

## Letter/Attachment for GTCC EIS Scoping Comment #97

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### Federal Energy Department (USDOE) Proposes to Use Hanford as National Radioactive and Toxic Waste Dump for Highly Radioactive Wastes – on top of pending plans to ship waste to Hanford for burial or “reprocessing”

#### Comments of Heart of America Northwest on the U.S. Department of Energy's (USDOE) “Notice of Intent to Prepare an Environmental Impact Statement for the Disposal of Greater-Than-Class-C Low-Level Radioactive Waste”

(Page numbers refer to pre-Federal Register publication version released 7-20-07).

The federal Energy Department (USDOE) which runs Hanford and the nation's nuclear weapons complex, has just announced a new proposal to truck *extremely radioactive* wastes to Hanford for burial. These wastes are referred to as “Greater than Class C” or “Greater Than Class C-like wastes” in the notice being published in the Federal Register on July 23, 2007.

*USDOE is now proposing to dump these extremely radioactive wastes in shallow landfills, or use relatively shallow boreholes above groundwater flowing to Columbia River.* Some of these wastes are so radioactive that they are legally barred from going to the deep geologic repository salt mine at WIPP in New Mexico.

This proposal comes on top of USDOE continuing to seek to dump radioactive and “mixed” radioactive toxic chemical wastes from other nuclear weapons plants in shallow landfills at Hanford for the next forty years; and, USDOE's proposal to ship much of the nation's High-Level Nuclear Waste (Spent Fuel) from commercial reactors to Hanford for “reprocessing” as part of the Bush administration's “GNEP” Program (reprocessing is the same chemical process that created the liquid High-Level Nuclear Wastes in leaking tanks that threaten the Columbia River today).

This latest proposal, announced on Friday July 20, 2007, makes clear that USDOE and the Bush Administration prioritize use of Hanford as a national radioactive and chemical waste dump over cleanup of the existing waste and contamination already flowing into the Columbia River.

Greater than Class C (GTCC) waste are **extremely radioactive wastes** – often as radioactive as *High-Level Nuclear Waste*. It is not called High-Level Nuclear Waste because USDOE and the Nuclear Regulatory Commission (NRC) reserve use of that name for reactor fuel removed from a reactor. USDOE refers to these wastes from its nuclear weapons and reactor complex as “Greater Than Class C-like wastes” (GTCC-like) because USDOE is exempt from NRC's legal terminology for classes of waste other than “High-Level Waste”. In a public relations effort for

this scheme, USDOE *renames highly radioactive Plutonium wastes*, previously called "Remote-Handled Transuranic Waste" (TRU), to be included in this category of "Greater Than Class C-like wastes" which USDOE proposes to ship to Hanford.

USDOE GTCC "like" waste is mostly highly radioactive Plutonium waste referred to as Transuranic Waste (TRU). This is also called "Remote Handled TRU" because it is so radioactively hot that it must be handled robotically behind shielding. This is the same waste which Heart of America Northwest and Washington State won an injunction against USDOE importing to Hanford in 2005. USDOE was enjoined from shipping more RH- TRU to Hanford because USDOE failed to consider the health and environmental impacts and risks in an environmental impact statement (EIS) before USDOE began trucking this waste to Hanford. In presenting our case, we proved to the U.S. District Court that USDOE's claims that the waste would come to Hanford and be shipped to WIPP for disposal within a short time period were false. One element we proved was that much of the waste was not legally eligible for disposal at WIPP (because it was non-defense waste, or because it included waste so radioactive that it is legally barred from disposal at WIPP).

**These Wastes Are Extremely Radioactive and Would Add Immense Amounts of Radioactivity to Hanford's Soil:**

These wastes are so radioactive that they equal 48% of ALL the radioactivity in the wastes currently at Hanford:

- 140 Million Curies in the GTCC and GTCC-like wastes<sup>1</sup>, while Hanford has an estimated 400 Million Curies in *all* wastes onsite.
- There is nearly as much radioactivity in these GTCC and GTCC-like wastes as in Hanford's High-Level Nuclear Mixed Waste tanks (184 Million Curies in Tanks v. 140 Million Curies proposed to be added to Hanford under the GTCC proposal).

Claims that this proposal is a small volume of waste are ridiculous. Over 200,000 cubic feet is not a "small volume". But, it isn't the size of the waste which matters; it is the radioactivity and toxicity that counts. A thimble full of liquid High-Level Nuclear Wastes will kill everyone in a room in an hour even though its size is less than that of a rock in Hanford's landfills.

**Greater Than Class C wastes** are not "rags" or lightly contaminated equipment; rather it includes the extremely hot internal portions of nuclear reactors or the "sealed sources" which have been a major topic of concern over the risk they pose if obtained by terrorists for use in a "dirty bomb":

"Examples of GTCC waste include activated metal hardware (e.g., nuclear power reactor control rods), spent fuel disassembly hardware, ion exchange resins, filters, evaporator residues, sealed sources that are used in medical and industrial applications, moisture and

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<sup>1</sup> 140 Million Curies and 200,000 cubic feet are the amounts of these wastes projected by USDOE only through 2035, not the full amount of these wastes which USDOE will generate under its own Complex 2030, GNEP and other programs. (Notice at page 16). Thus, USDOE underestimates the amounts of these wastes which it will likely send over coming decades to the selected site. The EIS should, legally, disclose and consider the full amount of wastes that all current USDOE proposals and commercial nuclear activities will generate.

density gauges, and contaminated trash. The type of radionuclides that are considered high enough in concentrations to be classified as GTCC waste include: C<sup>14</sup>, Ni<sup>59</sup>, Nb<sup>94</sup>, Co<sup>60</sup>, Te<sup>99</sup>, I<sup>129</sup>, Sr<sup>90</sup>, and Cs<sup>137</sup>.<sup>2</sup>

USDOE lacks ability to characterize the chemical content of these Remote Handled TRU wastes at Hanford (a fact which we proved in District Court, and USDOE admitted). Federal Register announcement of USDOE's intention for GTCC wastes notes that "Most of the DOE GTCCC-like waste consists of transuranic waste". (Federal Register Notice at 7).

In Washington State, CRK, Heart of America Northwest v. Spencer Abraham, U.S. Secretary of Energy (CT-03-5018-AAM, US District Court, Eastern District, WA) USDOE also admitted that all of the RH-TRU was considered Mixed Waste, containing hazardous wastes which are illegal to bury without treatment. USDOE lacks both the capability to characterize the chemical hazardous wastes due to the high radiation levels of the wastes, and has neither plans nor capability to treat the wastes prior to burying them. The presence of chemical hazardous wastes greatly increases the risks from these wastes. For example, many of the chemicals make the radionuclides on the wastes much easier to dissolve and move into groundwater – while posing great cancer and toxicity risks on their own.

In this current Federal Register Notice USDOE makes the unsupportable claim that "a small percentage of this waste is mixed waste." (Federal Register Notice at 8). This claim is not supportable, since: a) USDOE has not had any capability to characterize the wastes since the end of the litigation barring import of the RH-TRU to Hanford; b) USDOE admitted that it lacked the ability to characterize the chemical wastes present and to determine if hazardous wastes were present in these RH-TRU wastes; and, c) USDOE formally admitted that ALL the RH-TRU had to be considered Mixed Waste due to poor record keeping, the likelihood of commingling with hazardous wastes, and the inability to characterize the wastes to determine, as a matter of law, that any of the wastes were not Mixed Waste.

#### **Camel's nose under the tent:**

USDOE's notice is limited to analysis of approximately 200,000 cubic feet (5,600 m<sup>3</sup>) of GTCC and GTCC-like waste. Yet, USDOE alone has a far greater volume of similar wastes without any disposal plan, and which USDOE has admitted in the past is so similar to these wastes that it would seek to dispose in the same manner and place. As the State of Nevada wrote USDOE, in response to a prior proposal by USDOE to piecemeal consideration of disposal and storage of these wastes, which would violate NEPA:

Special Case Waste "denotes DOE waste having characteristics similar to those of GTCC waste that generally lack firm disposal plans". The State understands that the volume of

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<sup>2</sup> State of Nevada's comments on the U.S. Department of Energy's (DOE) proposed pilot project for storing up to 56 cubic feet of Greater-Than-Class-C Radioactive Waste (GTCC) at the Nevada Test Site (NTS). <http://www.state.nv.us/nucwaste/gtcc/gtcc.htm>

SCW alone could exceed 2.6 million cubic feet. U.S. Department of Energy, August 1995. See: Draft Waste Management PEIS, (DOE/EIS-0200- D), pages 1-16.<sup>3</sup>

Approximately half of the USDOE's "Special Case Waste", for which USDOE is also seeking a disposal location, is Transuranic Waste.<sup>4</sup> As we discuss below, USDOE fails to have any plan to retrieve and dispose of 152,800m<sup>3</sup> of TRU waste in Hanford's soil, in unlined burial grounds, the soil around radioactive liquid waste discharge ditches, etc... The amount of TRU in Hanford's soil is nearly equal to the full licensed capacity of the WIPP geologic repository in New Mexico – USDOE's only geologic repository. USDOE's approach to the GTCC, Special Case, orphaned Highly radioactive TRU waste, and TRU waste buried or dumped before 1970 appears to be to seek to dispose of these wastes in dangerous near surface landfills or to leave the pre-1970 TRU to leach out of unlined landfills.

USDOE has provided no rationale as to why the reactor vessels and highly irradiated components from other USDOE reactors should not also be included in this proposal, and considered for disposal in a deep geologic repository. At Hanford, the FFTF reactor's disposition is now undergoing analyses in the Tank Closure and Waste Management EIS. Again, this is a closely related proposal and decision – one where the disposal path for FFTF reactor metals and wastes should be considered in the same analysis of disposal alternatives for GTCC and GTCC-like wastes. The same is true for USDOE's other reactors, Spent Fuels, activated metals, etc... F

USDOE is proposing disposal of the GTCC wastes at Hanford or Yucca Mt. Yet, already at Hanford there exists far more Spent Nuclear Fuel (e.g., K-Basin wastes), Cesium and Strontium capsules and other highly radioactive wastes for which Yucca Mt, if it ever opens, will not have capacity. These wastes belong in a deep geologic repository – as do many of the potential wastes from vitrification (including ILAW or "supplemental treatment" wastes from Hanford's High-Level Nuclear Waste tanks, and the tanks and related piping themselves). Thus, USDOE must consider a geologic repository for these related and similar wastes with related proposed actions, rather than saying that the Department will not consider another repository because the volumes of GTCC and GTCC-like waste are too small. USDOE has deliberately limited the type and quantity of wastes in this current proposal to avoid inclusion of numerous similar and related waste streams in an apparent attempt to avoid opening up consideration of another repository.

The EIS must also consider hardened on-site storage for GTCC, GTCC-like and related wastes pending the federal government's licensing and opening a suitable deep geologic repository for all these wastes.

**Transportation Risks are Very High from These Highly Radioactive Wastes:**

<sup>3</sup> (Nevada State Policy Letter, State of Nevada, December 5, 1996: "Potential Greater-Than-Class-C (GTCC) Radioactive Waste Interim Storage Project at the Nevada Test Site (NTS)". Available at <http://www.state.nv.us/nucwaste/gtcc/gtcloux.htm>).

<sup>4</sup> Source: DOE Draft Waste Management Programmatic Environmental Impact Statement, page 1-16 [DOE/EIS-0200-d]

USDOE has admitted that the proposed shipments of highly radioactive Plutonium and TRU wastes (Remote Handled TRU) coupled with the other wastes which USDOE wanted to truck to Hanford as of 2004 would cause cancers which will *kill "up to ten" adults* along the transportation routes (through Oregon and Washington) due to the high radiation exposures – even if there are no accidents and no terrorist attack.<sup>5</sup> USDOE failed to consider the risks to children exposed along the route in its analysis in the Hanford Solid Waste Disposal EIS.

- **More than 50 children and adults would die from cancers, and a total of 160 cancers would strike children and adults, caused by "accident free" exposure to the radioactive wastes which USDOE wants to truck to Hanford**, according to an expert analysis of the transportation risks prepared by Heart of America Northwest with independent, highly respected nuclear physicists and radioactive waste transportation experts.<sup>6</sup> This analysis was limited to the RH-TRU and mixed wastes which USDOE was proposing to ship to Hanford for shallow land burial – without including the extremely radioactive Greater Than Class C wastes which USDOE has now announced it also may try to truck to Hanford, and without any consideration of the significant number of fatal cancers which would be caused by trucking the Spent Fuel from commercial reactors to Hanford (GNEP proposal).
- **An accident with fire, or reasonably foreseeable terrorist attack, on a truck carrying RH-TRU (Plutonium waste) through Portland, Oregon en route to Hanford on I-205 would cause a release of radionuclides that would result in over 1,400 people dying of cancer from the radioactive fallout; and up to 350 square miles of Portland, OR would be contaminated and require long-term evacuation. Similar risks were preliminarily calculated by experts for USDOE's plans to truck these wastes through Bellevue (on I-90) and Spokane.**<sup>7</sup>

In Washington State, CRK, Heart of America Northwest v. Spencer Abraham, U.S. Secretary of Energy (CT-03-5018-AAM, US District Court, Eastern District, WA; Injunction granted May, 2005), the US District Court found that USDOE had failed to properly consider the risks of transporting extremely radioactive RH-TRU (including Mixed Waste RH-TRU) to Hanford. (Order Granting Preliminary Injunction at 22, 23). The EIS issued after that decision (Hanford Solid Waste Disposal EIS) was admitted by USDOE to be seriously flawed

<sup>5</sup> "up to 10 potential latent cancer fatalities during routine transport." Record of Decision (RoD) on Final Hanford Solid Waste Disposal Environmental Impact Statement, published Federal Register June 23, 2004; page 19. USDOE's estimate of up to ten fatal cancers from exposure did not include the more recent proposal to truck High-Level Nuclear Waste (Spent Fuel) to Hanford for reprocessing as part of the GNEP program, nor does it include the Greater Than Class C waste shipment proposed on July 20, 2007 (However, it does include the portion of the "Greater Than Class C –like" wastes which are really RH-TRU, and which USDOE is apparently attempting to rename in order to include in this new proposal without complying with the legal requirements for a new, adequate site specific and route specific environmental impact statement).

<sup>6</sup> [http://www.heartofamericanorthwest.org/newsreleases/9\\_24\\_4\\_executive\\_summary.doc](http://www.heartofamericanorthwest.org/newsreleases/9_24_4_executive_summary.doc)

<sup>7</sup> Marvin Resnikoff, Ph.D.; Radioactive Waste Management Associates; for Heart of America Northwest, available on line at [www.heartofamericanorthwest.org](http://www.heartofamericanorthwest.org)

([http://www.heartofamericanorthwest.org/newsreleases/9\\_24\\_4\\_executive\\_summary.doc](http://www.heartofamericanorthwest.org/newsreleases/9_24_4_executive_summary.doc))

and “not defensible” for its safety, human health risk, groundwater and transportation analyses. USDOE has signed a formal agreement with WA State not to rely on that EIS, until it issues a new site-specific EIS covering the impacts of importing ANY wastes to Hanford.

- USDOE can not legally issue a decision to send GTCC Waste, GTCC-like waste and RH-TRU to Hanford without a new route specific analysis of the risks of transporting those wastes to Hanford. Analysis of generic impacts in a Programmatic EIS will not be adequate. This is especially true because USDOE is simultaneously considering using Hanford as a national radioactive waste dump for many other types of radioactive and mixed wastes, and a separate proposal to ship much of the nation’s commercial nuclear reactor High-Level Nuclear Waste (Spent Fuel) to Hanford.
- Federal law, the National Environmental Protection Act (NEPA), forbids agencies from considering the impacts of related actions, or decisions with cumulative impacts, in a piecemeal fashion – ignoring the total (cumulative) risk to human health from all wastes USDOE wishes to ship to Hanford.
- USDOE must now include in the GTCC EIS and in the TCWMEIS analyses of trucking these wastes to Hanford, including the cumulative risks from all wastes which USDOE has proposals under consideration to ship to Hanford (e.g., RH-TRU, Special Case Waste and other wastes). That analysis must include the risk to children along the transportation corridor under both “routine” and accident or terrorist created conditions.

If this waste comes to Hanford, it will never leave Hanford. Just as we successfully alleged in the *WA, Heart of America Northwest v. Abraham* litigation, USDOE now admits that much of the RH-TRU it wants to re-label as “Greater Than Class-C like” waste is legally barred from ever being disposed in the deep geologic repository for TRU wastes in New Mexico. *Yet, this waste belongs in a deep geologic repository, just like the less radioactive long-lived TRU wastes which are being disposed deep underground in a salt dome in New Mexico at WIPP. These wastes do not belong in near surface burial above groundwater which flows into the nation’s second largest River, and lifeblood of the Northwest; they do not belong in near surface landfills or boreholes where the wastes may expose the public, Tribes with rights to use the land, or the environment; and, they do not belong in shallow landfills or boreholes where they could be exhumed for malicious purposes in the future.*

***The Bottom Line:*** *USDOE needs to include all reasonable alternatives for disposal of GTCC and GTCC-like wastes, including all similar wastes and wastes under consideration in other proposals. All Reasonable Alternatives includes looking at geologic repository sites other than the two which USDOE currently proposes to examine in this EIS, which are both legally barred from taking these wastes (if Yucca ever opens). A new, scientific search for repository sites is required, one that does not start and end with sites USDOE already owns.*

**USDOE Wants to Truck These Highly Radioactive and Toxic Wastes to Hanford and Store Them For prolonged Periods Before Disposal, if USDOE Even Really Intends to Treat and Dispose of the Wastes Properly:**

USDOE's proposal is essentially a dangerous shell game – shipping waste away from USDOE's nuclear weapons plants and commercial facilities to a site where USDOE hopes it is out of mind once the GTCC is removed from the legal liabilities of storing it at operating weapons plants or commercial businesses.

USDOE has no facilities to properly store and treat these highly radioactive wastes at Hanford. USDOE doesn't have the facilities to properly and safely store and treat similar wastes already at Hanford, and is years away from having such capability (and, under official White House Office of Management and Budget [OMB] approved target budgets for 2009 through 2014, USDOE will not have legally required treatment capabilities for many years. Thus, USDOE's proposal is to ship the wastes to Hanford for burial, even though many of the wastes must be treated before they can be legally buried – and, there are no facilities at Hanford to treat such wastes.<sup>8</sup>

Hanford does not even have facilities capable of characterizing the hazardous chemical waste component of these highly radioactive wastes. This was admitted by USDOE in regard to its effort to import highly radioactive Transuranic wastes (Remote Handled TRU, or RH-TRU) in litigation from 2003 through 2005. Without characterizing the wastes, it is not possible to ensure that they are being safely stored (e.g., many chemical wastes are incompatible with being stored near other chemical wastes; flammable wastes require one form of storage, while volatile organic chemical wastes or caustic wastes require other forms of storage), or to determine how they should be treated before disposal.

USDOE may not just look at shipping these wastes to Hanford in its proposed national Programmatic EIS without considering the site specific and cumulative impacts of adding these dangerous wastes to Hanford's existing wastes, which already lack legally compliant storage and treatment. Adding these wastes to Hanford will delay treating and disposing the wastes already at Hanford, and strain the already inadequate Hanford Clean-Up Budget. The considerable cumulative and individual impacts from adding the GTCC and "GTCC-like" wastes to Hanford will now have to be added to the analyses in the Hanford Tank Closure and Waste Management EIS. This EIS has been under way for several years, and key decisions will have to be delayed as substantial new analyses are required for considering the impacts to groundwater, accident risks, treatment and storage capabilities, exposure risks to the public and Tribes in the future... which come from adding GTCC and GTCC-like wastes to Hanford for storage, treatment and disposal. USDOE should have learned by now that it can not get away with failing to consider the impacts from this new proposal in the pending Hanford Waste Management EIS.

**Proposal to Import and Bury These Wastes Would Violate State and Federal Hazardous Waste Laws, including Initiative 297, the Cleanup Priority Act:**

<sup>8</sup> USDOE must include analysis of the impacts and potential risks from siting storage, treatment and disposal facilities at Hanford in the Tank Closure and Waste Management EIS (TCWMEIS), as the GTCC proposal is a related proposal for NEPA analysis purposes. This must include identification of where and how GTCC / GTCC like wastes will be stored and disposed at Hanford. Likewise, the data from the TCWMEIS on cumulative impacts from existing waste and projected disposal of GTCC / GTCC-like wastes at Hanford must be included in the GTCC EIS. This includes analyses of cumulative impact, including total cancer and other health risks to future site users, and the scale of projected violations of standards from adding the GTCC / GTCC like wastes to Hanford.

USDOE admits that some of the GTCC and GTCC-like wastes it proposes to ship to Hanford is “mixed” waste composed of both hazardous chemical wastes (such as acidic, flammable, organic solvents and carcinogens) and radioactive wastes. Federal hazardous waste laws (RCRA and the Federal Facilities Compliance Act - FFCA) give the states authority over the hazardous wastes, including the mixed waste, to ensure that they are characterized, stored, treated and disposed in accordance with state and federal hazardous waste standards.

Washington State and Heart of America Northwest and other citizen groups won an injunction against import of some of these very same wastes – which *USDOE is now attempting to rename* from RH-TRU to “Greater Than Class C – like” *in order to propose that they can be imported without meeting the court’s orders* that USDOE properly consider the impacts and must comply with state hazardous waste standards before attempting to import these mixed wastes.

In its Order expanding the Preliminary Injunction, the US District Court described the requirement that the USDOE must meet state hazardous waste requirements (in the state hazardous waste law, HWMA) prior to disposal as follows:

“MLLW received from offsite facilities will have been treated as necessary prior to disposal; will meet the applicable LDRs of hazardous waste laws; and will be disposed in RCRA compliant disposal facilities with double liners and leachate collection systems meeting hazardous waste regulations designed to protect human health and the environment from chemical hazards. (*Id.* at Paragraphs 58-59, pp. 17-18). ... MLLW will need to meet all of the RCRA/HWMA requirements before it is disposed at Hanford.”<sup>9</sup>

In subsequent litigation, Washington State prevailed against USDOE to bar import of RH-TRU, which USDOE now seeks to import by renaming some of the very same waste as “Greater Than Class C –like waste,” because it would immediately violate State and federal hazardous waste storage standards upon arrival at Hanford. As noted earlier, Hanford has no capacity to characterize the chemical components of these dangerous wastes, and no storage or treatment capacity designed to handle such hazards prior to disposal.

The District Court held<sup>10</sup>:

“It is evident that DOE is already in violation of the HWMA storage prohibition by virtue of TRUM already stored at Hanford, and that adding offsite TRUM would only exacerbate the violation. As such, this is a basis, independent of NEPA, justifying continuation of a preliminary injunction against shipments of TRUM to Hanford.”

***USDOE now seeks to get around a clear court injunction against adding more mixed TRU waste to Hanford by renaming the same waste as “Greater Than Class-C like waste.” This must not be allowed.***

<sup>9</sup> No. CV-03-5018-AAM; May 13, 2005.

<sup>10</sup> Order Expanding Preliminary Injunction at 49, citing Order in *WA v. Bodman*, January, 2005.

Under the FFCA, Washington State has authority to “disapprove” of USDOE plans to import, store and treat mixed wastes at Hanford. Inability to meet basic hazardous waste standards, for both existing wastes on site and for new wastes USDOE seeks to import, is clearly an appropriate basis for exercising such disapproval. Such action does not rest upon the mandate that Washington Dept. of Ecology may not give permits for additional mixed waste being added to a site when existing mixed wastes are not in compliance and the site has contamination which has not been cleaned up, under the Cleanup Priority Act, passed as Initiative 297.

USDOE prevailed in District Court to have the Cleanup Priority Act invalidated as “field preempted”, which is on appeal to the Ninth Circuit. To uphold that ruling, the United States and Hanford contractors argue that states may exercise no authority under hazardous waste laws, if those requirements will have “direct and substantial effects” on USDOE’s radioactive waste decisions. US Brief to Ninth Circuit at 38. The US’ position would eviscerate state authority over cleanup of Hanford’s mixed wastes, including the infamous leaking High-Level Nuclear Mixed Waste tanks.

If the Ninth Circuit agrees with Washington State and the Sponsors of I-297 that Congress gave authority to the states to regulate mixed wastes, with knowledge that application of hazardous waste standards to such mixtures would, of course, have a direct and substantial effect on USDOE’s decisions about the radioactive component (i.e., USDOE proposes to leave waste in tanks or leaked to soil without removal and treatment – which would violate RCRA and the State HWMA), then the Cleanup Priority Act will also bar USDOE from importing mixed wastes to be stored and disposed at Hanford prior to USDOE complying with hazardous waste standards for existing mixed wastes at Hanford. However, the Cleanup Priority Act applies only to the mixed wastes, and not to the substantial portion of GTCC wastes from commercial sources which are only radioactive wastes without a hazardous waste component.

**USDOE Fails to Use Science to Look For Suitable Geologic Disposal Locations, Repeating the Same Mistakes That Have Plagued Its Effort to Dispose of High-Level Waste at Yucca Mt., Nevada:**

Highly radioactive wastes, which include GTCC and Remote-Handled TRU, belong in a deep geologic repository, in geologically stable formations below the depth of usable groundwater. TRU and GTCC should be disposed in geologic repositories because they are highly radioactive for hundreds of thousands of years, are easily dispersible (i.e., Plutonium), and are attractive targets for terrorists or exhuming for malicious purposes. USDOE admits this in citing NRC requirements for disposal of Greater Than Class C waste, but says the NRC rules allow for an exception: “there may be some instances where waste with concentrations greater than permitted for Class C waste would be acceptable for near-surface disposal with special processing or design.” (Notice at 10, citing 10 CFR § 61.7(b)(5)).

USDOE, instead of beginning a scientifically based and credible program to locate a geologically suitable location for a deep repository, proposes to immediately begin seeking to get around the requirement and seek an exception allowing shallow disposal, where the wastes will threaten

groundwater, surface water, human health and the environment, and pose unacceptable risks of being exhumed for future malicious purposes.

**A scientifically credible search for deep geologic repository sites is called for.** Indeed, Washington State, as early as 2002, passed a Joint Memorial calling on USDOE to search for granite formations to dispose of High-Level Wastes deep underground.

**Instead, the only deep geologic options USDOE proposes in its Notice of Intent are the already failed Yucca Mt, Nevada site, and disposal in the New Mexico WIPP facility.** USDOE – once again – limits its consideration of geologic repository sites to sites it already owns, even if those sites are clearly inappropriate. The same is true for USDOE’s search for near surface disposal: USDOE limits itself to its own sites, without consideration of a scientifically based search for a location where potentially potable groundwater will never be threatened, etc...

USDOE is unlikely to ever open Yucca Mt. USDOE’s consideration of Yucca Mt is a red herring: adding 5,600 m<sup>3</sup> and 140 Million Curies of waste to a hypothetical repository that is unlikely to ever be built or licensed; and, if built and licensed, is legally limited to a capacity that would be immediately exceeded by the wastes at existing reactors and USDOE sites.

The WIPP site is legally barred from taking the portion of these wastes which are not from defense programs (for good policy reasons it is not appropriate to send commercial radioactive waste to the defense TRU repository). As the GAO recently reported, WIPP also lacks the legal capacity to dispose of all the TRU waste at Hanford and other USDOE sites.<sup>11</sup> Heart of America Northwest previously reported that enough Plutonium TRU wastes remain in Hanford’s soil to build fifty nuclear weapons – without any plan or schedule by USDOE to ever cleanup and dispose of these TRU wastes in a geologic repository.<sup>12</sup>

152,800m<sup>3</sup> of TRU waste is in Hanford’s soil, in unlined burial grounds, the soil around radioactive liquid waste discharge ditches, etc... **The amount of TRU in Hanford’s soil is nearly equal to the full licensed capacity of the WIPP geologic repository in New Mexico** – USDOE’s only geologic repository. WIPP has a licensed capacity of 175,600m<sup>3</sup>, while the TRU waste that USDOE has abandoned in Hanford’s soil and dropped from all cleanup plans and assessments totals 152,800 m<sup>3</sup>.<sup>13</sup>

As the GAO confirms, the TRU in Hanford’s soil, which USDOE proposes to leave forever, poses high risks to the public, to the Columbia River, and would greatly exceed WIPP’s legal

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<sup>11</sup> GAO-07-761 “NUCLEAR WASTE: Plans for Addressing Most Buried Transuranic Wastes Are Not Final, and Preliminary Cost Estimates Will Likely Increase”; June, 2007.

<sup>12</sup> “Transuranic Waste at Hanford: Large Quantities Lost” USDOE’s Plans Increase Waste and Risk, While Ignoring Buried Wastes Spreading Contamination; published by Heart of America Northwest, 2004. Available at [www.hoanw.org](http://www.hoanw.org).

<sup>13</sup> *Id.*

capacity for disposal.<sup>14</sup> The total amount of retrievably stored TRU at Hanford which USDOE is required to retrieve and package for shipment to WIPP under TPA Milestone M-91 is just 8,600 m3. There is already approximately 18 times more TRU in Hanford's soil than USDOE intends to ever send to WIPP. Rather than using this opportunity to commit to cleaning up that TRU in Hanford's soil (and also at INEL) and finding a new scientifically suitable deep geologic repository, USDOE proposes adding even more TRU and GTCC waste to the long-term soil and groundwater contamination at these two sites.

The volumes of Plutonium and TRU waste in the soils at Hanford and INEL justify searching for a second deep geologic repository for TRU. As noted above, the total TRU which USDOE intends to just abandon in Hanford's soil forever is more than the total licensed capacity of the WIPP TRU repository. This belies USDOE's claim in the GTCC waste Notice that the small volumes do not justify looking for any repository beyond Yucca Mt and WIPP:

"DOE does not plan to evaluate an additional deep geologic repository facility because siting of another deep geologic repository facility for GTCC LLW and GTCC-like waste is impractical due to the cost, time, and the relatively small volume of GTCC LLW and GTCC-like waste." (Notice at 11).

The first priority for Hanford should be exhuming the TRU wastes buried before 1970, which pose very high risks, and sending those wastes to a geologic repository. Instead, USDOE turns the notion of cleanup on its head with this proposal to bury more extremely dangerous, highly radioactive Plutonium and TRU wastes in Hanford's soils or in boreholes above Hanford's groundwater.

As the Government Accountability Office's (GAO) recent report AO summed up the risk from leaving TRU in near surface burial:

"In general, state environmental agencies have expressed concern that leaving the transuranic wastes in place at the three sites, even with additional controls to limit intrusion, may not adequately prevent the buried contaminants from spreading to the environment in the long term. How much, if any, buried transuranic wastes will eventually be removed from these sites is undetermined, and final decisions are years away."<sup>15</sup>

USDOE needs to find a new deep geologic repository for the TRU buried at Hanford and other USDOE sites before 1970, which particularly threaten the Columbia and Snake Rivers. That

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<sup>14</sup> "In addition to the threats that buried transuranic wastes may pose, the other radioactive and hazardous wastes buried with them may pose additional threats. Some of these wastes emit skin-penetrating radiation and cannot be directly handled by humans. Other wastes, such as organic solvents and toxic metals, are volatile. In some cases, these wastes can migrate readily through soil, especially if exposed to water, and may contaminate surface waters and groundwater." GAO-07-761 at 2.

<sup>15</sup> GAO-07-761 at 4.

search for a deep geologic repository in stable geologic formations such as granite should include these GTCC and GTCC-like wastes. Instead, USDOE is seeking to rename some of the TRU wastes which legally are required to go to deep geologic disposal and avoid deep geologic disposal with cheap, dangerous near surface landfills.

The only deep geologic repositories which USDOE proposes to consider for the GTCC and GTCC-like wastes are Yucca Mt. and WIPP – both of which will greatly exceed their legal capacities from existing wastes (if Yucca even ever opens, which USDOE now says is unlikely before 2020). The prospects of increasing the legal capacities of these two sites are practically nil. This makes clear that USDOE is really only considering disposal of highly radioactive GTCC and GTCC-like wastes, including TRU and Plutonium wastes, in inappropriate near surface landfills or boreholes.

To justify looking primarily at near surface disposal at Hanford and other existing USDOE sites (INEL, Savannah River, Los Alamos, Nevada Test Site and Oak Ridge), USDOE makes the same sad claim it has tried to use for decades to justify dumping wastes at Hanford: that somehow Hanford's geologic and topographic condition next to the Columbia River and above a valuable ground water aquifer is appropriate for disposing of radioactive and toxic wastes:

“Identification of these sites for potential analysis is based on mission compatibility (these DOE sites currently have waste disposal operations as part of their mission) and physical characteristics of the sites such as hydrogeology and topography.” (Notice at 11).

Not one of these USDOE sites was chosen for their suitable hydrogeology and topography in terms of waste disposal. Quite the contrary. These sites were chosen for nuclear weapons plants because of their location next to major surface water bodies or access to groundwater - conditions which are the least desirable for waste disposal.<sup>16</sup>

***The Bottom Line (again):*** USDOE needs to include all reasonable alternatives for disposal of GTCC and GTCC-like wastes, including all similar wastes and wastes under consideration in other proposals. This must include retrieval of TRU wastes buried before 1970, which should be in a geologic repository. These are related wastes, with related decisions. All Reasonable Alternatives includes looking at geologic repository sites other than the two which USDOE currently proposes to examine in this EIS, which are both legally barred from taking these wastes (if Yucca ever opens). A new, scientific search for repository sites is required, one that does not start and end with sites USDOE already owns.

#### **Public Comment and Notice:**

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<sup>16</sup> With the exception of NTS, these sites were chosen for cooling water for reactors and nuclear facilities. NTS was initially chosen for isolation for above ground testing of nuclear weapons. Each of these other USDOE sites has seriously contaminated groundwater and, surface waters at some sites such as LANL, Hanford, SRS and Oak Ridge.

USDOE is proposing – once again – to use Hanford as a national radioactive and toxic waste dump. Hundreds of people have attended hearings on similar proposals in Portland, Seattle, Spokane, and Hood River, such as the proposals to use Hanford as a national radioactive and missed waste dump in the Hanford Solid Waste Disposal EIS, the Waste Management Programmatic EIS, and the recent scoping meetings for GNEP.

Because of the close relationship between this proposal and the issues and proposals in the Hanford Solid Waste Disposal EIS, and the cleanup of Hanford, **USDOE must provide mailed and email notice to all persons and organizations on the notice or attendee lists for the Solid Waste EIS and the TPA Hanford Clean-Up list.** USDOE can not pretend this is a separate, unrelated action. USDOE should be preparing paid advertising, as well as mail notice, which clearly identifies that USDOE is “Proposing to truck to, and dispose at, Hanford highly radioactive wastes. These wastes include Plutonium and Transuranic wastes as well as wastes referred to as ‘Greater than Class C’ due to their high radioactivity, and some wastes mixed with hazardous chemicals.”

USDOE should also present this proposal to the Hanford Advisory Board for review and comment. Sadly, USDOE failed to identify this proposal for upcoming public participation calendars and issues or proposals which may impact cleanup and the pending TCWEMIS to the Board and citizen groups over recent months. This would appear to be deliberate (as with issuance of the Notice on Friday afternoon). Providing 60 days from July 23, 2007 for comment fails to give adequate time for the public and the Hanford Advisory Board (legally advising USDOE, EPA and WA Ecology) to review and comment during this scoping period. **USDOE must extend the comment period** to allow time for presentation of this Notice and related issues to the Advisory Board in September, to be followed by consideration and potential advice in November.

USDOE mailed notice of the scoping for this EIS and of the hearings to a list that was comprised of only approximately 200 people. This was not just inadequate: it was a joke.<sup>17</sup>

USDOE has an obligation to be certain that each of its programs obtains the mailing lists from related programs and field offices for proposals that relate to those field offices and programs. Which administrative drawer at USDOE this proposal for GTCC came out of is irrelevant to USDOE’s obligations to provide notice to the concerned public, which has asked to be notified by the Department of proposals that affect the cleanup of each USDOE site.

The only hearings for this proposal to use Hanford as a national radioactive and toxic mixed waste dump were August 27, 2007 in Troutdale, OR and, August 28 in Pasco, Washington. This was inadequate. Indeed, it appeared that USDOE chose to proceed with Troutdale even after being apprised that the location was inappropriate and could not handle the anticipated audience

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<sup>17</sup> Claims that the lack of mailed notice could be made up for with paid advertising are both legally irrelevant and are undermined by the fact that the project’s paid ads were designed to avoid giving the public notice of how the proposal may affect regional public’s interests. Those ads, with their fine print, were a waste of our tax dollars, designed only to cover for the decision to avoid providing mailed notice to those who had asked to be on notice lists for related USDOE decisions.

– even when considering that many people from the Portland area would not travel to Troutdale. The room was woefully inadequate: undersized, hard to find, did not have enough chairs...

USDOE must hold hearings on this proposal in the other major population areas concerned with Hanford Clean-Up and where USDOE has agreed Hanford Clean-Up related hearings are conducted on a regular basis under the Hanford Clean-Up Agreement (Federal Facility Agreement and Consent Order; aka Tri-Party Agreement (TPA)) Community Relations Plan: Spokane, Hood River, Portland and Seattle. The hearings on the draft EIS, or any scoping hearings on a revised proposal need to be held in each of these areas.

USDOE knows of the intense interest in how such a proposal will affect cleanup and concerns of the public along potential transport corridors. USDOE knows that it has had hearings on related proposals with hundreds of attendees in Seattle, Portland, Spokane and Hood River. **USDOE needs to provide for hearings in each of those locations, with adequate notice** designed to actually inform the public of the nature of the proposal and how it may affect concerns regarding cleanup and adding more waste to Hanford, and for transportation risks. Such notice needs to be mailed to all attendees and commentors for the related Hanford Solid Waste Disposal EIS and the GNEP EIS scoping hearing and the TPA Cleanup mailing lists.

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[Return to GTCC EIS Scoping Comments](#)