the Interstate.
11. The Oregon Department of Transportation, as of December 10, 2002, has identified 9 bridges on Interstates 5 and 84 as weight restricted.

I declare under penalty of perjury that the foregoing is true and correct.

Ken Niles, dated this 1st day of May, 2003.

Ken Niles, Administrator, Nuclear Safety Division, Oregon Office of Energy

These wastes from ETC in California and Battelle Columbus Laboratory had been given overweight permits by the Oregon Department of transportation. *Id.* These overweight permits were based on weight alone and did not take into consideration the contents of the trucks. "Neither USDOE nor the contractor carrier fully considered the overweight status of the truck shipments and the routes that would be used." *Id.* at 2. Mr. Niles stated that, "[d]etours off of Interstate 84 may be necessary for future shipments of BCL TRU wastes, or other TRU wastes from other sites, due to weight restrictions or bridge construction." *Id.* at 2. "Oregon's secondary roads are not as well maintained as the interstate highways, they are narrower, detour routes go through small communities and past schools; and emergency response capability is more limited than on the Interstate." *Id.* at 2.

These factors were not considered in USDOE's analysis in the Revised Draft Hanford Site Solid Waste EIS. USDOE did not consider the increased likelihood of an accident from shipments being detoured off highways onto smaller roads and closer to human populations. When asked during the Seattle Public meeting on May 15th 2003 whether USDOE considered these types of detours in its transportation risk analysis, Michael Collins (USDOE) admitted on the record that they assumed that waste shipments would remain on the highways. The increased risk of an accident due to the detours stemming from the state of Oregon's bridges were not considered in their transportation analysis. This must be considered as well as the increased likelihood of harm due to the closer proximity to human populations as a result of these possible detours from bridge closures, and the possibility of a radioactive release from a truck, carrying radioactive waste, due to the catastrophic failure of a bridge.

The transportation analysis remains inadequate. The HSW EIS estimated impacts in Oregon and Washington using generic transportation parameters. It does not consider the specific transport route conditions. It used 1990 census data. The 2000 census data is available and should have been used.

Many bridges in Oregon are old and have load limits that preclude some overweight shipments required to support decisions proposed in the WM PEIS and the HSW EIS. These overweight shipments may need to use other Interstate routes, or use secondary roads. The EIS does not consider or analyze these routes, which may greatly increase potential impacts.

Oregon and Washington have done emergency preparedness planning and training and DOE has provided equipment for field teams on the major planned interstate routes. The same is not necessarily true for all secondary routes. The secondary routes may involve extensive detours through urban areas. If alternate Interstate routes are used, transport through Idaho via Spokane may be required. These are not analyzed in the HSW EIS.

The transport analysis does not, but must, consider the specific risks of transport in inclement weather or on dangerous road segments in inclement weather. The transport analysis did not, and must, analyze the risks and impacts from terrorist attack.

Environmental Restoration and Disposal Facility
The Tri-Parties committed to the public during siting of the Environmental Restoration Disposal Facility that it would never be used for disposal of off-site waste. The Tri-Parties must not renege on this commitment.

DOE response to prior advice on the HSW EIS.
In advice #133, the Board previously advised DOE on a number of points. The Board is very disappointed in DOE's responses to advise #133 and finds that the revised EIS still fails to adequately address or respond to these important issues, many of which we have expanded on above:

1. Failure to include impacts and alternatives identified by the Board (provided to DOE in advice #103 and 98) during the EIS scoping process.
2. Inclusion of off-site waste volumes in the draft HSW-EIS much greater than those identified during the EIS scoping period.
3. Lack of consultation with Tribes or other federal and state agencies, as required under NEPA and SEPA.
4. Failure to disclose impacts to groundwater and human health at the point of compliance for waste management units. The Board encourages the agencies to consider the recent advice from the Board reflecting input from the Exposure Scenarios Task Force (consensus advice #132). The point of compliance should ensure no further degradation to ground water beyond the edge of the waste management unit. Non-degradation is required under both state and federal regulations. Without explanation, and in apparent violation of applicable standards, the EIS provides only a partial description of groundwater impacts for a single well one kilometer away from the burial grounds.
5. The draft HSW-EIS improperly asserts a claim for irretrievable and irreversible impact to an unidentified area of ground water (which may encompass the entire Hanford site) forever, with no analysis or disclosure of how large an area this may be, how bad the conditions may become, or how long this may persist.
6. Inadequacy of NEPA assessment for endangered species.
7. Modeling and inventory assumptions are not explained and appear inconsistent with known data on the movement of radioactive and hazardous waste at Hanford, and are also inconsistent with other site actions.
8. Failure to include a true "No Action" alternative that does not import and bury offsite-generated LLW and MLLW from DOE sites and other generators. The current "No Action" alternative (as noted on page S-3, line 27-30) does not comply with legal or regulatory requirements.
9. Failure to integrate and consider the cumulative impact of all Hanford waste decisions, the impact of these decisions on this EIS, and the conclusions from this EIS in those decisions. The estimated risks proposed by this action are only a small portion of the total risks posed by all site actions and should be communicated. This

is exemplified by the failure to disclose and consider the cumulative impacts of wastes already disposed to the soil and proposed Performance Management Plan (PMP) actions to dispose of additional wastes to the soil (e.g. proposed actions to dispose of some wastes from Hanford's high-level waste tanks in the soil). Additionally, the Board urges DOE to end the use of unlined soil trenches without leachate collection systems for disposal of wastes.

10. Accident analysis must include malevolent events.
11. The Board is concerned the programmatic issue of the cumulative and route specific effects of transporting wastes from multiple sites to Hanford has not been addressed.
12. The Board is concerned the facilities required for treating remote handled TRU waste as required in the Tri Party Agreement (TPA) Milestone 91 have been delayed, and the impacts from delayed or lesser TRU waste retrieval, as well as the impacts of importing TRU have not been considered in this draft HSWEIS.
13. Waste from high level tanks that may be disposed in soil and disposition of K-Basin sludge should be included.
14. Cumulative impacts of reactor components disposal, including naval reactor compartments, should be included.
15. Pre-1970 TRU waste in the burial grounds should be addressed.
16. The impacts of not retrieving or shipping to WIPP the post-1970 TRU waste should be analyzed.
17. There is inadequate analysis of cap performance. The draft HSW-EIS considers only one cap, and assumes it meets RCRA requirements.
18. There is no analysis to support the draft document cover letter assertion that use of deep lined "megatrenches" is bounded by the analysis performed for shallow trenches in the draft HSW-EIS.
19. Long term stewardship considerations are still not evident.
20. The impacts of hazardous waste buried with various forms of radioactive waste (e.g. lead shielding) should be analyzed.

Currently disposed waste needs detailed analysis.
The Board has previously urged that DOE stop disposing of offsite wastes in the low level waste burial grounds (LLBG) until they are fully investigated for disposal of hazardous or dangerous wastes (including liquids, flammables, solvents, etc.) and for releases of hazardous substances (consensus advice # 98 and #103). It is vital that the groundwater monitoring around the burial grounds be substantially upgraded and vadose zone monitoring be instituted as part of this investigation. Many of the wells are dry, or soon will be, and the burial grounds lack any leachate monitoring and collection system.

The Board urges the State of Washington to exercise its authority over the burial grounds as dangerous waste management units to meet leachate collection standards, and to prevent the addition of several hundred thousand cubic meters of offsite waste to unlined soil trenches, as proposed in the draft HSW-EIS and the PMP. The Board has previously provided advice that the LLBGs should be independently regulated, and that the draft HSW-EIS should consider the benefits of independent external regulation of the LLBGs as a reasonable alternative (consensus advice #98).

Analysis should be limited to receipt of offsite MLLW for short-term storage and treatment only.
The Board has issued advice (#13 and #103) that the import of mixed waste to Hanford be limited to short term storage for purposes of using available treatment capacity. (If disposal of mixed waste were limited to onsite stored forecasts to be generated, the quantity for disposal would be 14,000 cubic meters. Instead, the draft HSW-EIS considers disposal of 210,000 cubic meters.) Thus, the analysis in the HSW-EIS should be limited to receipt of offsite MLLW for short-term storage and treatment. DOE wrongly states in the PMP the MLLW burial ground is permitted for offsite waste, and proposes to issue a decision in six months to start import and disposal of offsite mixed waste. The Board again urges the State of Washington to limit the MLLW burial ground permit to the quantity and types of wastes forecast from Hanford Cleanup (as has been done with the Environmental Restoration Disposal Facility landfill).

Contrary to DOE's assertion of supremacy of the commerce clause, we believe the State of Washington can and should site and issue a permit for a RCRA disposal facility for Hanford origin Wastes under the Corrective Action Management Unit (CAMU) regulations and that they need not authorize a general disposal facility. In determining whether to permit the landfill, Washington must consider both the impacts of all waste that may be disposed in the landfill and the cumulative impact from prior disposal at the facility. Under the State Environmental Policy Act, these considerations require mitigation of impacts through barring the addition of offsite wastes to the soil in Hanford disposal facilities. As such, the State can effectively prohibit the disposal of off-site mixed wastes and low-level wastes at Hanford. DOE has instead proposed permitting a mixed waste disposal facility for both on-site and off-site DOE mixed waste. The Board has already recommended to the State that they not license such a general disposal facility. We note that if the DOE wishes to assert that disposal of its Low-Level Wastes constitutes "commerce" for these purposes, then its Low-Level Waste would not be exempt from regulation by the NRC and State. We have previously advised that consideration of reasonable alternatives includes the benefits of external regulation of disposal of USDOE Low-Level Wastes. Additionally, the State of Washington is a member of the Northwest Compact. This compact was created pursuant to Congressional action and does limit commerce in the disposal of low-level radioactive waste to the compact member states.

Permitting decisions should not be made based on this draft HSW-EIS.
The Board is concerned that permitting decisions for the Waste Receiving and Processing facility, the low level burial grounds, and the Central Waste Complex may be made without knowledge of the quantities and nature of wastes proposed to be stored, disposed, or treated. The Board urges permitting agencies not to grant any permit based solely upon the draft or the final HSW-EIS unless this issue is resolved.

The above shaded areas are from draft advice prepared by Dirk Dunning, and Gerald Pollet for consideration by the Hanford Advisory Board, and are not the advice of the Board, but are submitted as part of Heart of America Northwest's comments. We believe these points should be responded to by USDOE in detail and that the advice given should guide Washington Ecology on permitting decisions.

[i] US EPA: "Analysis of What Radiation Dose Limit is Protective of Human Health at CERCLA Sites"; US Environmental Protection Agency, August 20, 1997.
[ii] See "Analysis of what Radiation Dose Limit is Protective of Human Health at CERCLA Sites (Including Review of dose Limits in NRC Decommissioning rule); U.S. Environmental Protection Agency, August 20, 1997; and, See NRC's Radiological Criteria for License Termination (see 62 FR 39058, July 21, 1997).
[iii] "Systematic Radiological Assessment of Exemptions for Source and Byproduct Materials," NUREG-1717, June 2001, Advanced Technologies and Laboratories International, Inc. ("Options Paper: Exemption in 10 CFR 40 for <0.05% Source Material").
[iv] 40 CFR 300; The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 USCA 9601 et seq.
[v] SEE Washington Model Toxics Control Act, and implementing regulations at Chapter 173-340 Washington Administrative Code.
[vi] WMPEIS Section 8.2.1.1, page 8-10.

E-0056

^Solid Waste EIS - DOE

From: Jeremy Hale [jchalebop@msn.com]
Sent: Thursday, June 12, 2003 4:45 AM
To: hsweis@ml.gov

Mister Collins

1 Please accept my lack of timlieness. As a member of our local community I would like to offer my full support of the Department of Energy's decision to repackage complex wide radioactive wastes including transuranic wastes. If there is anything I can do to further DOE's efforts either locally or statewide please don't hesitate to call on me. Have a very good day.

Sincerely

Jeremy C Hale