

Transportation

Comments

E-0043/041, EM-0217/041, EM-0218/041, L-0056/041, LM-0017/041, LM-0018/041

The HSW EIS acknowledges that the local jurisdictions that would likely be the first to respond to a radiological emergency, yet fails to state quantitatively the who, what, when, and how regarding the DOE and the federal government's response if and when an emergency occurs.

Response

The DOE has several programs in place to assist State and local first responders. For example, the Radiological Assistance Program provides trained personnel and equipment to evaluate, assist, and advise in the mitigation and monitoring of radiological incidents. Part of the RAP is a network of eight Regional Coordinating Offices across the country that is staffed 24 hrs per day 365 days per year. The staff are trained to provide field monitoring, sampling, decontamination, communications, and other services as requested. In addition, DOE's Radiological Emergency Assistance Center/Training Site (REAC/TS) focuses on providing rapid medical attention to people involved in radiation accidents. REAC/TS is available 24 hours per day to provide personnel and deployable equipment to State and local emergency personnel for the treatment of radiation exposure. Volume I Section 2.2.4 discusses transportation, including emergency preparedness.

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THR-0010/003

And then three or four or five months ago I wake up at four o'clock in the morning listening to NPR [National Public Radio] about these shipments of nuclear waste that are going to start next Wednesday, next Wednesday, without us even being notified, is just ridiculous.

THR-0012/003

They start shipping [radioactive waste] tomorrow. When did this happen?

THR-0019/001

If we have been given this deadline of tomorrow to start shipping, where is the news people in this, where is the newspapers? I believe it would be [the responsibility] on the DOE to provide, you know, coverage on this for the world's news.

Response

The Hanford Site has received thousands of shipments of radioactive waste from offsite generators over the years.

About 300,000,000 hazardous material shipments take place every year in the United States. Of those shipments, about 3,000,000 involve radioactive materials and less than 10,000 involve shipment of DOE radioactive materials.

Comments

E-0043/057, EM-0217/057, EM-0218/057, L-0056/057, LM-0017/057, LM-0018/057

Remarkably, in light of the tragic events of September 11, 2001, the EIS failed to consider the possibility of terrorist attacks on the transporting vehicles. In a recent report, the Office of Inspector General noted that the DOE "[should maintain] the strictest possible control over [nuclear] materials that could, in the wrong hands, threaten national security." DOE should heed the advice contained in the OIG report. In the wrong hands, this waste material could be used against the United States, with deadly results. Such scenarios should be addressed in the HSW EIS.

E-0043/070, EM-0217/070, EM-0218/070, L-0056/070, LM-0017/070, LM-0018/070

The HSW EIS only considers an earthquake accident scenario. There should be analysis of other emergencies,

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such as terrorist attacks, especially along transportation routes.

F-0029/008

Has the DOE looked into safeguarding Hanford from terrorist attacks? If so, why was this not in the EIS [?]

L-0044/130

While analyses convey the fatalities that can result from accidental or malevolent sudden loss of containment in transport of TRU waste, they do not address the real possibility of diversion of shipments. Further, the scenarios evaluated do not address other measures that terrorist might take (e.g., dirty bombs) that would have significant adverse effects to public health and psyche, the environment, and the economy. In evaluating risk in transit, USDOE fails to consider that while most shipments are made on the Hanford Site, the total distance shipped offsite is significant.

P-0153/002

In the age of terrorism it is a no-brainer to even think of transporting such harmful waste.

THR-0001/005

Another thing they didn't really look at is what is the potential for terrorist attack for dirty bombs.

THR-0009/007

And they haven't addressed the terrorist risk. Which I think is real. Unlike Greg, I think there really is risk. Because it is ideal, it is an ideal access point. So why wouldn't there be some risk?

TPO-0005/003

What if someone dropped a bomb on Hanford [?]

TPO-0011/007

The fact that, of course, 9-11, and terrorism is not taken into account.

TPO-0027/001

We have planes going into buildings; we have, in other countries, cars and trucks going into various compounds, buildings, and so forth, blowing things up, so have they looked at one of the drivers running this truck loaded with all these goodies into some major, you know, like, pick it, the federal building downtown, whatever? ... Well, that needs to be included.

TSE-0023/002

[The DEIS does not consider] what happens when a truck full of transuranic waste is intentionally or accidentally breached.

TSE-0028/002

Nor does it [the DEIS] consider the terrorist attack [associated with importing transuranic wastes to Hanford]. ... Instead the EIS in one and a third page, discusses the terrorist attack and says, we actually just borrowed the analysis of a severe accident involving spent nuclear fuel, and trust us, that ought to be the same. And it is not the same as a benevolent event[.]

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

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Comments

E-0043/038, EM-0217/038, EM-0218/038, L-0056/038, LM-0017/038, LM-0018/038

The Department's list of typical long-term stewardship activities provides no terrorism prevention activities. This is unacceptable.

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

DOE does not and will not rely solely on long-term stewardship to protect people and the environment. As indicated in the DOE sponsored report "Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites" (National Research Council 2000), "contaminant reduction is preferred to contaminant isolation and the imposition of stewardship measures." Contaminant reduction is a large part of the ongoing cleanup efforts at Hanford. Most of the analyses in the HSW EIS are based on the assumption that long-term institutional controls would no longer be in effect 100 years after closure (about 2150 AD). Long-term groundwater impacts and subsequent human health impacts were determined based on the assumption that caps would degrade and eventually provide no protection (see Volume I Sections 5.3 and 5.11 and Volume II Appendices F and G). In addition, "intruder scenarios" are analyzed to determine the impacts of gaining access to the site (i.e., no institutional controls) and digging or drilling into waste sites. See Volume I Section 5.11.2.2 and Volume II Appendix F Section F.3. Further information on DOE's long-term stewardship activities can be found in the DOE Long-Term Stewardship Study (DOE 2001a). The discussions of long-term stewardship in Volume I Sections 2.2.7 and 5.18 of the HSW EIS have been revised in response to comments.

Comments

E-0043/024, EM-0217/024, EM-0218/024, L-0056/024, LM-0017/024, LM-0018/024

Analysis of the transportation of an estimated 70,000 truckloads of radioactive and chemically toxic waste from across the country that analyzes all the routes within each state in which the waste will pass, including but not limited to detours due to construction, weight limitations, weather, and potential terrorism.

E-0043/028, EM-0217/028, EM-0218/028, L-0056/028, LM-0017/028, LM-0018/028

The EIS failed to look at other routes such as those required by detours. There are recent detours along the Columbia Gorge because of weight restrictions, which should be addressed in the transportation analysis.

E-0050/007

The EIS fails to assess and disclose the risks to the public on transportation routes, including detours off major highways, from the point of shipment to Hanford. The possibility of a terrorist attack has not been adequately disclosed or assessed along the shipping routes.

E-0055/028

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

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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.

F-0011/004

Nuclear waste should not be transported thru Oregon given the current unreliable state of our bridges and roads.

F-0013/003

In regards to transportation of off site waste to Hanford, the condition of roadways (esp. [especially] in Oregon) has not been addressed.

L-0055/024

The transportation component is still poorly lacking in evaluating the risks to transporting shipments in inclement weather. This was discussed with DOE when they visited the CTUIR offices. DOE used 1990 census data rather than the available 2000 census data. The EIS does not evaluate secondary routes that may have to be used due to overweight shipments or detours as bridges are replaced and roads closed due to routine maintenance.

THR-0005/003

Transportation. I'm in total awe regarding the information I have received about the nine bridges that do not take the weight of the 70,000 or 20,000, which I can't even believe, and to think of those trucks going through towns, and cities, neighborhoods. What happens [in the event] of an accident? And the transportation route, which of course would include going by our beautiful Columbia River.

THR-0009/006

This whole trucking thing I find unacceptable. ... If you take one truck and watch it carefully, I don't know what you are going to do about watching something from a satellite, how much impact can you have from a satellite if the truck has a problem we are watching it from a satellite. It is like remote access. It's not going to help. You can't stop something that's happening from a satellite. So you send these trucks out, you send one and you make it, and you send out ten. Ten times the risk. And then you send out 100, it just went up ten times more. And a thousand, it is ten times more. And you go 10,000, is ten times more risk. The amount of risk in 25,000 or 75,000 trucks is just huge. It's huge. And they realize that. And what they're saying is that their drivers can't have an unauthorized second deviation from route, but they will let them do one deviation from the route and that's okay, they can keep driving. Their third failure to make -- their third failure, to make their shipment notifications, but the first one and the second one is okay? So they know their drivers are not going to do everything that is asked of them. ... They know they are going to have accidents. That's life. That's how it is. You can't move 70,000 vehicles anywhere, any time, anyhow, and not have something happen.

TLG-0013/001

If we concentrate shipments to avoid bad weather, then they have to redo the calculation for the worker, the trucker radiation dose, because it's going to take longer to truck the waste and also for the public radiation dose, because they're going to be stuck in traffic next to it. And that's very significant. Same as the detour risk. And we do believe they need to do those calculations on a route and site-specific level. And it needs,

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then, to include the impact on the accidents of the hazardous waste component.

TPO-0002/007

The EIS fails to assess and disclose the risk to the public on all transportation routes, including detours off major highways from the point of shipment to Hanford. All detours from the point of shipment.

The waste management Programmatic EIS, which is the one before this, looked at shipments from the different sites to Hanford. That was prior to 9-11. They are not assessing a potential terrorist attack on one of these dirty -- these trucks holding this highly radioactive waste.

TPO-0015/008

It is also unacceptable to not have a complete study of the impact to the entire routes of all the roads, bridges, detours, communities, and so forth, in case of accidents along the way.

TPO-0015/009

Many of you have read the articles about how bad the roads are in Oregon and that we have to detour trucks through little tiny towns. It's unacceptable to be moving the waste through Oregon at this point.

TSE-0018/001

One of the things we had grave concerns about early on was the transportation of the transuranic waste, and actually all the waste described in the waste -- revised Draft EIS coming through Oregon on Interstate 5 and 84. ... And you can see that the EIS does consider coming up I-5 -- well, it plans to come up I-5 and through I-84. What it doesn't consider is that these highly radioactive shipments will be shipped over some of Oregon's decaying bridges. And these are some of them right here.  An investigation by the State of Oregon has identified 221 critical problem bridges on I-5 and I-84 that these shipments will pass through. They were discussed in this draft Oregon Department of Transportation Economic and Bridge Options Report. This was done in January of this year. This report concluded that bridges throughout the state on I-5 and I-84 are currently cracked and/or restricted. This next slide is a map, indicates all the bridges along I-5 and 84 that are currently restricted. All the little circles represent the restricted bridges. And you can see that a lot of them are on I-5, and a significant number of them are on 84 along here. And in his declaration, Ken Niles, the administrator for the Nuclear Safety Division of the Oregon Office of Energy, stated that based on the permits granted the truck shipments from ETEC and the trucks from BCL in Ohio were directed to use secondary roads and detoured off the interstate highway. Currently this year a truck carrying transuranic waste was supposed to come off the main highway because it was too heavy for some of the bridges, and it was only after they reweighed and recalibrated some of the weights that they were able to keep it on the highway. Now, he said the detours off Interstate 84 may be necessary for future shipments of Battelle Columbus Lab TRU waste or other TRU wastes from other sites due to weight restrictions or bridge construction. Now, it was apparent that neither USDOE nor the contractor carrier fully considered the overweight status of the truck shipments and the routes that would be used. Now, back in, earlier this year a bridge in Riddle and Canyonville was unexpectedly closed down and they found that 1800 trucks were detoured off the main highway, off of I-5, and through the small town of Riddle. Now, this could result in community safety concerns, damage to city streets, these small communities, and negatively impact local commerce. They also found that these bridge restrictions could detour be up to 100 to 200 miles, school buses could be rerouted, and consequently, images like this become much more real possibilities.

TSE-0037/001

Earlier I asked you about the transportation risk analysis you guys did. And Mike [Collins, DOE], you said that most of it assumed that the shipments of waste would be on a highway, on an interstate. So does that mean you didn't take into consideration the likelihood of shipments being detoured off of the highways onto smaller rural roads, like what happened in Canyonville and Riddle in Oregon? ... So can you say that you actually did a real meaningful site specific or regional, region specific analysis, then, of an accident scenario?

TSP-0016/001

I want to just reiterate a few more concerns I have with the EIS in terms of transportation. Someone just was

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talking about the increased number of accidents on I-90 was because of the increased use of the freeway, with more population going up along the I-90 corridor. And that's similar to I-5 and I-84 as well.

And I just want to comment that the census data that's used for transportation risk for this EIS is based on 1990 census data. So I think that it should be updated. I think that the EIS should be redone and revised and updated with 2000 census data so that we can really adequately analyze the risks along all the different corridors.

And also the issue of the bridges in Oregon. I want to reiterate my concern that although the Oregon routes of I-84 and I-5 are preferred for the transportation of this waste to Hanford, because of the large number of bridge closures due to over-exceeding the weight, that it seems like there's a pretty good chance a lot of this stuff will be coming through Spokane. So I really have to think that the health and environmental risks to the Spokane community need to be analyzed and included in the EIS.

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

About 300,000,000 hazardous material shipments take place every year in the United States. Of those shipments, about 3,000,000 involve radioactive materials and less than 10,000 involve shipment of DOE radioactive materials.

The Hanford Site has received thousands of shipments of radioactive waste from offsite generators over the years.

Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection, communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

With respect to concerns about the condition of roadways and bridges, the waste shipments to Hanford will predominantly travel on Interstate highways. Only in extremely rare instances would Interstate highway or bridge construction lead to a detour through municipal streets. Furthermore, the waste shipments will be

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conducted using heavy-combination trucks but are not "overweight" vehicles that require special overweight permits. The weights of the trucks that haul the waste to Hanford will be below legal-weight truck limits, similar to the vast majority of tractor-trailer vehicles that carry cargo on the Interstates every day.

Oregon's Department of Transportation (ODOT) has identified 487 bridges with some degree of cracking; 309 of those are likely candidates for repair and replacement. Two hundred and twenty-one of the critical bridges lie on I-5 and I-84. Oregon has developed a strategy to fix highways 20 (Bend to Ontario) and 97 (California border to the Washington State line) as alternative east-west and north-south routes that can be improved quickly (schedule for completion in 2005) and at least cost and could serve as detour routes, if necessary, for subsequent stages of the work to restore the interstate system. The subsequent stages of the project will address the bridges on I-84 and begin work on I-5, proceeding from the north to the south. As work progresses southward on I-5, lateral routes will be fixed that will reconnect the coastal parts and Central Oregon to I-5 as repairs continue southward. The repairs on the interstates are expected to be completed by 2015 (Oregon 2003).

During the period of repair, truckloads of radioactive/hazardous materials will stay on the interstates wherever possible and would typically not be detoured through cities and towns along the route. If construction/repair of a bridge is taking place, traffic would be detoured to the opposite side of the freeway from where construction/repair is taking place – the open half of the freeway would temporarily become a two-way road. If the entire bridge were to be closed, the most common procedure would be to have traffic exit the freeway at the interchange immediately before the bridge and enter the freeway on the other side of the bridge at the same interchange or at the next entrance. In such cases, having a small number of shipments travel a short distance on routes other than the interstate freeways would not substantially change the transportation risks or conclusions presented in the HSW EIS (This response is based in part on information presented by Mike Barry of the Oregon Department of Transportation during the public hearing in La Grande, Oregon on May 12, 2003. See Volume IV Appendix B for the transcript of the La Grande public meeting).

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E-0002/003

It is also dangerous to transport these shipments on our highways. No more of the nations radioactive waste to Hanford!!

E-0003/003

Third, the danger of hauling the nuclear waste across the country with the potential of accident and terrorist attack is too great.

E-0008/002

Also, movement of radioactive materials endanger the population along I-5 and I-84 in the Oregon region, by bringing radioactive materials close to vehicles, school, and communities.

E-0012/002

This new EIS still does not adequately address risks to all communities along transportation routes, specifically the risks from dangerous "transuranic wastes." Accidents can happen.

E-0021/002

In addition, the plans for transporting waste to Hanford did not adequately insure safety as it journeys through our communities.

E-0026/010

It [the EIS] fails to assess and disclose risks to the public on all transportation routes.

E-0027/001

We would like to add our voices to those who are asking that no nuclear waste be hauled to Hanford. The

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dangers and problems that hauling would bring to an already terrible situation are not justifiable. Hauling the nuclear waste endangers more people and areas. The plain truth is that there is no satisfactory disposal of nuclear waste. So hauling it is adding more risk to an already terribly risky situation.

E-0040/001

I am writing to express my grave concern about trucking nuclear waste on major thoroughfares shared by many citizens simply commuting to work or going about their daily lives. The radiation emissions are a public health hazard.

E-0043/029, EM-0217/029, EM-0218/029, L-0056/029, LM-0017/029, LM-0018/029

Further, the trucks that were analyzed for accident scenarios were trucks designed to hold high level waste. Those are not the types of trucks that will be transporting the LLW, and MLLW, and TRU addressed by the HSW EIS. Without an analysis that considers the consequences of an accident involving these less protective trucks, the transportation analysis is invalid.

E-0048/005

The EIS does not adequately explain and provide solutions to the risks inherent in transporting dangerous waste cross-country. I think the EIS incorrectly assumes the transports will always or almost always arrive without accident. The probability of accidents and terrorism/sabotage have been understated. I also think the damage that could be caused by spills and inadvertent releases have been seriously underplayed. Some of the proposed waste could contaminate a large area for an immensely long time. It is much safer to store and decontaminate hazardous waste at the site of its creation and/or use. It is a poor use of resources and puts communities and the environment at unnecessary risk to transport waste across long distances.

E-0055/006

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.

F-0001/001

I was shocked to hear that the Dept of Energy was planning on shipping nuclear waste to Hanford, endangering the lives of all the people who live along the transportation route.

F-0002/002

TRU waste - if truck is in a accident on I-90 what will happen to my family a few blocks from the hwy?

F-0004/002

The insidious nature of this waste makes transit routes proposed too dangerous given the proximity to populated areas.

F-0005/003

I feel great outrage that DOE wants to add to the waste load at Hanford by trucking waste through our communities - what are you (DOE) thinking??

F-0006/002

No trucking of any kind no matter how much satellite/computer surveillance is overseeing the transuranic trucking can offset the inevitable probability of nuclear waste highway accidents all around the country on these routes.

These trucks make a perfect target for terrorists to wreak havoc on our own country from within by use of a minimal amount of effort on their part to cause massive destruction on our public highways.

F-0015/002, TSE-0014/002

The DOE cannot transport anymore of the highly radioactive, plutonium transuranic waste to Hanford from other nuclear weapons plants until it fully considers the risks and the health and environmental impacts of trucking the waste to Hanford and storing it at Hanford. This Revised Draft EIS fails to consider those site

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and route specific risks.

F-0018/003

Also, with 70,000 truckloads of transuranic waste (some requiring remote manipulation) terrorists would have an ideal source of material for a "dirty bomb"

F-0019/002

I oppose the shipment of more waste to the Hanford site. I oppose shipment through the Gorge. The existing waste must be cleaned up!

F-0026/002, F-0028/002

New Mexico had and has a very similar issue with waste disposal of nuclear materials in Carlsbad, NM [New Mexico] salt mines. Roads were built, and transportation around major cities were designated. Nuclear waste spills do happen!

F-0029/009

In addition, how safe is it to truck waste to Hanford? I think not very safe, as accidents or intentional targeting of trucks filled with wastes would be a disaster...

L-0001/003

With all the fears/threats of terrorism what on earth are you thinking driving trucks full of dangerous waste all over the country? Even without terrorism, there are hundreds, perhaps thousands, of vehicle accidents daily, often involving trucks.

L-0005/003

The very transporting of nuclear waste creates frightening risks to human and environmental health in Washington and Oregon. Either an accident or a terrorist act could bring instant catastrophe.

L-0007/003

A plan that involves shipping 70,000 truckloads of toxic waste along highways creates an unacceptable risk to the population living along the truck routes.

L-0019/002, TSE-0002/002

Transportation risks [are insufficiently addressed in the revised draft.]

L-0027/003

The very transporting of nuclear wastes creates frightening risks to human and environmental health in all the states through which it travels. Either an accident or a terrorist act could bring instant catastrophe.

L-0030/002

Then there is the matter of almost 70,000 truckloads of radioactive waste and chemical waste traveling our highways. This would certainly be an opportunity for terrorists to wreak havoc upon our citizens and highways!

L-0041/046

The transportation analysis is inadequate. Among its deficiencies: it is based on 1990 census data; it does not fully evaluate rail transport; and it does not adequately address potential impacts from a terrorist attack or diversion of nuclear material.

a) Population densities along portions of the proposed routes have changed significantly from 1990 to 2000. The most current census data should be used in the analysis.

b) While the EIS does provide limited information on rail transport, it also states that "an analysis of rail transport does not appear warranted" (Page H-44). This statement is not consistent with planning already underway to prepare for the shipment of transuranic waste from Hanford to the Waste Isolation Pilot Plant (WIPP) as early as 2005. The document attempts to satisfy this issue by stating that "If rail shipment is proposed it will be evaluated under future National Environmental Policy Act reviews" (Summary, page S-

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21). As stated earlier, it is not acceptable to defer needed analysis to future, unspecified dates.

c) The EIS states that a terrorist attack on a shipment is not a likely event, in part, because the majority of shipments will occur on the Hanford Site. That statement ignores upper bound projections which could result in as many as 9,600 shipments of transuranic waste to and from the Hanford Site, and an additional 24,000 shipments of LLW and MLLW to Hanford. Further, the draft EIS ignores the threat of diversion of radioactive materials for use in a Radiation Dispersion Device or "dirty bomb." The EIS should include an analysis of these possibilities.

L-0044/021

Vol. I, Sec. 4.8.5, p. 4.91: There is no analysis of impacts of shipping lower- or upper-bound volumes of waste to Hanford, or shipping wastes from Hanford for treatment or disposal, as such shipments would relate to the deficiencies in the regional transportation system identified on p. 4.91, including segments of the road network operating below minimal levels of service. Nor is there any analysis of the ways in which such congestion might affect risks of routine exposure or accident.

L-0044/103

Appendix H, H.5.2, pp. H.32- 36 The "Route Characteristics for Transport in Washington and Oregon", identified in Table H-14 and used in the analysis of risk of transportation through Oregon and Washington is, as we understand it, based on 1990 census data. The analysis must be updated to include 2000 census data. Suburban and urban characteristics along the analyzed routes in the Portland and Tri-Cities areas have changed significantly since 1990.

L-0044/107

Sec. 2.2.4.1, p. 2.36 This brief overview section does not address the relative numbers of shipments associated with lower- or upperbound cases in the EIS. Therefore, it provides neither a bridge to the risk analysis in Sec. 5.8 nor a basis for estimating impacts to the local transportation network discussed in Sec. 4.8.5.

E-0049/007, L-0048/007

We still have some issues with the adequacy of the analyses of the transportation impacts. We believe that route-specific factors should be considered, which would recognize the severe winter weather conditions that frequently exist along major portions of the Oregon route.

L-0049/008

Section 5.8 and Appendix H. The transportation impacts need to be updated with the current data and methods.

L-0052/011

Transportation. The ERWM recognizes the risk to tribal members exercising treaty resource rights in usual and accustomed places, and the risk to those resources by radioactive and hazardous waste being transported to and from the Hanford Site. The ERWM requests a concentrated effort by DOE to insure the ERWM is included in the transportation information loop, so that we can serve as a source of information for any tribal members who would be in the neighborhood of wastes in transport. We are currently taking steps to encourage that effort.

L-0062/005

The Washington Department of Ecology has commented that the transportation analysis should be based on current census data and that it should assess the range of risks from terrorist activities. We have the same concern.

P-0007/002

And, let's not endanger ourselves by transporting it on public highways.

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P-0008/005

ENOUGH RAIL AND HIGHWAY SHIPPING RISKS!

P-0020/002

I also do not want radioactive waste trucked on the highways in Oregon and Washington. The risk to all in the area - if there were a crash with the trucks carrying radioactive waste - is too high!

P-0026/002

Also shipping 70,000 truckloads of radioactive waste poses great risks to citizens along the route.

P-0028/003

Trucking waste is just a disaster waiting to happen.

P-0030/004

Shipping accidents happen.

P-0033/004

We must protect the health of the public. Keep waste off our roads.

P-0036/002

Furthermore, shipping 70,000 truckloads of radioactive and chemical waste will increase risks to people along Oregon and Washington highways.

P-0055/003

And the shipping of radioactive waste along highways increases the risk to citizens.

P-0062/003

Shipping 70,000 truckloads of radioactive and chemical waste increases risks to citizens along Washington and Oregon highways.

P-0074/003

[We no longer want the risks] from hauling truckloads of radioactive wastes on Washington highways.

P-0075/004

Keep radioactive waste off our roads!

P-0078/003

The risk from shipping truckloads of hazardous waste on the highways is unacceptable.

P-0082/002

That also means no 70 thousand truckloads being trucked through Oregon & Washington. We don't want it & can't handle the risk.

P-0086/001

Trucks carrying radioactive waste should not be on our highways!

P-0090/001

It is hard for me to understand why shipping nuclear waste in trucks on our busy freeways to the Hanford Reservation is even being considered. These trucks not only could result in terrible accidents, but would be very vulnerable to terrorists.

P-0092/004

Transporting the waste increases risks to those living along the highways of the route.

Transportation

P-0093/001

[I am very concerned about DOE's current plan regarding] transportation safety[.]

P-0095/002

Transporting any chemical or radioactive waste into the area should be out of the question.

P-0096/002

We shouldn't be transporting waste for long distances on public highways where accidents of shipments could imperil many people.

P-0108/001

Shipping [waste] on freeways, thru cities, etc. How dangerous[!]

P-0109/004

Protect the health of public - do all you can & keep chemical waste off our roads!

P-0110/003

Shipping truckloads of radioactive waste increases risks to citizens along OR and WA highways.

P-0113/002

I remain concerned that hazardous radioactive waste will be shipped along the highways.

P-0123/002

You [DOE] are also putting my community [Hood River, OR] at risk if you proceed with plans of transport from accidents along the freeway. Do not transport any more toxins to Hanford!

P-0125/002

[There are risks to human health] through the transport of materials on public roads.

P-0129/002

Obviously, the [waste] importation process itself is potentially dangerous as well.

P-0133/002

Also, trucking wastes to Hanford and then eventually shipping them out again poses a double hazard of transportation.

P-0139/002

...meanwhile we are subject to the danger of Hwy. Transport [of radioactive waste].

P-0143/002

The shipments [of radioactive material increase the] risk [to] citizens in Oregon and Washington.

P-0145/002

Shipping the waste can be damaging as well.

P-0166/002

No transporting [of radioactive waste].

P-0167/002

[I am really concerned about the] risk of 70,000 truck loads of radioactive waste going through our state.

THR-0002/010

But just to add, the analysis of transportation risks in the EIS is being done with 1990 census data and early '80s data for the amount of traffic on I-5 and I-84 in Oregon. So this is not adequate, if you are looking at risks right now in 2003 to these trucks on the roads.

Transportation

THR-0010/005

They want to ship it through the Gorge, this confined area that's one of the most beautiful areas in our country, with one of the largest rivers in North America, that has cliff walls that if there were an accident, that confines this radiation and just dumps it into the river and into the environment that we have to deal with.

THR-0018/001

There was a railroad derailment that happened just about 20 miles east of here [Hood River]. 20,000 gallons of soybean oil was spilled, and EPA was in there within two hours. And all of that soybean oil contaminated soil was trucked out of there within a matter of days. I just cannot understand why something, which was certainly dangerous to the wildlife, why something that is millions of times more dangerous cannot get the same priority, that something like soybean oil got.

TLG-0003/001

Interstate 84, as we all know, the two worst portions of Interstate 84 are directly to the east, directly to the west of La Grande. I have concerns that we're looking at year-round shipment of wastes through that area.

I travel that highway pretty regularly, several times a month under -- year-round, and that's not a road I'd want to be on with those shipments beside me.

TLG-0006/002

The second is that La Grande has two of the worst passes in the country right next to us. And that we're going to be shipping these trucks over it. And even though there's a low accident rate, if an accident occurs around people and a truck breaks open, there's going to be harm from it. There's no stopping it.

TLG-0007/001

The passes are horrible. The driving conditions are horrible. Things change at a moments notice, leaving truckers quite unprepared to deal with the situation. We have truckers that are driving around with, well, possibly diminished mental faculties. But definitely not the knowledge that those of us that live here have of the conditions and the potential for icing, et cetera, on the road. ... We have situations here in the valley where the wind blows hard enough to blow a railroad freight train and blow cars off of a freight train, off the tracks. Blow them completely off the tracks. It's a documented fact here in the valley that that has occurred. Trucks frequently flip over, blow over, slide off the road on ice. ... The numbers have been crunched, accident levels are shown, low risk, but there's always Murphy out there. And Murphy says that, you know, he's the worst possible time, worst possible things can happen. Rollover, Ladd Canyon, high winds, you have basically a dirty bomb going off.

TLG-0009/003

Oregonians will not accept a plan that calls waste by another name to enable it to be trucked down Oregon freeways[.]

TLG-0012/006

And I think one other thing that occurred to me as we were talking about seasonal differences in transportation conditions around here, it looks to me like wintertime conditions pose a recognized threat. But I think it also needs to be taken into consideration that because winter conditions are so severe, that it affects safety and other things that a lot of this maintenance stuff that gets deferred to other times of the year. So therefore, the time of year when we have the highest number of vacation travelers and other travelers, we also have the most maintenance happening on our roads. So if we defer maintenance for those times and we have to slow down some of the shipments, we're going to be concentrating more shipments during times when we have higher volumes of traffic and more regularly scheduled maintenance projects. So we're concentrating all of those factors together. It's not the same as spreading it out over the whole year.

TPO-0005/002

The problem with nuclear things is it's difficult to trace, you know. The truck drives through near my house, because I live near the 205 freeway, a truck drives past and then 20 years from now my mom or my dear

Transportation

friend finds herself with cancer. Now, what caused it? ... So I thought I would mention this: that until we're sure that it's really safe, don't do it.

TPO-0009/003

And it's just mind-boggling to think about those trucks on those crowded highways and the lack of alternatives to I-5.

TPO-0013/003

I'm convinced that the risks involved in transporting waste to the region are high and have not been properly assessed.

TPO-0015/010

It's also unacceptable to have a method of transportation that allows the emissions to put the truck drivers and fellow travelers in traffic jams and accidents at risk.

TSE-0017/005

As for the transportation, we looked at the accident reviews, and nobody mentioned the fact that three trucks last summer, not directly related with Hanford, but related with transporting radioactive waste in the Northwest, had problems, and accidents. In Bremerton, an empty truck's brakes failed. In Idaho there was a car accident that was not the driver's fault, had nothing to do with the driver, it had nothing to do with the weather. It was just one of those things. And also in Idaho a driver fell asleep and his truck ran off the road. These are without importing 75,000 more trucks to Hanford.

TSE-0027/005

We regularly travel I-5. We are very unhappy that we are unlikely to be able to avoid exposure to nuclear waste and transport in this plan. But I didn't see anything in the EIS about people who were traveling in these highways and who lived near Hanford and who would be having increased exposure to nuclear materials.

TSP-0001/002

And I object to the idea of transuranic waste and combined chemical waste, which can also injure children for several generations coming through our community, and not having adequate safety.

TSP-0001/003

I think that the engineers cannot make adequate predictions of what's going to happen. And I think as you look at the community of Spokane, an explosion on I-90 downtown would be just beyond belief, in the numbers of thousands of people that would be involved. Likewise, if you explode any one of the main bridges across the Columbia River, then you would have contamination of the water immediately, and that would go on for generations. 70,000 truck loads I think speaks for itself. I can't imagine how many miles of that goes. I can't imagine the cost involved in that. And I can't imagine the requirements of safety.

TSP-0001/004

I know that the government in the past has not been very careful about when they put things on trains and we go watch the white train go across the United States, because that was the train that was carrying nuclear weapons.

TSP-0002/001

I was shocked to hear that the Department of Energy was planning on shipping nuclear waste to Hanford, endangering the lives of all the people who live along the transportation route.

TSP-0003/002

I want to know what would happen if a TRU waste truck explodes or is in an accident and what's going to happen to my family.

TSP-0005/001

I just want to say that I don't want to get stuck in traffic next to one these trucks [hauling waste]. Just

Transportation

personally, I live about 20 blocks from the freeway in the [Spokane] valley. I don't want it anywhere near me.

TSP-0008/002

My major concern for an accident, especially coming through the Idaho and Spokane area and I-90, is the aquifer, which is our sole source of drinking water. And there are some areas of the aquifer where it is quite close to the surface. So it wouldn't take that long for materials to get into that drinking water. In other areas it might take years.

TSP-0009/003

Transportation risks. I have done a considerable amount of work on the aquifer issue here. What was previously stated is correct. The Spokane aquifer is one of the world's unique aquifers. It is also the sole source [of] drinking water for 400,000 people. It was the second such sole source designation in the country when it was designated in 1978. In many places the aquifer is quite shallow. It's not far underground. So that if there were an accident on I-90, it could immediately threaten the aquifer.

TSP-0009/004

Another aspect of the transportation issue that needs to be considered is that there are two tertiary care centers that service the Inland Northwest just above the interstate; Sacred Heart Medical Center and Deaconess Medical Center. So if there were an accident on I-90, you know, you would potentially have a huge impact. Not only directly on the city, but the ability of the city to respond. So, I think that that needs to be further developed in the Final EIS.

TSP-0010/003

What would happen if there were crashes where I-90 comes so close to water?

TSP-0011/002

This is what I see is this truck, and I live right above I-90. This is a population zone. The whole state of Washington is being threatened.

TSP-0014/003

I just want to say in your Environmental Impact Statement, are you also actually going to do a study on the high level of accidents on I-90? It is tremendously increased in the last five years, where there are fatal accidents, there are cars following each other at 65 miles per hour at one and a half or two-car lengths separate from each other.

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

About 300,000,000 hazardous material shipments take place every year in the United States. Of those shipments, about 3,000,000 involve radioactive materials and less than 10,000 involve shipment of DOE radioactive materials.

The Hanford Site has received thousands of shipments of radioactive waste from offsite generators over the years.

Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and

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environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection, communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

The accident rates used in the analysis of potential radiological impacts of accidents are taken from the best currently available source (Saricks and Tompkins 1999). These data represent state-wide averages on several highway types and are derived from actual accident reports and commodity flow information. Therefore, the reported rates incorporate areas with high accident rates, such as mountain passes and crowded urban highways, as well as areas with lower than average accident rates. These high accident rate areas are traversed 365 days per year by heavy-combination trucks similar to those used in radioactive material shipping. Past studies have shown that radioactive material shipments experience lower accident rates than other truck shipments in general commerce (NEI 2003, Saricks and Kvitek 1994). Credit for this effect is not taken in the analysis. This effect, combined with the generally conservative approach taken to calculate the accident rates used in this EIS (Saricks and Tompkins 1999) leads to bounding accident impact results.

The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

Comments

E-0047/034

Fails to assess and disclose the risks to the public on all transportation routes including detours off major highways from the point of shipment to Hanford. Since 9/11 the possibility of a terrorist attack is even more of a possibility that has not been adequately disclosed or assessed.

Analysis is based on 1990 census data and must be based on current data and along all shipping routes.

Does not fully evaluate rail transport or diversion of nuclear material.

L-0020/001, TSE-0021/001

The DOE wants to transport 70,000 shipments of nuclear waste in a steady stream on our roads, railways, and shipping lanes, to the Hanford Nuclear Reservation with U.S. taxpayer money, mostly without our collective knowledge and definitely without our permission. This steady stream of nuclear waste will be in transit on our highways and railways for several generations.

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards

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Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection, communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

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The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

The use of rail is not part of the proposed action evaluated in this HSW EIS. Shipments of waste by rail may require constructing a spur from the existing rail lines, which, if proposed, would require additional environmental review. DOE conducted a qualitative analysis of the potential impacts of transporting solid waste by rail (see Volume II, Appendix H).

Comments

E-0014/003

We understand the 70,000 truck loads of nuclear waste our government wants to ship to Hanford will deliver the equivalent of over 100 full-body x-rays per hour to those they pass on our freeways. We're certain it would be illegal for us to do that to unsuspecting citizens. We don't think the government should be allowed to do it either.

Transportation

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

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Waste transported to Hanford is characterized consistent with applicable RCRA and state regulations, and as appropriate, meets relevant manifesting, tracking and reporting requirements. In some cases these requirements do not apply because there are no RCRA-regulated or state-regulated constituents in the waste.

DOE is currently developing capabilities for certification of remote-handled TRU waste for shipment to WIPP for disposal. The radiation levels of remote-handled waste have not precluded DOE's ability to meet applicable RCRA requirements.

Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection, communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

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The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

With respect to concerns about the condition of roadways and bridges, the waste shipments to Hanford will predominantly travel on Interstate highways. Only in extremely rare instances would Interstate highway or bridge construction lead to a detour through municipal streets. Furthermore, the waste shipments will be conducted using heavy-combination trucks but are not "overweight" vehicles that require special overweight permits. The weights of the trucks that haul the waste to Hanford will be below legal-weight truck limits, similar to the vast majority of tractor-trailer vehicles that carry cargo on the Interstates every day.

Oregon's Department of Transportation (ODOT) has identified 487 bridges with some degree of cracking;

Transportation

309 of those are likely candidates for repair and replacement. Two hundred and twenty-one of the critical bridges lie on I-5 and I-84. Oregon has developed a strategy to fix highways 20 (Bend to Ontario) and 97 (California border to the Washington State line) as alternative east-west and north-south routes that can be improved quickly (schedule for completion in 2005) and at least cost and could serve as detour routes, if necessary, for subsequent stages of the work to restore the interstate system. The subsequent stages of the project will address the bridges on I-84 and begin work on I-5, proceeding from the north to the south. As work progresses southward on I-5, lateral routes will be fixed that will reconnect the coastal parts and Central Oregon to I-5 as repairs continue southward. The repairs on the interstates are expected to be completed by 2015 (Oregon 2003).

During the period of repair, truckloads of radioactive/hazardous materials will stay on the interstates wherever possible and would typically not be detoured through cities and towns along the route. If construction/repair of a bridge is taking place, traffic would be detoured to the opposite side of the freeway from where construction/repair is taking place – the open half of the freeway would temporarily become a two-way road. If the entire bridge were to be closed, the most common procedure would be to have traffic exit the freeway at the interchange immediately before the bridge and enter the freeway on the other side of the bridge at the same interchange or at the next entrance. In such cases, having a small number of shipments travel a short distance on routes other than the interstate freeways would not substantially change the transportation risks or conclusions presented in the HSW EIS (This response is based in part on information presented by Mike Bary of the Oregon Department of Transportation during the public hearing in La Grande, Oregon on May 12, 2003. See Volume IV Appendix B for the transcript of the La Grande public meeting).

There are extensive DOT, NRC, and DOE requirements that apply to the transportation of radioactive materials and hazardous materials in general. Most shipments of waste to and from Hanford would have external dose rates much lower than the maximum allowed. There are also restrictions on how long a truck carrying radioactive shipments may be parked (49 CFR 173). A 200 mrem per hour dose rate to the public that is implied by the “100 full-body x-rays per hour” would not occur during routine transportation.

The amount of radiation exposure a person might receive from a shipment of radioactive material is a function of the source strength (usually the exposure rate in millirem per hour) and exposure time. While the shipment is moving, the exposure times are very small, measured in seconds, as the shipment passes by a potential receptor. In addition, the shipment is normally several to tens of meters away from potential receptors, which reduces the radiation dose rate to a fraction of the dose rate at the surface of the shipping container. Consequently, the individual doses received by the public while a shipment is moving are very small.

Shipments that have stopped for rest or refueling or are caught in traffic jams could expose individuals for a substantial length of time. Any single exposure event such as this would not be a public health concern because the dose rates are controlled to safe levels by regulations. The probability that an individual is exposed for long periods of time to shipments at truck/fuel stops or caught in traffic is extremely unlikely. Consequently, the risk to an individual associated with these relatively long-duration exposure scenarios is low.

Transportation

Comments

L-0034/003

Inbound RH TRU waste contains long-lived radioisotopes such as plutonium, and emits at least 200 mrem (20 full body x-rays) per hour of radiation at the waste package surface. In addition, the SWEIS states that the TRU waste may also contain hazardous components; i.e. mixed TRU. USDOE has violated manifesting, tracking, and reporting requirements, and has not characterized the hazardous wastes of the incoming TRU shipments, in violation of RCRA, the Washington Hazardous Waste Management act, and the Hanford Site RCRA Permit. Further, documents received by Ecology state that some of this material has radiation levels that "preclude current visual, chemical, and NDE verification at Hanford."

These problems intensify all aspects of the issues related to the import of RH TRU, including potential environmental impacts of transportation, which the SWEIS still fails to adequately address. The SWEIS lists dozens of chemical and radiological releases associated with on site accidents, but continues to address off site transportation accidents only in terms of the historical number of traffic fatalities. Greg DeBruler, technical consultant for Columbia Riverkeeper has noted "We have to protect the interests of our groups' member families along these truck routes, to protect against our families being radiated by passing shipments, as well as from the never disclosed risks of accidents or terrorist incidents involving truckloads of Plutonium and chemical wastes."

THR-0001/004

[In] this EIS they failed to assess the true transportation risk that might occur. For example, state of Washington said, we've got nine bridges in the state -- pardon me, State of Oregon, we've got nine bridges that we have a concern of overweight loads. When they ship this transuranic waste, which is the stuff that we will say it's in barrels that's radioactive, the remote handled stuff, the hot stuff, according to their numbers, says that if you are sitting beside it, by it on a highway, if it was parked there and I was like sitting here for an hour, just looking at you for an hour, I'd get 20 chest x-rays, something like that, on a low case. But what they haven't done is they haven't analyzed the fact that they can't use, because these bridges can't support it, that they are going to have to take a route and come through some municipality. So they didn't do that in their analysis.

Response

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Transportation

There are extensive DOT, NRC, and DOE requirements that apply to the transportation of radioactive materials and hazardous materials in general. Most shipments of waste to and from Hanford would have external dose rates much lower than the maximum allowed. There are also restrictions on how long a truck carrying radioactive shipments may be parked (49 CFR 173). A 200 mrem per hour dose rate to the public that is implied by the "20 x-rays per hour" would not occur during routine transportation.

The amount of radiation exposure a person might receive from a shipment of radioactive material is a function of the source strength (usually the exposure rate in millirem per hour) and exposure time. While the shipment is moving, the exposure times are very small, measured in seconds, as the shipment passes by a potential receptor. In addition, the shipment is normally several to tens of meters away from potential receptors, which reduces the radiation dose rate to a fraction of the dose rate at the surface of the shipping container. Consequently, the individual doses received by the public while a shipment is moving are very small.

Shipments that have stopped for rest or refueling or are caught in traffic jams could expose individuals for a substantial length of time. Any single exposure event such as this would not be a public health concern because the dose rates are controlled to safe levels by regulations. The probability that an individual is exposed for long periods of time to shipments at truck/fuel stops or caught in traffic is extremely unlikely. Consequently, the risk to an individual associated with these relatively long-duration exposure scenarios is low.

Comments

L-0044/108

Sec. 2.2.4.2, p. 2.36-39 This generic discussion of transportation regulation and emergency response is helpful background. But this section contains no information about what activities will specifically be undertaken as any alternatives in the EIS are implemented, or which might be affected by differences in volumes or differences in the choice of alternatives (e.g. onsite vs. off-site treatment of waste.) Nor does it contain the information that many of these regulations do not apply to shipments on the Hanford Site – c.f. Sec. 6.11, p. 6.14). Nor does it contain any information about potential terrorism, although this issue was raised in comments on the first draft HSW-EIS.

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

Transportation

Comments

L-0044/104

Sec. H.7 pp. H-41-2 The discussion of risks of terrorist attack or diversion is inadequate. First, it implies NRC physical protection regulations apply to the shipments in question, which may not be the case for DOE shipments. Second, it assumes that maximizing fatalities is the only metric of interest to terrorists. Therefore, it ignores psychological and economic effects of terrorist acts. The analysis thus ignores the threat of diversion for a “dirty bomb” scenario. Third, while “most of the shipments . . . covered in this EIS are within the Hanford site boundaries, most of the shipment miles are not. Finally, because the analysis ignores the “dirty bomb” scenario, and because the shipments covered in the EIS are not (for the most part) Highway Route Controlled Quantities (HRCQ), requiring special physical protection, the large number of miles traversing “rural” territory may well increase opportunities for diversion. This analysis needs to be expanded and updated.

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

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The statement in Section H.8 regarding NRC transportation regulations was intended to convey that these regulations are similar to DOT and DOE transportation regulations. However, to avoid any confusion regarding the applicability of the NRC regulations, the statement has been deleted.

Comments

F-0018/004

...what protection would truck drivers have from a terrorist hijacking?

Response

The consequences of a malevolent event are expected to be within the range of accidents including severe (low probability, high consequences) accidents already evaluated in this HSW EIS. The HSW EIS analyzes several accident scenarios, including onsite facility fires, explosions, and earthquakes. See Volume I Section 5.11 and Volume II Appendix F. The HSW EIS also analyzes the impacts of accidents during transportation of waste in Volume I Section 5.8 and Volume II Appendix H. It is not possible to predict the probability of a malevolent event. However, in general, the LLW, MLLW, and TRU waste do not present an attractive target. The shipping containers used for transporting these materials are designed with safeguards commensurate with the potential hazard. In response to comments, DOE included a discussion of the potential impacts of acts of sabotage or terrorist attacks in Volume II Appendix H.

Truck drivers for all hazardous material shipments are required to receive security training (68 FR 14509).

Transportation

The training must provide an awareness of security risks, recognition of potential security threats, and methods of responding to potential security threats. In addition, truck drivers and other employees of hazardous material transportation companies that are required to have a security plan must receive in-depth training on the security plan and its implementation, including specific security procedures and actions to take in the event of a security breach. Since the offsite shipments are not believed to be attractive to terrorists due to their relatively low radioactive content and low hazards, DOE considers the security regulations promulgated by the DOT to be adequate to protect drivers and shipments carrying LLW, MLLW, and TRU waste.

Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

Comments

E-0043/027, EM-0217/027, EM-0218/027, L-0056/027, LM-0017/027, LM-0018/027

The HSW EIS failed to do an adequate impact analysis of transportation. There was no delineation of routes beyond Washington or Oregon, no plans to minimize risks to the people in towns en route; no analysis of transportation vehicles as possible terrorist targets; no analysis regarding DOE's consideration of rail as an alternative method of transporting waste; and no analysis regarding the possibility that Yucca Mountain may not accept the cesium-strontium capsules or the Hanford waste destined to go there.

Response

About 300,000,000 hazardous material shipments take place every year in the United States. Of those shipments, about 3,000,000 involve radioactive materials and less than 10,000 involve shipment of DOE radioactive materials.

Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection, communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

DOE NEPA decisions and actions regarding the cesium and strontium capsules are not within the scope of the Hanford Solid Waste EIS. Disposal of cesium and strontium capsules at Yucca Mountain were evaluated in the Yucca Mountain Repository EIS (DOE 2002c).

While the probability of malicious events (including sabotage and terrorist attacks) cannot be determined, it is expected that the consequences of such events would be similar to accidents involving fires and explosions, which are discussed in this HSW EIS. See Volume I Sections 5.8 and 5.11 and associated Volume II Appendixes H and F.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

The use of rail is not part of the proposed action evaluated in this HSW EIS. Shipments of waste by rail may require constructing a spur from the existing rail lines, which, if proposed, would require additional environmental review. DOE conducted a qualitative analysis of the potential impacts of transporting solid waste by rail (see Volume II, Appendix H).

Transportation

Comments

TLG-0008/003

Again, I think the real weak point in the EIS at this point is the probability distributions associated with the risk analysis. They should be highway specific. They should be specific to the terrain they're going to be going through. And they should also take into account the potential for worst-case scenarios where we actually dump stuff into our rivers.

Response

About 300,000,000 hazardous material shipments take place every year in the United States. Of those shipments, about 3,000,000 involve radioactive materials and less than 10,000 involve shipment of DOE radioactive materials.

Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection, communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

RADTRAN uses route-specific accident statistics that account for geography, weather, driver error, traffic load, vehicle type, and road conditions.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

Comments

F-0011/002

Transporting additional nuclear waste to Hanford is dangerously ill advised!

F-0025/001

The shipping of offsite waste to Hanford poses a greater health risk both during transportation and on site, where storage is already unsafe.

TPO-0026/004

We have transportation risks, but it's really not clear how we would manage them.

TSP-0006/006

I think that the EIS does not consider transportation.

Response

About 300,000,000 hazardous material shipments take place every year in the United States. Of those shipments, about 3,000,000 involve radioactive materials and less than 10,000 involve shipment of DOE radioactive materials.

Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection,

Transportation

communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

The Hanford Only waste volume has been evaluated in all action alternatives and the No Action Alternative to provide a better comparison with the impacts of adding offsite waste. The incremental impacts of offsite waste are the differences between the Lower and Upper Bound Volumes and the Hanford Only impacts for a given alternative.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

The HSW EIS evaluates several alternatives for the storage, treatment, and processing of waste from onsite and offsite generators. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities.

Comments

E-0045/002

I am very concerned about the contamination of the Columbia River and the transport of waste on our highways.

Response

About 300,000,000 hazardous material shipments take place every year in the United States. Of those shipments, about 3,000,000 involve radioactive materials and less than 10,000 involve shipment of DOE radioactive materials.

Offsite shipments of LLW, MLLW, and TRU waste can be conducted safely without exposing the public and environment to undue risks. This is ensured by a number of means that emphasize preventing releases of radioactive and hazardous material in transit including appropriate packaging, route selection, communications, vehicle safety, and driver training. In addition, in the unlikely event that an accidental release occurs, DOE provides the necessary support to local first responders to effectively mitigate, clean up, and monitor potential releases. Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

The HSW EIS evaluates impacts to the Columbia River and downstream populations for about 10,000 years. For all alternatives analyzed in this HSW EIS, DOE has analyzed the long-term movement of contaminants through soil and groundwater to the Columbia River. In all cases, it found that the water quality of the Columbia River would be virtually indistinguishable from the current river background levels. The concentrations of all the constituent contaminants were well below benchmark drinking water standards at a hypothetical well located near the Columbia River. The impacts of groundwater reaching the river are discussed in Volume I Sections 5.3 and Volume II Appendix G. See also Volume I Section 5.11 and 5.14 and

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Volume II Appendixes F and L.

Comments

E-0043/058, EM-0217/058, EM-0218/058, L-0056/058, LM-0017/058, LM-0018/058

DOE is considering using rail as an alternative method of transporting waste. The present EIS should quantitatively analyze the impact of shipment of waste, the construction of a spur or development of an intermodal transfer capability if needed to ship waste by rail, rather than deferring the needed analysis to future National Environmental Policy Act reviews. The analysis should include all potential impacts of construction, accidents, and terrorism.

L-0044/105

Sec. H.9 Effects of Transporting Solid Wastes by Rail, pp. H43-44 The generic discussion may be interesting, but it provides little insight into decisions to be made under the EIS. The last paragraph says it is premature to discuss. However, several DOE documents, including the Performance Management Plan for Carlsbad include specific commitments to rail transport of wastes from Hanford. The Carlsbad office is currently negotiating rail protocols with the Western Governors' Association. Clearly some use of rail is more imminent than the EIS acknowledges. In any case, Ecology's original August 2002 comment that impacts of inter modal transfers should be analyzed is not adequately addressed.

L-0044/106

Sec. 2.2.4, p. 2.36 This section appears to anticipate rail transport more seriously than Appendix H (see comment # 4 above), but still does not include any analysis of impacts of intermodal transfers.

L-0044/131

In addition, the analyses are limited because they fail to address use of rail transport for waste shipments to WIPP, which appears to be in conflict with a commitment to support rail shipments from Hanford.

Response

The use of rail is not part of the proposed action evaluated in this HSW EIS. Shipments of waste by rail may require constructing a spur from the existing rail lines, which, if proposed, would require additional environmental review. DOE conducted a qualitative analysis of the potential impacts of transporting solid waste by rail (see Volume II, Appendix H).

Comments

L-0055/053

Although an analysis of nationwide transportation of wastes to Hanford from other DOE sites was not performed, the transportation impacts associated with those wastes in the states of Oregon and Washington were added to the revised draft. This EIS seems inadequate without knowing what kind, or how much waste is going to be transported to Hanford.

Response

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

Comments

F-0030/005

What about an assessment of the dangers of trucking this waste from Ohio and California[?]

Transportation

L-0014/014, L-0022/014

The Department of Energy must give additional attention and support to the transportation of wastes and nuclear materials between DOE sites. Significant public concerns exist regarding these programs.

L-0039/022

An adequate transportation analysis has not been performed. For example, the HSW EIS estimated impacts in Oregon and Washington using generic transportation parameters. It does not consider the specific transport route conditions, which may result in alternate routes being used and the impacts on those routes.

L-0041/047

In addition, the section describing transportation impacts is horribly difficult for a layperson to understand the information that is provided. The final EIS should present the results of a new transportation analysis in clear language, rather than using scientific notation.

TSE-0028/001

It is fallacious to say that this EIS considered either the site specific or route specific impacts of importing transuranic wastes to Hanford.

Response

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

Information about DOE transportation requirements and practices is presented in Volume I Section 2.2.4.

RADTRAN uses route-specific accident statistics that account for geography, weather, driver error, traffic load, vehicle type, and road conditions.

Comments

F-0009/002

Trucking waste from other parts of the country is wrong due to the dangers of transportation.

L-0013/001

I am very concerned about 70,000 trucks with nuclear waste traveling across our nation from all directions in the U.S. to Washington, Hanford nuclear waste area. We must have 5 or 10 depositories nationwide and each waste must be transported to the nearest depository. This will minimize in transit crisis, and additionally reduce the volume of the materials in any one area.

P-0013/003

Please plan to bury the waste somewhere closer to its origin - avoiding the dangers inherent in long-distance transport.

P-0023/002

Shipping 70,000 truckloads of radioactive and chemical waste increases risks to citizens all along the highways. How about keeping it where it is. We don't want it.

P-0044/001

... these patently insane plans to ship 70,000 tons of radioactive materials anywhere, much less to Hanford.

P-0072/002

Moving it [waste] around the country dangerously isn't going to be acceptable.

Transportation

TPO-0002/002

70,000 truckloads is, this is kind of like the initial salvo. Once they get through that 70,000, it could go up to 150,000. It could go higher than 70.

Response

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

Comments

F-0016/001

The subsidy of production of nuclear waste will tend to perpetuate itself. As government and industry planners get used to cheap disposal of nuclear waste, they will design into their future plans production of large amounts of nuclear waste. The prediction of 70,000 truckloads of waste is thus only the narrow end of a wedge. An adequate EIS would consider this, and would anticipate far greater amounts of nuclear waste needing to be dealt with.

TSE-0038/001

So I wonder how confident are we that 70,000 truck loads, we will [stay] 70,000 truck loads, how likely is it that once there is an expectation in the industry that you can get rid of nuclear waste for free, that will be built into further plans, and 70,000 truck loads will become 700,000?

Response

The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

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 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.

Transportation

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.

Charging DOE waste generators higher disposal costs is not expected to reduce the amount of waste generated by DOE sites or to increase the amount of waste reduction already occurring under the DOE pollution prevention and waste minimization program. The Pollution Prevention Act, Section 6002 of RCRA and several executive orders were enacted, in part, because it was recognized that (1) government organizations should make efforts to minimize the amount of waste they generate and (2) economic incentives generally do not work for government entities. For waste being disposed of at Hanford, the waste generator and the disposal facility are both part of the same government organization, the DOE. Although private companies can collect money today for work to be performed in later years, government organizations like DOE are precluded from collecting money to cover future costs (such as closure costs and long-term monitoring costs) without specific congressional approval.

The recent "Report to Congress - The Cost of Waste Disposal: Life Cycle Cost Analysis of Disposal of Department of Energy Low-Level Radioactive Waste at Federal and Commercial Facilities" (DOE 2002d) explains that waste disposal decisions should be made based on the total life-cycle cost of waste disposal. These decisions need to consider the costs for treatment, inspection and verification, disposal, closure, and long-term monitoring. The DOE pollution prevention and waste minimization program already requires waste disposal decisions to be made based on life-cycle costs and other factors. See Volume I Section 2.2.5 for a discussion of the DOE pollution prevention/waste minimization program.

Comments

F-0013/004

Oregon has expressed their concerns about the condition of their aging bridges and have made official statements about their desires not to have waste trucked through their state. Why have these concerns not been addressed? Why have the opinions and concerns of states not been adequately considered and respected?

Response

With respect to concerns about the condition of roadways and bridges, the waste shipments to Hanford will predominantly travel on Interstate highways. Only in extremely rare instances would Interstate highway or bridge construction lead to a detour through municipal streets. Furthermore, the waste shipments will be conducted using heavy-combination trucks but are not "overweight" vehicles that require special overweight permits. The weights of the trucks that haul the waste to Hanford will be below legal-weight truck limits, similar to the vast majority of tractor-trailer vehicles that carry cargo on the Interstates every day.

Oregon's Department of Transportation (ODOT) has identified 487 bridges with some degree of cracking; 309 of those are likely candidates for repair and replacement. Two hundred and twenty-one of the critical bridges lie on I-5 and I-84. Oregon has developed a strategy to fix highways 20 (Bend to Ontario) and 97 (California border to the Washington State line) as alternative east-west and north-south routes that can be improved quickly (schedule for completion in 2005) and at least cost and could serve as detour routes, if necessary, for subsequent stages of the work to restore the interstate system. The subsequent stages of the project will address the bridges on I-84 and begin work on I-5, proceeding from the north to the south. As work progresses southward on I-5, lateral routes will be fixed that will reconnect the coastal parts and Central Oregon to I-5 as repairs continue southward. The repairs on the interstates are expected to be completed by 2015 (Oregon 2003).

During the period of repair, truckloads of radioactive/hazardous materials will stay on the interstates wherever possible and would typically not be detoured through cities and towns along the route. If construction/repair of a bridge is taking place, traffic would be detoured to the opposite side of the freeway from where

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construction/repair is taking place – the open half of the freeway would temporarily become a two-way road. If the entire bridge were to be closed, the most common procedure would be to have traffic exit the freeway at the interchange immediately before the bridge and enter the freeway on the other side of the bridge at the same interchange or at the next entrance. In such cases, having a small number of shipments travel a short distance on routes other than the interstate freeways would not substantially change the transportation risks or conclusions presented in the HSW EIS (This response is based in part on information presented by Mike Barry of the Oregon Department of Transportation during the public hearing in La Grande, Oregon on May 12, 2003. See Volume IV Appendix B for the transcript of the La Grande public meeting).

Comments

P-0018/002

What liability insurance will be taken out by the gov't to pay for tragic accidents along the highways as waste is moved?

TPO-0015/005

Secondly, I cannot insure my house against nuclear accidents. So if one of those trucks that runs right by my house, on I-84 through Portland, spills something, leaks something, whatever -- and we just had a leak recently that shut down half the city from a very much safer truck -- well, I can't do anything about it.

Response

In the event of a nuclear incident involving DOE waste shipments, the federal government would be responsible in accordance with provisions of the Price Anderson Nuclear Hazards Indemnity Act.

Comments

P-0151/001

Please for the sake of the world and all living things DON'T attempt to move nuclear waste (WMD) [weapons of mass destruction] around the USA.

Response

The HSW EIS is not evaluating any proposals to transport Weapons of Mass Destruction.

Comments

L-0049/006

Section 3.4.8, page 3.35, line 34. This sentence states that the transportation is the same for all alternative groups. The No Action Alternative should be different.

Response

The sentence refers to the action alternatives, not the No Action Alternative. See Volume I Section 3.1.1 for description of the No Action Alternative.

Comments

L-0053/001

However, all risk assessments for releases during accidents, fires, earthquakes and transportation relied on for EIS are based on treated mixed TRU. If USDOE wishes to claim it is exempt from treatment requirements, then it must analyze all risks from prolonged storage of untreated mixed TRU.

TLG-0013/002

Crazily, and this is my last point here, but it's very important that this EIS be revised to do a real transportation analysis, because it relies on the old '97 document. That '97 document transportation risk

Transportation

analysis is based on an assumption that all the waste is treated before it's on the highway; for instance, the remote-handled, mixed transuranic waste. And it acknowledges that untreated waste has far greater impacts. And they don't know what it is. They don't know what the chemical composition is, they don't know what the impacts are. And it's much more stable after treatment. And they only modeled post-treatment. And the same is true for once it's at Hanford, they only modeled, for instance, what the impact is if you got this remote-handled transuranic waste to Hanford, there's an earthquake, and they expected it to kill 200 people offsite from the waste management PEIS analysis, you won't find this new one. And 200 offsite fatal cancers. And it's modeled on it coming after treatment, but we know this stuff is coming without treatment.

Response

Transportation impact evaluations are based on shipments of waste streams identified by DOE generators. The chemical and radionuclide concentrations in these waste streams have not been adjusted to reflect compliance with RCRA treatment standards or to reflect other treatment that may be needed to meet waste acceptance criteria at the receiving facilities.

The accident analyses in the HSW EIS do address chemical constituents and do not assume all mixed wastes are treated (See Volume II, Appendix H).

Comments

L-0055/050

DOE claims that 300 million hazardous material shipments occur in the United States each year. It is not accurate to compare shipments of compressed air and gasoline since they don't pose the same long-term hazard as a radioactive accident would.

Response

Compressed air, gasoline, and other non-radiological hazardous materials may present different short term and long term risks than radiological materials. However, because these risks are different does not mean they are insignificant. Transportation accidents analyzed in the HSW EIS did address radiological materials. See Volume I Section 5.8 and Volume II Appendix H.

Comments

L-0044/044

CRD (Re: Comment # 162) On August 21, 2002, the Department of Ecology commented on the lack of integration between the EIS process and State and local planning concerning receipt of waste from other US Department of Energy (USDOE) sites (see Comment Response Document Letter L095, comments 162 through 164). Ecology intended for the US Department of Energy to acknowledge a significant disparity in State and Federal plans, as exemplified by a letter from Tom Fitzsimmons to Carolyn Huntoon, dated March 21, 2001. Mr. Fitzsimmons stated clearly that the State does not wish to accept offsite waste while the USDOE defers action on serious problems already in existence.

The State filed a lawsuit on March 4, 2003, to stop shipments of transuranic waste to Hanford. A Federal Court judge has issued a preliminary injunction prohibiting additional shipments, based on Ecology's concerns. While the USDOE modified its waste volumes to include Hanford-only wastes, the preferred alternative is dismissive of the land to be used for additional waste volumes and impacts on the environment. Please address conflicting goals for acceptance of offsite waste fully.

Response

DOE acknowledges that the State of Washington has expressed concern with regard to shipment of offsite DOE waste to Hanford. However, DOE does not believe that transport of offsite waste to Hanford would violate state laws or applicable land use plans. On the contrary, shipments of DOE's offsite radioactive mixed waste would comply with applicable provisions of the State of Washington Hazardous Waste Management

Transportation

Act.

The preferred alternative for disposal is Alternative Group D. Land use and other impacts for all alternatives and all waste volumes, including those from other DOE sites, are in Volume I Section 5.

Comments

TSE-0028/003

The accident analyses in this EIS are woefully inadequate, they assume that no one is exposed within 100 meters of the accident. And it fails to consider many of the actual chemical constituents and their immediate dangers to life and health values. Astonishingly, whoever the contractor was who prepared this left blank the immediately dangerous life and health values which are known for numerous chemicals. So, this EIS is not adequate in regards to the accident consequence[.]

Response

As noted in the text preceding the table in the final HSW EIS, the chemical concentrations at 100 m downwind from a severe transportation accident could potentially exceed the Temporary Emergency Exposure Limit-2 (TEEL-2) for 3 constituent chemicals. The "Immediately Dangerous to Life and Health" values are only presented for perspective where the estimated concentrations exceeded TEEL-2. The 100-m receptor distance for the evaluation is commonly used for both facility and transportation accidents because of limitations in the atmospheric transport models used to estimate downwind concentrations.

Comments

TSP-0012/003

The transportation of hazardous waste. I am currently working on becoming a volunteer firefighter. So I have gone through a HAZ-MAT class, and I have listened to lots of stuff. The way this toxic waste sounds, it sounds like it could be really bad, and really interesting to try to take care of, and firefighters will get contaminated, hospitals will get contaminated, it will be really bad.

Response

DOE recognizes that accidents in transit are likely to occur during the transportation of radioactive wastes to, from, and within Hanford. Due to processes and procedures designed to ensure appropriate packaging, vehicle safety, driver training, and other precautions, the likelihood of a significant release of radioactive materials from an accident in transit is very low. Even so, in the unlikely event of an accidental release in transit, DOE provides the necessary support and assistance to potential first responders to assure effective mitigation, cleanup, and monitoring of the potential release.

As discussed in Volume I, Section 2.2.4, local, state, tribal, and federal governments and carriers all have responsibility for preparing for and responding to transportation emergencies. State and tribal governments have primary responsibility for the health and welfare of their citizens and therefore have an interest in ensuring the safety of shipments of hazardous materials, including DOE-owned materials, within their boundaries. The Emergency Response Guidebook (DOT 2000) provides information to assist potential first responders to the scene of a transportation accident involving hazardous materials, including radioactive waste. The Federal Emergency Management Agency (FEMA) is responsible for the federal government's emergency response activities. DOT has established requirements for reporting transportation accidents involving radioactive materials and has a comprehensive training program on handling emergencies involving radioactive materials shipments. Carriers are required to notify the National Response Center (operated by the U.S. Coast Guard) of all releases of hazardous substances that exceed reportable quantities or levels of concern. The DOE Manual 460.2-1 expands these criteria and requires notification to the states (DOE 2002e).

DOE operates a Radiological Assistance Program (RAP) with eight Regional Coordinating Offices staffed with experts available for immediate assistance in offsite radiological monitoring and assessment. DOE RAP

Transportation

teams assist state, local, and tribal officials in identifying the material and monitoring to determine if there is a release and with general support.

Consistent with DOE Manual 460.2-1, DOE has developed the Transportation Emergency Preparedness Program (TEPP) to assist federal, state, tribal, and local authorities to prepare for transportation accidents involving radioactive materials. That assistance includes planning for emergencies as well as training for emergencies. For example, through education programs offered to state and tribal organizations, over 17,000 emergency response personnel in twenty states have been trained to respond to accidents involving radioactive material (Westinghouse 2001). See www.em.doe.gov/otem for additional information about TEPP.

DOE believes that the emergency preparedness planning, training, equipment, and post-accident assistance provided by DOE, other state and federal agencies, tribes, and carriers are adequate to protect local first responders to a potential transportation accident and the public from potential accidental releases in transit.

Comments

L-0038/001

Transportation of high level nuclear waste across our country poses unacceptable, unfathomable risk. Since 9-11, jet fueled aircraft flying at hundreds of miles per hour has not been factored into Environmental Impact Statements of any proposed nuclear waste transportation plan. It is not possible to build enough safety into the trucks or waste containers to withstand that kind of impact. Therefore, high level nuclear waste should remain where it is presently.

Response

The likelihood of successfully striking a relatively small moving target like a radioactive waste shipment with a fast-moving jet aircraft, as the commenter suggests, is extremely low. Even if such an event were to occur, the consequences are expected to be within the range of severe accident impacts presented in the HSW EIS, Volume II, Appendix H.

The HSW EIS does not evaluate any proposals or alternatives regarding offsite transportation of immobilized high-level radioactive waste (IHLW) that will be transported to Yucca Mountain for disposal. The HSW EIS does address, however, onsite transportation of immobilized low activity wastes (ILAW). The ILAW packages will be transported from the Waste Treatment Plant, currently under construction, to an onsite disposal facility located in either the 200 East or 200 West Areas of the Hanford Site. There are no plans to transport ILAW offsite.