

Tanks

Comments

L-0012/009

We want no further delays and changes of plans for the Waste Treatment Plant. We want the waste at Hanford treated and stored in the safest manner.

L-0018/004, TSE-0001/004

We all recognize that the greatest threat to the Columbia River is the tank farms, and stabilizing, pumping, and eventually vitrifying and shipping these wastes must remain our top priority.

L-0035/002

The waste issue has been a concern of mine since 1976, when we were promised a vitrification plant and it has never come into being.

P-0031/001

I would like to know how much longer it will take until vitrification of radioactive waste becomes reality.

TLG-0009/004

At the scoping hearings held in this Solid Waste Environmental Impact Statement of February, I and other Oregonians urged the Department of Energy to keep working to vitrify all of the wastes in the tanks at Hanford. I reminded the DOE that it made a commitment in 1997 to vitrify all of the wastes in the tanks. And I told the Department that keeping that promise was important to Oregonians.

TLG-0009/009

As I wrote in February, the Department of Energy is spending a great deal of time trying to avoid the commitment it made to us back in 1997. Oregonians want the DOE to live up to its commitments and move forward with the task of eliminating the high-level tank -- wastes in the tanks. Vitrification was the best decision then, it's the best decision now. In a recent statement, Richland operation manager Keith Klein stated the following, and I quote, 'The Department's job is to clean up waste and take the necessary steps to ensure the job is done in a safe and effective manner in accordance to all the applicable laws.' I could not agree more. When the Congress appropriates funds for the Department of Energy and the Hanford Nuclear Reservation, it expects those funds to be used for cleanup and not for a lawyer's full employment program. It's time for the DOE to stop fudging on its commitments, stop trying to weaken the TPA and start getting back to the job that Oregonians and all Americans are paying them to do.

TPO-0017/005

We have to have a vitrification plant.

TSE-0003/006, TSE-0004/006, TSE-0005/006, TSE-0006/006, TSE-0007/006

Empty those high-level waste tanks, vitrify 75 percent, don't leave leaking active waste tanks here despoiling our environment.

Response

The Hanford Waste Treatment Plant is being constructed to treat wastes removed from the Hanford tanks.

Decisions regarding the vitrification plant are not within the scope of the HSW EIS.

The Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site (68 FR 1052) will analyze other tank waste activities.

DOE is committed to cleaning up the Hanford Site in accordance with the Tri-Party Agreement (TPA) and applicable environmental requirements under federal and state laws and regulations. As of February 1, 2003, DOE had met 99% of its TPA milestones on or ahead of schedule. A lot in the way of cleanup has happened at Hanford over the last decade. Portions of the site have already been cleaned up, removed from the

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National Priority List (NPL), and released for other uses (e.g., the 1100 Operable Unit). As part of the river corridor cleanup, DOE is remediating contaminated soil sites, decommissioning the plutonium production reactors and associated facilities, removing production reactor fuel from the K Basins to interim storage in the 200 Area, and treating groundwater contaminated by past operations. Groundwater contamination beneath the Hanford Site is being studied and remediated by the ongoing CERCLA program in accordance with the Tri-Party Agreement. See Volume II Appendix N, Section N.2.4. See Volume III Section 2.0, Item 6 of the CRD for more examples of cleanup at Hanford.

DOE is responsible for the cleanup of dozens of sites around the country. DOE's approach is to consolidate and dispose of radioactive waste from all its cleanup efforts in the safest and most cost-effective manner possible. Hanford and other sites would be available for the disposal of low-level waste and mixed low-level waste; WIPP is used for the disposal of TRU waste; Yucca Mountain is expected to be used for the disposal of high-level waste and spent nuclear fuel. Many more curies of waste will be sent offsite from Hanford than will be received from offsite. Analysis indicates that these wastes could be handled without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities.

The Hanford clean-up effort is expected to be completed in 2035, followed by a long-term stewardship program that ensures waste remaining onsite is appropriately managed.

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F-0022/003

As for as the choice to terminate the vitrification of holding tanks -- I want to see in the draft where that money is going[.]

E-0049/011, L-0048/011

In addition, given that elements of the upcoming Tanks Closure EIS will also contribute to the waste disposed and left at Hanford, the two EIS's should be issued concurrently, with an expanded public comment period.

Response

DOE is preparing the Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single Shell Tanks at the Hanford Site (68 FR 1052), which will address the potential environmental impacts from retrieving and processing tank wastes. DOE will conduct appropriate environmental review to support future decisions for closing the vitrification plant (i.e., Waste Treatment Plant) and other existing treatment and associated facilities.

Comments

E-0019/001, L-0026/001

The draft HSW-EIS is inadequate for defining the environmental impacts of the Immobilized Low Activity Waste (ILAW) produced by the tank waste treatment program in the Waste Treatment Plant (WTP).

1) The draft HSW-EIS uses a dated, obsolete value of 211,000 cubic meters for the ILAW volume. Reference 2 [RPP-12416, 2002, River Protection Project Target Baseline, Rev. 1, CH2M HILL Hanford Group, Inc, Richland, Washington, December] provides LAW vitrification plant feed inventories that result in 250,000 cubic meters of ILAW borosilicate glass.

E-0019/002, L-0026/002

The draft HSW-EIS (Reference 1) states that WTP wastes are not applicable to lower and upper bound waste volumes (Sections 3.3 and C.5). References 2 and 3 [RPP-12416, 2002, River Protection Project Target Baseline, Rev. 1, CH2M HILL Hanford Group, Inc, Richland, Washington, December and RPP-13678, 2003, Integrated Mission Acceleration Plan, Rev 0, CH2M HILL Hanford Group, Inc, Richland, Washington, March] identify supplemental treatment technologies of containerized grout, steam reformation, and bulk

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vitrification that may treat up to 80 percent of the tank wastes. Approximate volumes of alternate ILAW forms containing 100 percent of the tank waste inventory and pretreatment chemicals are:

ILAW Form	Volume, cubic meters
None – All High Level Waste	0
Iron Phosphate Glass	125,000
HSW-EIS	211,000
Borosilicate Glass	250,000
Stabilized Steam Reformation	600,000
Containerized Grout	750,000
Bulk Vitrification	1,000,000

The bulk vitrification volume of 1,000,000 cubic meters results from macroencapsulation of the ILAW melter in grout (Reference 1, Section 5.3.2.4). During melter operation, volatile radionuclides such as technetium and iodine are volatilized and condense in cooler areas of the melter. The condensed radionuclides have a higher leach rate than radionuclides encapsulated in the glass. The macroencapsulation of the melter in grout is an attempt to reduce the leach rate of radionuclides. The grout in the 1,000,000 cubic meters of emplaced ILAW is estimated at 1,000,000 metric tons and should be included in impacts and resources committed.

The draft HSW-EIS gives the total solid waste disposal volume as 754,727 cubic meters Lower Bound and 1,095,409 cubic meters Upper Bound (Reference 1, Table C.1). The correct values with ILAW alternate waste forms should be 545,000 cubic meters Lower Bound and 1,900,000 cubic meters Upper Bound. The ILAW has a potential range of 0 to 65 percent of the total disposed solid wastes.

E-0043/014, EM-0217/014, EM-0218/014, L-0056/014, LM-0017/014, LM-0018/014

All alternatives in the HSW EIS assume that all of the ILAW will be vitrified. Yet the DOE no longer plans to vitrify the overwhelming majority of ILAW, and instead plans to mix it with concrete (grout) and use other "alternative" technologies. The failure to incorporate alternative technologies is a glaring omission, as vitrification (glassification) is presumed to immobilize the waste for thousands of years, while grout will only hold for up to 30 years, and probably less. Therefore, all of DOE's analyses fail to consider the reality of the waste they are adding to the ground, rendering all alternatives and the cumulative impact sections invalid.

E-0047/018

Assumes ILAW will be disposed as silicate glass; however, the Office of River Protection (ORP) has decided on a different waste form.

E-0055/002

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.

L-0041/024

The EIS assumes that all the immobilized low-activity waste (ILAW) will be vitrified as borosilicate glass.

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DOE has proposed that a large amount of this waste be in some form other than borosilicate glass. These potential forms are well known at this time: aluminosilicate glass, aluminosilicate "sand" (steam reforming), or grout. These potential waste forms need to be analyzed in the EIS. Or, the ROD needs to make explicit statement that based on the analyses in the EIS, which assumed the immobilized form would be borosilicate glass, that any alternate waste form must have performance properties as good as or better than borosilicate glass. Otherwise, a supplemental EIS will be necessary when final waste forms are determined.

L-0041/025

Since the EIS assumes that low-level tank waste will be vitrified as borosilicate glass, and also that technetium 99 will not be removed from the low-activity waste, this represents an implicit commitment that any supplemental low activity tank waste forms will immobilized technetium 99 to at least the degree that borosilicate glass does.

L-0052/012

Addition of ILAW. Adding ILAW to this draft EIS is a highly significant change from the prior version. We are aware that the analyses in this EIS assume all ILAW will be vitrified, but that Tc-99 is not removed. As supplemental technologies are currently being tested, we have concerns about the form the ILAW will take, and how this EIS will be revisited if ILAW is not vitrified.

Response

DOE is preparing the Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single Shell Tanks at the Hanford Site (68 FR 1052), which will address the potential environmental impacts from retrieving and processing tank wastes. DOE will conduct appropriate environmental review to support future decisions for closing the vitrification plant (i.e., Waste Treatment Plant) and other existing treatment and associated facilities.

The HSW EIS uses the definition of cumulative impact as defined by the CEQ Regulations (40 CFR 1508.7): "Cumulative impact" is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Potential cumulative impacts associated with implementing the HSW EIS alternative groups are summarized in Volume I Section 5.14. Past, current, and future Hanford activities include treatment and disposal of tank waste, CERCLA remediation projects, previously disposed of waste, decontamination and decommissioning of the Hanford production reactors and other facilities, waste in the PUREX tunnels, operation of a commercial LLW disposal facility by U.S. Ecology, and operation of the Columbia Generating Station by Energy Northwest. Cumulative impacts of storage, treatment, and disposal activities for a range of waste volumes are evaluated and expanded in the final HSW EIS. For most resource and potential impact areas, the combined effects from the alternative groups for the Hanford Only, Lower Bound and Upper Bound waste volumes, or for the No Action Alternative for the Hanford Only and Lower Bound waste volumes, when added to the impacts of these other activities, are small.

ILAW disposal has been evaluated in the HSW EIS based on the expectation that it will be a borosilicate waste form. Outside the scope of the HSW EIS, DOE has been considering adjustments to the ILAW waste form and its chemical and radionuclide composition. It is expected that potential environmental impacts associated with such changes in the ILAW waste form will be evaluated in the Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single Shell Tanks at the Hanford Site (68 FR 1052).

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L-0055/038

Existing High level waste creates additional problems with this analysis. The document states no technology known or anticipated can remove 100% of contents of Hanford's HLW tanks. It is for this reason that the CTUIR [Confederated Tribes of the Umatilla Indian Reservation] would like a complete removal of the buried HLW tanks and the contaminated soil under them. This is only way to assure the waste will not continue to leak and contaminate the ground water in the future. The tanks should be cut into sections and converted into a form more stable for the environment. The final product should also be stored in lined and monitored facilities.

L-0055/039

The EIS suggests impacts to workers from cleaning up the site may be greater than the impacts to the general public from not cleaning the site up. This is an excuse to leave high levels of waste in place. We recommend other techniques, such as the use of robotics, be demonstrated for larger applications such as soil removal and tank removal to protect the workers and remove the waste.

It is further suggested that the risk of accidental release from cleaning up waste is greater than leaving it in place. This is not an argument often successfully used by industries that have to clean up a hazardous waste sites after their production operations have created it in the first place. The long-term impacts from the waste left in place is not known well enough that DOE can use the argument that it will not pose much of a danger to the future generations.

TLG-0009/001

Oregonians will simply not accept any plan that leaves waste in the Hanford tanks.

Response

DOE is preparing the Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single Shell Tanks at the Hanford Site (68 FR 1052), which will address the potential environmental impacts from retrieving and processing tank wastes. DOE will conduct appropriate environmental review to support future decisions for closing the vitrification plant (i.e., Waste Treatment Plant) and other existing treatment and associated facilities.

The long term stewardship discussions in Volume I Sections 5.18.9 and 2.2.7 have been revised.

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F-0021/005

...re-classifying waste and calling that progress is not OK[.]

F-0023/003

We do not want waste already there to be reclassified.

L-0044/100

Ecology noted that the Integrated Mission Analysis Plan for the Office of River Protection lists processing 750,000 gallons of transuranic mixed (TRU-M) waste from single shell tanks using supplemental technology (Table ES-1, Integrated Mission Acceleration Plan Strategies Produce Results, p. ES-3) Ecology supports the TRU-M tank waste initiatives. Section 4.4.1.1 of the IMAAP states that 12 tanks will be handled as TRU-M (9 SSTs as contact handled waste and 3 DSTs as remote handled waste). Section 4.4.1.2.1 explains that the TRU-M waste will be dewatered and packaged into WIPP compliant containers (contact handled), with added steps for remote-handled TRU solid/liquid separation-processing or solidification. Ecology interprets these steps as treatment to meet the WIPP disposal requirements. In the Revised Solid Waste EIS, Appendix B [Volume II] Preferred Alternative Groups D & E (pp. B.85-B.88) has no detailed information reflecting the additional

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volume of TRU-M waste that may be generated by this ORP action.

The tank waste that is being characterized as TRU-M (rather than HLW) cannot be transported to WIPP until the NRC concurs with the redesignation, WIPP accepts the waste, and the State of New Mexico accepts the waste. Should that acceptance be delayed, the tank waste TRU-M must be treated, packaged, and stored at Hanford. That waste might constitute a waste form with no approved path forward to disposal. Ecology's review of the SWIFT report for 2002 did not reveal specific amounts forecast for the TRU-M tank waste. Ecology requests that the USDOE add specific quantities to the TRU-M volumes evaluated for storage and evaluate the impacts of long-term storage in the Final EIS.

L-0054/002

DOE had expanded the scope to include actions involving the reclassification of high-level tank waste and on-site disposal of an 'immobilized low-activity waste' fraction. This is a specific proposed action which mandates consultation with the YN Tribal government. Consultation on this matter has yet to be initiated by USDOE.

THR-0009/009

I also don't like how the statement takes things and relabels them from high-level to low-level.

Response

The HSW EIS proposes no changes regarding the classification of high-level waste.

DOE is preparing the Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single Shell Tanks at the Hanford Site (68 FR 1052), which will address the potential environmental impacts from retrieving and processing tank wastes. DOE will conduct appropriate environmental review to support future decisions for closing the vitrification plant (i.e., Waste Treatment Plant) and other existing treatment and associated facilities.

The HSW EIS uses best available data for estimating inventories of hazardous and radioactive wastes. These data are obtained from information management systems maintained at Hanford and other DOE sites. The Office of River Protection has contributed data to these information management systems.

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P-0142/001

I strongly object to the on-going delays of the vitrification plant construction project.

TLG-0009/006

That new plan for the vitrification plant was announced last week, just a few days before giving the people of Pacific Northwest a chance to comment in these hearings and well before the record of decision is finalized.

TSP-0015/002

The vitrification plant. I was so ecstatic to see that come up and to be built. And I do encourage you to do all you can to get that going again.

Response

Decisions regarding the vitrification plant are not within the scope of the HSW EIS.