Document #0007: Comments 7.1 – 7.3
U.S. Department of the Interior, U.S. Fish and Wildlife Service

file | T3 | rtbam

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
408 Atlantic Avenue – Room 142
Boston, Massachusetts 02210-3334

Comment #0007

June 19, 2003

JUN 2003 Received DOE-WV

(ER-03/0473)

Mr. Daniel W. Sullivan
Document Manager
DOE-West Valley Area Office
PO Box 191
West Valley, NY 14171-0191

Dear Mr. Sullivan:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the West Valley Demonstration Project, Cattaraugus County, West Valley, New York. Our comments are as follows.

Federally-listed Species

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act is required with the U.S. Fish and Wildlife Service (Service) at this time. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered.

Because our information on the presence of Federally-listed species is frequently updated, we recommend that the Department of Energy contact the Service's New York Field Office, 3817 Luker Road, Cortland, NY 13045, for updated information on the presence of listed species or their habitat within one year prior to starting the proposed action. 7.1

Environmental Impact Statement Comments

The DEIS adequately describes the environmental resources in the revised project area. The Department is concerned about the existing levels of contamination of soil and groundwater that were mentioned in the DEIS, but not discussed in detail. Any remediation efforts or increases in the areal extent or levels of contamination should be coordinated with this office of the Department, and the Service's New York Field Office. 7.2

To reduce the likelihood of an accidental release of contamination, the Department recommends that the project sponsors and contractor conform to all Federal and State regulations pertaining to the transport of hazardous/contaminated material. Contingency plans for accidental releases should be developed prior to initiation of the proposed action. If the project sponsor and contractors comply with Federal and State regulations for the transportation of this material, develop contingency plans to 7.3

88168

Document #0007: Comment 7.3
U.S. Department of the Interior, U.S. Fish and Wildlife Service

minimize the adverse effects of an accidental release, and contact the Service's New York Field Office for information on Federally-listed species prior to initiating the proposed action, the Department does not anticipate that this project will have significant impacts on fish and wildlife resources, or their habitats, under our jurisdiction. 7.3

Thank you for the opportunity to provide input on the DEIS. Please contact me at (617) 223-8565 if you have any questions concerning this correspondence, or if I can be of further assistance.

Sincerely,

Andrew L. Raddant
Regional Environmental Officer

cc:

FWS, NYFO, Cortland, NY (A. Chmielewski)

0007, 2 of 2
RECEIVED
JUN 23 2003

2

Document #0007: Responses

7.1. DOE will consult with the U.S. Fish and Wildlife Service regarding possible updates on the presence at the WVDP site of any threatened or endangered species protected under the Endangered Species Act.

7.2. Remediation efforts as the Department of the Interior has defined them at the WVDP site are outside the scope of the WVDP Waste Management EIS and will be addressed in the Decommissioning and/or Long-Term Stewardship EIS.

7.3. DOE does conform to all federal and state regulations pertaining to the transport of hazardous/contaminated material and has contingency plans in place for accidental releases. Appendix D of the Draft and Final EISs includes a discussion of the applicable transportation regulations. Contingency plans for dealing with accidental releases during transportation would be in place prior to the start of the transportation campaign.

Document #0008: Comments 8.1 – 8.2
State of Washington, Department of Ecology

file | TJ | + Dan

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
1315 W. 4th Avenue • Kennewick, Washington 99336-6018 • (509) 735-7581

JUN 2003 Received DOE-WV

June 20, 2003

Mr. Daniel W. Sullivan
Document Manager
West Valley Area Office
United States Department of Energy
P. O. Box 191
West Valley, New York 14171-0191

0008, 1 of 9

Dear Mr. Sullivan:

Re: Draft West Valley Demonstration Project Waste Management Environmental Impact Statement, West Valley, New York DOE/EIS – 0337D

The Washington State Department of Ecology (Ecology) has received and reviewed the Draft West Valley Demonstration Project Waste Management Environmental Impact Statement (WVDP WM EIS). Ecology's review of the WVDP WM EIS has focused on omissions, inadequacies, and adverse impact issues that relate to storage, treatment, or disposal of wastes at Hanford

The purpose and need statement says, in part: "To fulfill its responsibilities under the West Valley Demonstration Project act, DOE needs to identify a disposal path for the wastes that are currently stored onsite and that will be generated in the future and to determine a management strategy for the exiting waste storage tanks." Some aspects of the analysis relating to all the alternatives are of concern to the state of Washington, and significant components of Alternative B are simply not acceptable to the state.

Specifically, the two forward action alternatives propose shipping additional volumes (21,000 cubic meters) of Low Level Waste (LLW) and Mixed Low Level Waste (MLLW) for disposal at Hanford. These are significantly larger than volumes estimated in the Revised Draft Hanford Solid Waste Program EIS. In addition, Alternative B includes shipping Transuranic (TRU) and High Level Waste (HLW) to Hanford. The LLW and MLLW volumes will compound the impacts of inadequate waste treatment and the lack of groundwater mitigation measures needed to protect public health and the environment from wastes and contamination already disposed of or released to the environment at Hanford. With regard to Alternative B: 8.1

- Ecology is not amenable to the importation of HLW for interim storage (which may be very long-term) at the Hanford Site pending availability of the National High Level Waste Repository. Further, this treated waste does not conform with the planned HLW canister storage design planned to be built at the Hanford Site. Neither the Revised Draft Hanford Solid Waste EIS nor the WVDP WM EIS include analyses of significant adverse environmental impacts that may result from operation of facilities needed to store the additional HLW waste described in the WVDP WM EIS. 8.2

8817

Document #0008: Comments 8.3 – 8.5
State of Washington, Department of Ecology

Mr. Daniel W. Sullivan
June 20, 2003
Page 2

- Proposing to ship TRU waste without a disposal path to Hanford is not acceptable. The storage (and potential treatment) of West Valley Demonstration Project TRU at Hanford was not analyzed in either the Waste Management Programmatic EIS or the WIPP Second Supplemental EIS. Further, the state of Washington filed a lawsuit to stop shipment of TRU wastes to Hanford, based on lack of adequate National Environmental Policy Act coverage and lack of acknowledgement of the state's mixed waste management authority, especially as it applies to TRU waste that may not meet requirements for WIPP disposal. The Federal District Court for the Eastern District of Washington issued a preliminary injunction prohibiting additional shipments, pending the outcome of this litigation. 8.3
- The transportation analysis should include more route detail for shipments to Hanford. It should also include an analysis of potential risks from terrorism and diversion. 8.4

In summary, the WVDP WM EIS raises significant questions in the face of the state of Washington's priority concern that Hanford Site waste be cleaned up before substantial additional non-Hanford wastes are added to the site's environmental burden. Additional information is needed to address the cumulative impacts and appropriate treatment and waste management capabilities needed to process non-Hanford waste. Because such information was likewise lacking in DOE's Revised Draft Hanford Site Solid Waste Environmental Impact Statement (RHSWEIS), Ecology hereby incorporates by reference its June 10, 2003 comments on the RHSWEIS. Ecology's detailed comments on the WVDP WM EIS are attached. 8.5

Thank you for the opportunity to comment on this document.

Sincerely,

for

Michael A. Wilson
Program Manager
Nuclear Waste Program

Enclosure

cc: (see next page)

0008, 2 of 9

RECEIVED
JUN 24 2003

Document #0008: Comment
State of Washington, Department of Ecology

Mr. Daniel W. Sullivan
June 20, 2003
Page 3

cc: Nick Ceto, USEPA
Mike Gearheard, USEPA
Keith Klein, USDOE/RL
Roy Schepens, USDOE/ORP
The Honorable Robert Wahpat, Chairman, Yakama Nation
The Honorable Ross K. Sockzehigh, Tribal Council Chair, Yakama Nation
The Honorable Gary Burke, Chair, Board of Trustees, Confederated Tribes of the Umatilla Indian Reservation
The Honorable Samuel N. Penney, Chairman, Nez Perce Tribal Committee
Rick Gay, CTUIR
Stuart Harris, CTIUR
Patrick Sobotta, NPT
Russell Jim, YN
Todd Martin, HAB
Ken Niles, OOE
Administrative Record

0008, 3 of 9
RECEIVED
JUN 24 2003

Document #0008: Comments 8.6 – 8.8
State of Washington, Department of Ecology

RECEIVED
JUN 24 2003
0008, 4 of 9

Comment Number	West Valley DP WM EIS Section Reference	Washington State Department of Ecology Comment	References	
1	Sec. 1.6, Table 1-1	The definition of transuranic waste (TRU) at West Valley given in Table 1-1 is "material contaminated with radioactive elements of atomic number greater than 20, and neptunium, plutonium, americium, and curium, and that are in concentrations greater than 10 nanocuries/gram (nCi/g) or in such concentrations as [the] NRC may prescribe to protect public health and the environment." A parenthetic statement following says that if the wastes are disposed offsite, the applicable definition at the disposal site will be used. In theory, Hanford might then receive mixed wastes that would not meet the common definition of 100 nCi/gram for transuranic (TRU) waste. These wastes might exceed the volume of LLMW shown in the WVDP WM EIS. The Washington State Department of Ecology (Ecology) requests the WVDP identify any volumes of waste that could be shipped from West Valley as TRU, but could be received at the Hanford Site, designated as LLMW, treated, then disposed at Hanford LLMW burial grounds.		8.6
2	Sec. 1.6, Table 1-1	In the table, TRU waste is classified as Contact Handled and Remote Handled Waste. Capability to process RH TRU will not be available at the Hanford until 2013. Ecology notes that shipment of RH TRU to Hanford within the next 10 years, which might mean that waste with no known means of treatment and no path for disposal could be received on the Hanford Site. The action is not acceptable to Ecology.		8.7
3	Sec. 1.7.1.2, p. 1-14	Reference is made to the US Department of Energy's plan to ship TRU to selected sites for where it would be prepared for disposal within the next 10 years. Ecology does not support shipment of RH TRU to the Hanford Site before 2013, because RH TRU handling capacity will not be available at Hanford until then, per the Revised Draft Hanford Solid Waste EIS. In addition, receipt and management of TRU waste is the subject of litigation; therefore, discussion of storage of TRU generated off of the Hanford Site should await the Court's decision.		8.8

Page 1 of 8

Document #0008: Comments 8.9 – 8.12
State of Washington, Department of Ecology

RECEIVED
JUN 24 2003
0008, 5 of 9

Comment Number	West Valley DP WM EIS Section Reference	Washington Department of Ecology Comment	References	
4	1.7,1.6	This description of the HSW-EIS is accurate, but fails to point out that the HSW-EIS does not include storage of WVDP TRU in its analysis.		8.9
5	Table 2-6, p. 2-21	Ecology has reviewed the information presented on Human Health Impacts from disposal of LLW and MLLW at Hanford under the three alternatives. For both the no-action alternative (Class A LLW) and Alternative B (LLW and MLLW), the latent cancer fatality to the maximally exposed individual is 10 orders of magnitude less at the Nevada Test Site (3.0E-16 and 2.1E-15) than at Hanford (6.9E-8 and 5.1E-6). Such dramatic differences in risk would appear to preclude Hanford from serious consideration		8.10
6	Table 2.6, p. 2-21	Ecology reviewed the human health impacts for storage interim storage of TRU waste under Alternative B. Hanford's latent cancer fatality for the population is two orders of magnitude (1.7E-3) greater than that at SRS (2.3E-5), and at a level (nearly 2 fatalities per 1000 population) that is not acceptable given the option of storage at SRS. For that reason, Ecology does not support interim storage of TRU at Hanford.		8.11
7	Tables 2-8 and C-10	The use of the WM-PEIS estimates for storage and treatment of off-site TRU under its "centralized" alternatives is probably bounding. However, one should not assume there will be no treatment at the interim storage site for RH-TRU and certain mixed CH-TRU, since WIPP acceptance criteria are not yet in place for such wastes. Some treatment may be necessary at interim storage sites. In addition, the use of the (dated) WM-PEIS analysis presents some anomalies—e.g. a significant difference in worker health effects for interim storage between Hanford and Savannah River.	RHSW EIS assumption: LLMW received from West Valley will arrive treated to the Hanford Solid Waste Acceptance Criteria and will require no further treatment.	8.12

Page 2 of 6

Document #0008: Comments 8.13 – 8.16
State of Washington, Department of Ecology

RECEIVED
JUN 24 2003
0008, 6 of 9

Comment Number	West Valley DP WM EIS Section Reference	Washington State Department of Ecology Comment	References	
8	Page 2-15, Table 2-3	An escalated volume of mixed LLW (MLLW), which appears to be 223 cubic meters (7,889 cubic feet) in the table, is based on waste volumes that are currently in storage and projections of additional wastes that could be generated from ongoing operations over the next ten years. In comparison, *The Revised Draft Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement, Volume II, Appendix C, Page C.4, Table C.1* states that West Valley Nuclear Services MLLW volume expectations for accelerated cleanup and closure, with shipment and disposal sites identified to be Hanford or the Nevada Test Site (NTS), is 26 cubic meters. Ecology requests WVDP identify the volume discrepancy to allow evaluation of current expectations for MLLW disposal to Hanford or Nevada Test Site (NVT).		8.13
9	C-10	There is a disconnect between the assumption that LLW and MLLW disposal impacts at Hanford (and NTS) are a proportion of WM-PEIS impacts and the specific inventory assumptions in the Hanford Solid Waste EIS. WVDP volume estimates are both larger than those contained in the HSW-EIS and larger than two per cent of the volumes considered in the HSW-EIS.		8.14
10	D.3	We appreciate the use of RAOTRAN 5 and 2000 census data for calculation of impacts of transportation from WVDP to Hanford. It would be very helpful, however, to have a map showing the "representative routes" that are described in the tables. Choice of routes may make a significant difference to emergency preparedness in western states.		8.15
11	3.9.2	It is not accurate to say that I-182 and U.S. 12 and 395 "run through the Hanford Site."		8.16

Page 3 of 6

Document #0008: Comments 8.17 – 8.18
State of Washington, Department of Ecology

Comment Number	West Valley DP WM EIS Section Reference	Washington State Department of Ecology Comment	References	
12	Summary Sec. 2.0, p. 5-8	Alternative A states that TRU waste shipments could occur in the next 10 years if the waste were determined to meet all the requirements of disposal at WIPP. It also states that if some or all of WVDP's TRU waste did not meet these requirements, the USDOE would need to explore other alternatives. In the National TRU Waste Management Plan, Table 3.1-1, p.38 WVDP is said to have 77.2 cubic meters of stored CH TRU, 16.0 cu. m. projected to be generated for a total of 93.2 cu. m. The volume to be disposed is 0.0 cu. m. Footnote (5) states that the waste is of commercial origin and does not meet the Land Withdrawal Act requirement for disposal at WIPP. If this volume of CH-TRU waste is included in the volume to be stored at Hanford, the environmental impacts of that storage must be evaluated.	National TRU Management Plan, DOE/NTP-96-1204, Rev. 3, Table 3.1-1, Stored, Projected, and Disposal Volumes of CH TRU Waste by Site, pp. 38-39.	8.17
13	Summary Sec. 2.0, p. 5-8	Alternative A states that TRU waste shipments could occur in the next 10 years if the waste were determined to meet all the requirements of disposal at WIPP. It also states that if some or all of WVDP's TRU waste did not meet these requirements, the USDOE would need to explore other alternatives. In the National TRU Waste Management Plan, Table 3.1.-2, p. 40, WVDP is said to have 470.5 cubic meters of stored RH TRU, 8.4 cu. m. projected to be generated for a total of 478.9 cu. m. The volume to be disposed is 0.0 cu. m. Footnote (6) states that the waste is of commercial origin and does not meet the Land Withdrawal Act requirement for disposal at WIPP. If this volume of RH-TRU waste is included in the volume to be shipped, the environmental impacts of that storage must be evaluated.		8.18

RECEIVED
JUN 24 2003
0008, 7 of 9

Page 4 of 6

Document #0008: Comments 8.19 – 8.21
State of Washington, Department of Ecology

Comment Number	West Valley DP WM EIS Section Reference	Washington State Department of Ecology Comment	References	
14	Summary Sec. 5.0, p. 5-25	Ecology noted that the final paragraph on the page stated that analyses associated with transportation to the receiving sites associated with WVPD WM EIS were also addressed in the Final Waste Management Programmatic EIS and the WIPP Phase I Supplemental EIS. Transportation analyses in the WM PEIS are outdated, therefore, the transportation analyses are no longer valid. The WIPP SEIS-II did not address transportation of TRU waste from WV to Hanford; therefore, Ecology does not consider the analyses of risks from transportation to be adequate.		8.19
15	Section 2.5, Table 2-3, pp. 2-14 through 2-16	Ecology does not support shipment of HLW from WVDP to Hanford for several reasons. First, the USDOE Office of River Protection recently informed Ecology that original plans to build a second high-level waste (HLW) Canister Storage Building to store vitrified tank waste have been abandoned. Further, Ecology was informed that shipments of vitrified HLW to the geologic repository will begin as early as 2012 to reduce the need for onsite storage and to expedite disposal. Ecology has not agreed that the USDOE may treat tank waste by other than vitrification, so the volume of vitrified HLW that will require interim storage will be significant.		8.20
16	Section 2.5, Table 2-3, pp. 2-14 through 2-16	Ecology does not support shipment of HLW from WVDP to Hanford because the USDOE Office of River Protection recently informed Ecology that original plans to build a second high-level waste (HLW) Canister Storage Building to store vitrified tank waste have been abandoned. With space limited to one facility, there will not be sufficient space to store HLW from offsite.		8.21

RECEIVED
JUN 24 2003
0008, 8 of 9

Page 5 of 6

Document #0008: Comments 8.22 – 8.24
State of Washington, Department of Ecology

Comment Number	West Valley DP WM EIS Section Reference	Washington State Department of Ecology Comment	References	
17	Section 2.5, Table 2-3, pp. 2-14 through 2-16	Ecology does not support shipment of HLW from WVDP to Hanford because Ecology has seen no information in the WVDP WM EIS that confirms that the waste will be in a configuration that allows it to be stored in the Canister Storage Building. If the WVDP HLW will be stored elsewhere on the Hanford Site, Ecology will require prior approval of the location.		8.22
18	Section 2.5, Table 2-3, pp. 2-14 through 2-16	Ecology does not support shipment of HLW from WVDP to Hanford because Ecology has not seen any evidence that the WVDP HLW will be allowed to be disposed in the geologic repository or that the repository will be available to receive the waste.		8.23
19	Appendix D, Section D.6, pp. D-19 through D-19 and D.7.1 through D.7.3 pp. D-20 through 28	The risk of terrorist attack on shipments of waste between WVDP and Hanford are not included in the transportation accident analyses. Ecology does not deem transportation terrorist attack analyses to be complete unless they address social, psychological, and economic disruption.		8.24

RECEIVED
JUN 2 4 2003
0008, 9 of 9

Page 6 of 8

Document #0008: Responses

8.1. The inclusion of Hanford as a potential receiving site for disposal of LLW and mixed LLW in the action alternatives in this EIS (Draft and Final) is consistent with DOE's decision under the WM PEIS to designate Hanford and NTS as regional disposal sites for LLW and mixed LLW from DOE generator sites that do not have comparable facilities to dispose of these wastes. DOE expects changes in inventory estimates from individual generators over time, due to several factors, including improved methods of evaluation or changes in mission. Most recently, for example, this West Valley Waste Management EIS analyzed approximately 19,194 and 221 cubic meters of LLW and mixed LLW (rounded conversion from cubic feet) respectively for potential disposal at Hanford, while the *Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement* (HSW EIS) analyzed 11,297 and 26 cubic meters of LLW and mixed LLW respectively from the WVDP Site. As will be addressed in the Final HSW EIS, these differences in waste volumes would not significantly change the impacts reported in the Final HSW EIS for Upper Bound LLW and mixed LLW inventories. This is because these differences (approximately 7,898 cubic meters of LLW and 200 cubic meters of mixed LLW) represent a small fraction of the Upper Bound volumes analyzed for LLW (631,427 cubic meters) and for mixed LLW (198,852 cubic meters) in the HSW EIS. DOE intends to ensure that its waste treatment capabilities and practices comply with all applicable requirements, and this would apply to any waste received at Hanford from other DOE sites. Similarly, mitigation measures to be described in the Final HSW EIS for Hanford's and other generators' wastes would also apply to any LLW and mixed LLW disposed of at Hanford from the WVDP Site.

NEPA implementing regulations (40 CFR 1502.14(a)) require agencies to evaluate all reasonable alternatives in an EIS. Accordingly, Alternative B analyzed the transportation of TRU waste and vitrified HLW from the WVDP site to other sites including Hanford for interim storage, until these wastes can be shipped for disposal to WIPP and Yucca Mountain respectively. Depending on costs and cleanup schedules at the WVDP site, interim storage of the WVDP TRU waste and HLW at other sites is a reasonable alternative, but DOE's preferred course of action is to ship the wastes directly to WIPP or Yucca Mountain.

8.2 DOE analyzed the interim storage at Hanford of vitrified HLW from the WVDP site under the Regionalized Alternative 2 and Centralized Alternative of the WM PEIS. In this WVDP Waste Management EIS, DOE also contemplated Hanford as a potential interim storage site for the WVDP vitrified HLW, in accordance with implementing requirements under NEPA (40 CFR 1502.14(a)), for agencies to evaluate all reasonable alternatives. The completed West Valley Demonstration Project has produced 275 canisters (this EIS analyzes 300 canisters) containing vitrified HLW in a borosilicate glass form, consistent with current requirements for all DOE sites, including Hanford, at the planned repository at Yucca Mountain. DOE is preparing a license application for submission to the Nuclear Regulatory Commission in order to make the repository available for nuclear wastes that qualify for disposal there, such as vitrified HLW from DOE sites. DOE's preferred alternative in this EIS is to ship the WVDP vitrified HLW directly to Yucca Mountain for disposal.

The potential onsite impacts of storing the WVDP HLW canisters at Hanford were not analyzed in the HSW EIS (Draft) nor this WVDP Waste Management EIS (Draft and Final), because that action is not within the scope of either EIS. However, this WVDP Waste Management EIS (Draft and Final) did analyze potential transportation impacts of shipping the canisters to Hanford. Further, DOE is preparing an *Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, Washington* ([Tanks EIS], 68 Fed. Reg. 1,052, January 8, 2003). In the various Tanks EIS alternatives, DOE proposes to build 2 to 64 buildings in addition to the existing Canister Storage Building, for a storage capacity of 8,300 to 172,800 HLW canisters. DOE believes the storage capacity to be analyzed in the Hanford Tanks EIS would account for the incremental impacts potentially associated with the comparatively small number of canisters from the WVDP site. Nevertheless, DOE would not make a final decision to ship the WVDP canisters until the Tanks EIS is completed and DOE had reviewed all of the pertinent factors related to the WVDP canister specifications and the Hanford canister storage specifications.

8.3 The West Valley Demonstration Project Act directs DOE to dispose of TRU waste; accordingly, indefinite storage is not an option open to DOE. In the WM PEIS and the WIPP SEIS-II, the storage and processing of WVDP TRU waste at Hanford was not specifically analyzed because DOE did not contemplate this site-specific action at the time these EISs were prepared. Similarly, the Revised Draft HSW EIS also did not include WVDP TRU waste in its analyses. However, under Alternative B of this WVDP Waste Management EIS (Draft and Final) DOE has analyzed the potential impacts of shipping approximately 1,372 cubic meters of TRU waste to other DOE sites, including Hanford, for interim storage in accordance with NEPA-implementing requirements (40 CFR 1502.14(a)) that require agencies to consider all reasonable alternatives. This EIS also analyzes shipping this waste

from the storage sites to WIPP for disposal, consistent with the WIPP SEIS-II.

In the Final HSW EIS, DOE will estimate the potential onsite impacts of storing the WVDP TRU waste and processing the waste through the existing Waste Receiving and Processing Facility and modified T-Plant or a new facility at Hanford. The increment to health impacts on workers and the general population resulting from the interim storage and processing of TRU waste from the WVDP site is expected to be so small that it would not significantly change the results reported in the Hanford Solid Waste EIS for the Upper Bound TRU waste volume.

Shipping TRU waste to Hanford for storage until it can be disposed of at WIPP is not DOE's preferred alternative; rather, DOE prefers to ship this waste directly to WIPP for disposal. In any case, DOE would await resolution of the pending litigation before deciding to send TRU waste to Hanford. Any such decision would comply with applicable legal requirements.

8.4 For transportation analysis, DOE relies on the commonly accepted transportation models, which generally select the most direct routes between origins and destinations, using interstate highways to the extent possible. For this EIS, representative highway and rail routes were analyzed using the routing computer code Web TRAGIS (Johnson and Michelough, 2000), which maximizes the use of interstate highways in accordance with all applicable requirements. The routes analyzed may not be the actual routes that DOE would use.

Terrorism and other intentional destructive acts cannot be analyzed in transportation accident risk analyses prepared for NEPA documents in the same way as accidents, because the information needed to calculate probabilities is unknowable. Nevertheless, accident analyses may be used to provide insight into the potential consequences of intentional destructive acts because the consequences of such acts may be comparable to those from severe accidents. The HSW EIS (Volume II, Appendix H) contains such a discussion for potential waste shipments to Hanford from other DOE sites. Although the probability of an attack on a waste shipment cannot be known, DOE believes that LLW, mixed LLW, and TRU shipments would not present an attractive target. Further, the containers used for transporting these wastes are designed with safeguards appropriate to the potential hazard.

8.5 The LLW, mixed LLW, TRU waste and vitrified HLW considered for shipment to Hanford in this WVDP Waste Management EIS have characteristics similar to Hanford's wastes of the same waste type. The WVDP wastes would be shipped only if they met Hanford's waste acceptance criteria and all other applicable requirements. Further, the WVDP wastes would not require storage or processing facilities other than those existing or planned for Hanford's wastes. DOE believes the increment of WVDP wastes added to those analyzed for the Upper Bound Volumes in the Final HSW EIS are so small that they would not significantly change the results reported in the HSW EIS cumulative impacts.

The cumulative impact analysis in the HSW EIS assumed an Upper Bound volume that included wastes from off site. The Hanford Only volume analyzed in the cumulative impacts did not include wastes from off site. This approach was used to permit an identification of the incremental impacts that potentially could be associated with receipt of off site wastes under the various HSW EIS alternatives.

8.6 The definition of TRU waste in Table 1-1 was provided in this WVDP Waste Management EIS (Draft and Final) for

historical accuracy, because this definition was used for TRU waste at all DOE sites at the time the West Valley Demonstration Project Act was enacted. However, this EIS (Draft and Final) reported and analyzed mixed LLW and TRU waste based on the current definition used at all DOE sites of 100 nCi/gram of transuranic elements as the minimum concentration defining TRU waste. In other words, DOE does not regard as TRU waste any waste that does not meet the definition of TRU waste in DOE Order 435.1 and does not propose to ship TRU waste to Hanford for disposal there as mixed LLW. The TRU waste that was analyzed under Alternative B for shipment to Hanford was analyzed for interim storage and subsequent shipment to WIPP for disposal.

8.7 DOE intends to complete Hanford's RH TRU processing facility to comply with DOE's policy to dispose of its TRU waste at WIPP. Any RH-TRU waste from other sites that may be stored at Hanford would be subject to the same policy for TRU waste disposal and would be processed in the modified T-Plant or a new facility for disposal at WIPP. As stated in this WVDP Waste Management EIS (Draft and Final), DOE is considering all available paths forward to meet its requirement under the West Valley Demonstration Project Act to dispose of waste generated as a result of Project Activities. Indefinite storage of the WVDP TRU waste at any site is not an option open to DOE under the Act.

8.8 If DOE were to send WVDP's RH-TRU waste to Hanford before an RH TRU handling capacity were available, the waste would be stored in a facility having existing safe storage capability such as the T-Plant, until the RH TRU waste processing facility could prepare the waste for shipment to WIPP. Hanford will continue to store its own RH-TRU until it can be accepted at WIPP, and DOE believes the potential incremental impacts posed by storing WVDP TRU waste there would be very small. However, this is not DOE's preferred alternative. In any case, DOE would await resolution of the referenced, pending litigation prior to deciding whether to send TRU waste to Hanford. Any such decision would comply with applicable legal requirements.

8.9 DOE will address the storage and processing of the WVDP TRU waste at Hanford in the Final HSW EIS. DOE will estimate the onsite impacts of processing WVDP TRU waste through the existing Waste Receiving and Processing Facility (for CH-TRU waste) and the T-Plant or new facility addressed in that EIS. The increment to health impacts on workers and the general population resulting from the interim storage and processing of TRU waste from the WVDP site is expected to be so small that it would not significantly change the results reported for the Upper Bound Volume in the Final HSW EIS.

8.10 The latent cancer fatality estimates for the maximally exposed individual are small for both sites and indicate that no incidence of cancer would be expected to result from disposing of LLW and mixed LLW from the WVDP site at either Hanford or NTS. This small risk does not provide a meaningful basis for discriminating between the two sites. Nevertheless, in arriving at a final decision under this EIS, DOE would consider potential health impacts along with all other pertinent factors.

8.11 The commentor's interpretation of the risk estimates is incorrect. The expected number of fatalities per 1,000 people is not two. Rather, the estimate of about 2E-3 latent cancer fatalities refers to the total number of cancer fatalities expected among the entire potentially affected population at Hanford (all people within 50 miles of the Hanford site). In other words, this estimate indicates that no one would be

harmed either at Hanford or the Savannah River Site. This small population risk does not provide a meaningful basis for discrimination between the sites.

That notwithstanding, any decision to ship the WVDP TRU waste off site for interim storage and processing would consider pertinent analysis of potential health impacts at the candidate receiving sites, along with all other relevant factors. As stated in this WVDP Waste Management EIS (Draft and Final), DOE prefers to ship this waste directly to WIPP for disposal.

8.12 This WVDP Waste Management EIS reported potential impacts at receiving sites for WVDP TRU waste as a fraction of those reported in the WM-PEIS as an estimate. The Final HSW EIS will address the storage and processing of TRU waste from the WVDP site. DOE believes that final WIPP acceptance criteria are not necessary to estimate potential impacts of transporting, storing and processing Hanford's and other sites' TRU waste for the purposes of analysis in the HSW EIS and this WVDP Waste Management EIS. The analyses assume that all waste received at Hanford from other DOE sites would meet Hanford's waste acceptance criteria, which provides a base of information for adequate analysis, in addition to the waste inventories.

8.13 This WVDP Waste Management EIS analyzed approximately 221 cubic meters (rounded conversion from cubic feet) of mixed LLW for potential disposal at Hanford, while the Revised Draft HSW EIS analyzed 26 cubic meters of mixed LLW from the WVDP site. As will be addressed in the Final HSW EIS, DOE believes this difference of approximately 200 cubic meters would not significantly change the impacts reported in the Final HSW EIS for Upper Bound mixed LLW inventories. This difference is a small fraction of the Upper Bound volume analyzed for mixed LLW (198,852 cubic meters) in the HSW EIS.

8.14 The inclusion of Hanford as a potential disposal site for LLW and mixed LLW in this WVDP Waste Management EIS (Draft and Final) is consistent with DOE's designation of Hanford and NTS under the WM PEIS as regional LLW and mixed LLW disposal sites for other DOE sites. DOE estimated potential impacts at receiving sites as a fraction of the WM PEIS impacts, based on the LLW and mixed LLW volumes analyzed in this WVDP Waste Management EIS.

The total volume of WVDP LLW analyzed in this EIS (Draft and Final) is less than 2% of the total volume analyzed in the Centralized Alternative 1 of the WM PEIS, and is approximately 3% of the Upper Bound volume for LLW analyzed in the HSW EIS. (The volume of mixed LLW analyzed in this WVDP Waste Management EIS is approximately 0.1% of the Upper Bound volume analyzed for mixed LLW in the HSW EIS.) DOE believes these proportions are sufficiently close that impact estimates derived from the WM PEIS are adequate.

Nevertheless, in the Final HSW EIS, DOE will address these small differences in the WVDP LLW and mixed LLW inventories analyzed in this EIS (Draft and Final) and in the Revised Draft HSW EIS. DOE expects that inventory estimates from individual generators will change over time, due to several factors, including improved methods of evaluation or changes in mission. The Revised Draft HSW EIS used inventory data available at the time the site data were compiled. However, this WVDP Waste Management EIS used updated inventories and analyzed 19,194 and 221 cubic meters (rounded from cubic feet) of LLW and mixed LLW respectively for potential disposal at Hanford. The Revised Draft HSW EIS analyzed 11,297 and 26 cubic

meters of LLW and mixed LLW respectively from the WVDP site. As will be addressed in the Final HSW EIS, these differences would not significantly change the impacts reported in the Final HSW EIS for Upper Bound LLW and mixed LLW inventories. This is because the incremental differences (approximately 7,898 cubic meters for LLW and approximately 200 cubic meters for mixed LLW) represent such a small fraction of the Upper Bound volumes analyzed for LLW (631,427 cubic meters) and for mixed LLW (198,852 cubic meters) in the HSW EIS.

8.15 DOE uses commonly accepted transportation models, which generally select the most direct routes between origins and destinations, using interstate highways to the extent possible. For this EIS, representative highway and rail routes were analyzed using the routing computer code Web TRAGIS (Johnson and Michelough, 2000), which maximizes the use of interstate highways in accordance with all applicable requirements. The routes analyzed may not be the actual routes that DOE would use.

DOE routinely plans actual transportation campaigns well in advance, with appropriate notice to affected State and local jurisdictions along the transportation route. DOE has long maintained a transportation program that provides assistance to all affected States and local jurisdictions in maintaining emergency preparedness capabilities, including training, and DOE transportation personnel remain available for assistance during transportation campaigns in the event of an incident.

8.16 In this Final EIS, DOE has modified Section 3.9.2 to state that these highways run near the Hanford Site.

8.17 The inventory data in the National TRU Waste Management Plan are based on information available at the time of preparation. The inventory estimates in this WVDP Waste Management EIS (1,120 cubic meters of CH-TRU waste) are derived from more current projections. As stated in this EIS, (Draft and Final) DOE prefers to ship this waste directly to WIPP. DOE will continue to update its TRU Waste planning documents on a regular basis to reflect changes in its TRU waste inventory.

8.18 The inventory data in the National TRU Waste Management Plan were based on information available at the time of preparation. The inventory estimates in this WVDP Waste Management EIS (252 cubic meters of RH-TRU waste) are derived from more current projections. As stated in this EIS, (Draft and Final) DOE prefers to ship this waste directly to WIPP. DOE will continue to update its TRU waste planning documents on a regular basis to reflect changes in its TRU waste inventory.

8.19 In this EIS (Draft and Final), DOE referenced the transportation analyses in the WM PEIS and the WIPP SEIS-II for national context. The WM PEIS analyses, for example, were intended to support decisions about where DOE would locate key radioactive and hazardous waste management functions, i.e., in a decentralized, regionalized or centralized national configuration of DOE sites. Any updates to the supporting data would apply to all of the DOE sites considered in these National-level EISs and would not change the bases on which the programmatic waste management decisions were made. Further, DOE does not agree that the WM PEIS analyses are no longer valid. Updates to the supporting data, such as using new census data, would not significantly change the potential environmental impacts reported in the WM PEIS or the WIPP SEIS-II. Transportation analyses contained in the HSW EIS indicate that results using new census data are similar to those reported in the WM PEIS.

Nevertheless, under Alternative B of this WVDP Waste Management EIS (Draft and Final), DOE analyzed the potential transportation impacts of shipping approximately 1,372 cubic meters of TRU waste from the WVDP site to Hanford for interim storage and processing for shipment to WIPP and shipping this waste from Hanford to WIPP. This site-specific analysis used 2000 census data, waste inventories that have been updated since the WM PEIS and WIPP SEIS-II were prepared, and current, commonly accepted analytic methodology. DOE believes these analyses satisfy applicable requirements under NEPA. In the Final HSW EIS, DOE will also include a comparison of the methodology used in this WVDP Waste Management EIS for transportation impact analysis to that used in the Final HSW EIS, for general information.

8.20 The West Valley Demonstration Project has completed its HLW vitrification mission, having generated a total of 275 HLW canisters. Under DOE's non-preferred alternative (Alternative B) in this WVDP Waste Management EIS (Draft and Final), DOE analyzed the storage of 300 HLW canisters until they could be shipped to Yucca Mountain for disposal. DOE is currently preparing the Tanks EIS. In the various Tanks EIS alternatives, DOE proposes to build 2 to 64 buildings in addition to the existing Canister Storage Building, for a storage capacity of 8,300 to 172,080 HLW canisters. DOE believes the storage capacity to be analyzed in the Hanford Tanks EIS would account for the incremental impacts potentially associated with the comparatively small number of canisters from the WVDP site. Nevertheless, DOE would not make a decision to ship the WVDP canisters until the Tanks EIS is completed.

8.21 Under DOE's non-preferred alternative (Alternative B) in this WVDP Waste Management EIS (Draft and Final), DOE analyzed the storage of 300 WVDP canisters containing vitrified HLW until they could be shipped to Yucca Mountain for disposal. DOE is currently preparing the Tanks EIS. In the various Tanks EIS alternatives, DOE proposes to build 2 to 64 buildings in addition to the existing Canister Storage Building, for a storage capacity of 8,300 to 172,080 HLW canisters. DOE believes the storage capacity to be analyzed in the Hanford Tanks EIS would account for the incremental impacts potentially associated with the comparatively small number of canisters from the WVDP site. Nevertheless, DOE would not make a decision to ship the WVDP canisters until the Tanks EIS were complete.

8.22 The HLW canisters produced by the West Valley Demonstration Project contain a borosilicate glass waste form consistent with current requirements for immobilizing DOE's HLW. DOE prefers to ship these canisters directly to Yucca Mountain.

However, before making any decision to ship the WVDP canisters to Hanford and in order to ensure safety and security, DOE would review all factors related to the WVDP canister specifications and the Hanford canister storage and handling facility specifications. As examples, such factors include but are not limited to, overall canister size, radiation dose rate, thermal conductivity and heat capacity of the WVDP waste, the equipment at Hanford used to move the canisters, and the individual canister storage structures at Hanford. Also before making any decision to ship WVDP HLW canisters to Hanford, DOE would consult with the State of Washington regarding safety and security in accordance with all applicable requirements.

8.23 DOE included the inventory and characteristics of WVDP's HLW in their analysis presented in the *Final Environmental Impact Statement for a Geologic Repository for the Disposal*

of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (DOE/EIS-0250F, February 2002). This FEIS also addressed transportation impacts of shipping this HLW from WVDP to Yucca Mountain. The HLW canisters produced at the WVDP site contain a borosilicate glass waste form consistent with current requirements for immobilizing DOE's HLW, and DOE expects that these canisters will be acceptable for disposal at Yucca Mountain. The Nuclear Waste Policy Act of 1982, as amended, defines high-level radioactive waste as, "highly radioactive material resulting from the reprocessing of spent nuclear fuel" and stipulates that the geologic repository would be designed for the permanent disposal of spent nuclear fuel and high-level radioactive waste. Furthermore, the Nuclear Regulatory Commission (NRC) has made a generic determination in 10 CFR 51.23 that, "the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life of operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time." DOE is now preparing an application, to be submitted to the NRC in 2004, for a construction authorization for the geologic repository at Yucca Mountain, Nevada. DOE currently plans to obtain the appropriate NRC license and open the repository in 2010. DOE prefers to ship the WVDP HLW directly to Yucca Mountain.

8.24 Terrorism and other intentional destructive acts are not accidents and cannot be analyzed in accident risk analyses prepared for NEPA documents in the same way as accidents.

In analyzing accident risks under NEPA, DOE considers the range of foreseeable accidents, including low probability/high consequence events and higher probability/lower consequence events. "Risk" refers to the product obtained by multiplying probability of occurrence for an event times the event's consequences. DOE considers all three factors (probability, consequence, and risk) in its accident analyses under NEPA. The probability of malevolent acts, however, is unknowable. Therefore, meaningful risk estimates cannot be conducted in the same way as for accidents.

Nevertheless, accident analyses may be used to provide insight into the potential consequences of intentional destructive acts because the consequences of such acts may be comparable to those from severe accidents. The Hanford Solid Waste EIS (Volume II, Appendix H) contains such a discussion for potential waste shipments from other DOE sites to Hanford.

Although the probability of attack on a waste shipment cannot be known, DOE believes that LLW, mixed LLW, and TRU shipments would not present an attractive target. Further, the containers used for transporting these materials are designed with safeguards appropriate to the potential hazard.

Regarding social, psychological, and economic disruption associated with intentional destructive acts, DOE does not agree that these impacts can be meaningfully evaluated. In general, such impacts are too speculative for analysis. There are no reliable methods for predicting such impacts with any degree of certainty and the uncertainty is irreducible. DOE addressed key issues relevant to this topic in greater detail in the *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250F, February 2002, see Appendix N).