

Appendix D

Draft EA Comments Received and Responses

**Stakeholder Comments and DOE Responses for the Draft Environmental Assessment Addendum
Disposition of Additional Waste at the Paducah Site (DOE/EA-1339-A)**

Comment No.	Page/ Section	Comment	DOE Response
<i>Robert A. Carson, Illinois Environmental Protection Agency</i>			
1.	General	<p>The Department of Energy should contact the Illinois Department of Nuclear Safety at least five working days prior to initiating any radioactive waste shipping campaign that will involve transport through the State of Illinois. This notification should include waste description, container type, vehicle type, route and expected dates of shipment. The notification should be provided to:</p> <p>Gary N Wright, Director Illinois Department of Nuclear Safety 1035 Outer Park Drive Springfield, Illinois 62704 217-785-9868</p> <p>Illinois DNS requests this information so that their duty officers and potential responders will have essential information in the case of a shipment problem.</p>	DOE will provide the notification.
2.		The Waste Disposition EA identified one of the roads to be utilized for waste transport through Illinois as I-65. This should be corrected to "I-64".	Transportation documents will be revised to reflect this correction. This notation was not used in the Waste Disposition EA Addendum, therefore this document was not modified.

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<i>Ruby English, Neighbor and ACT Chairman (Active Citizens for Truth)</i>			
3.	General	With the decision to proceed with disposition of additional low-level waste now rather than waiting until D&D occurs, I would like to know more about the 17,600 m3 of low-level waste and the 11,000 m3 of various waste types in the Waste Disposition DOE/EA-1339.	<p>The 17,600 m3 of material is primarily stored in DOE Material Storage Areas (DMSAs) throughout the site. This material consists of process and non-process equipment (e.g., converters, scrap metal, discarded furniture, and assorted rubble); mixed, polychlorinated biphenyl (PCB), and low-level radioactive waste (LLW); and other miscellaneous items.</p> <p>The text of the Environmental Assessment (EA) Addendum will be revised to clarify that the 17,600 m3 of additional materials is not all low-level radioactive waste. These materials will be characterized and dispositioned appropriately. No low-level radioactive waste will be disposed in the C-746-U Landfill.</p>

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4.	General	When you talk about on-site disposal, I am concerned about the C-746-U Landfill for the additional 7,900 m ³ to be put in this landfill. As a neighbor, what guarantee do I have that no hazardous waste of any kind will go in this landfill. The contamination from previous dumping has not been cleaned up and this only makes me think that the Paducah Gaseous Plant will only become a dumping ground for more locations in the near future.	The process for waste acceptance at the C-746-U Landfill, as well as the environmental effects of disposal, are evaluated in two environmental assessments – <i>Environmental Assessment for the Construction, Operation, and Closure of the Solid Waste Landfill at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky</i> (DOE/EA-1046) issued in March 1995 and <i>The Environmental Assessment on the Implementation of the Authorized Limits Process for Waste Acceptance at the C-746-U Landfill Paducah Gaseous Diffusion Plant, Paducah, Kentucky</i> (DOE/EA-1414) issued in August 2002. Materials designated for disposal in the C-746-U Landfill will meet the conditions discussed in these EAs as well as the requirements of the landfill permit and the landfill waste acceptance criteria, with the Kentucky Division of Waste Management (KDWM) having primary oversight responsibilities. No RCRA, low-level radioactive, or mixed wastes will be disposed in this landfill.
5.	General	Would you furnish more information as to the types of waste the 45% (7,900 m ³) would be put into the C-746-U Landfill. Since, this is a Subtitle D Landfill and not a Subtitle C Landfill, I am concerned about what the 45% waste would consist of that would be stored in this landfill.	As the materials are characterized the appropriate disposition will be determined. Waste that meets landfill permit and waste acceptance criteria will be disposed in the C-746-U Landfill. No RCRA, low-level radioactive, or mixed wastes will be disposed in this landfill.
6.	General	In reference to the 7,900 m ³ going into the C-746-U Landfill I am really concerned that more hazardous waste will be put in this landfill. Two cells already contain hazardous waste, supposedly put there by error. Notice of Violations issued to Bechtel Jacobs for this hazardous waste being put there has not remedied the problem I have with more waste going to this landfill by mistake. Maybe, people who do not reside in this area of the plant think that everything is okay and there is no harm to the neighbors or community, but, I disagree with these assumptions that are put out to the public.	See response to Comment 4.

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7.	General	This additional waste should be figured in and included in the original scope instead of being overlooked. Since, the Environmental Assessment (DOE/EA-1339) has already been finalized, there should not be an addendum to this assessment. Let the 17,600 m3 stay where it is until the D&D is started.	DOE recently funded an accelerated cleanup plan affecting the Paducah Site. Disposition of DMSA materials is part of that plan. This EA Addendum analyzes the environmental effects of proposed activities involving these materials.
8.	General	In the Final Environmental Assessment DOE/EA-1414, (Waste Acceptance at the C-746-U Landfill) of July, 2002, it states that the determination of whether to place CERCLA-derived materials in the landfill is beyond the scope of the proposed action, potential impacts associated with the potential disposition of CERCLA-derived materials are properly considered within the scope of this cumulative impacts analysis since such disposition may in fact occur. My opinion is that no CERCLA-derived materials should be allowed in the C-746-U Landfill. Will this Subtitle D Landfill permit be adhered to or will this addendum open the way for such materials to be put in this landfill?	The EA Addendum does not address CERCLA-derived wastes. DOE will adhere to all landfill permit and waste acceptance criteria for waste to be disposed in the C-746-U Landfill.
9.	General	Thank you for taking the time to read these comments and questions. I do expect a copy of the final assessment DOE/EA-1339-A when it is completed.	Comment noted. Your name will be placed on the distribution list for the final EA Addendum.
<i>Charles Jurka and Vicki Jurka</i>			
10.	General	<p>This document, the Draft Environmental Assessment Addendum (for) Disposition of Additional Waste at the Paducah Site, May 2003 (DOE/EA-1339-A) clearly states DOE's intention to dispose low-level waste on-site in the C-746-U landfill. The Final Environmental Assessment for Waste Disposition Activities at the Paducah Site Paducah, Kentucky November 2002 (DOE/EA-1339-Final), which this addendum amends, clearly states (pg. 15) that "... on-site disposal of all wastes ... was not considered reasonable." Even though the draft version contained the same language regarding on-site disposal, we requested as part of the public comment process, that "particular attention ... be given the future impact of long-term on-site disposal (i.e. landfills)." The response in the Final EA stated "no on-site disposal is considered within the proposed action of this document." (K,pg. 10-#1)</p> <p>However, this addendum (pg 2-1.2) says even though 45% (4,900 m3) of the additional waste may be sent to the C-746-U landfill for disposal, now the <u>only</u> issue a reviewer can consider is the "potential transportation of all 28,600 m3 of low-level waste offsite for disposal" because on-site disposal is considered elsewhere and "not within the scope of this EA Addendum". The Final EA (pg. 15) clearly shows transportation was not the <u>only</u> issue causing the DOE to find on-site disposal an unreasonable alternative. "The need for new landfill cells" as well as opposition "by</p>	<p>DOE completed DOE/EA-1414 and DOE/EA-1046 to evaluate what waste would be appropriate for disposal in the C-746-U Landfill. The EA Addendum (DOE/EA-1339A) states that only waste that meets the criteria for disposal in that landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification.</p> <p>DOE recently funded an accelerated cleanup plan affecting the Paducah Site. Disposition of DMSA materials is part of that plan. This EA Addendum analyzes the environmental effects of proposed activities involving these materials. The environmental impacts of placing waste in the C-746-U Landfill were evaluated in DOE/EA-1414 and DOE/EA-1046, and are not within the scope of the EA Addendum.</p>

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	<p>local residents” were important components of DOE’s decision not to further evaluate on-site disposal.</p> <p>(EA Final, Pg. 12-2.1.7) Under the proposed action 20,000 m3 of DOE Material Storage Area (DMSA) waste required Nuclear Criticality Safety (NCS) characterization. “DOE’s proposed action includes (d) this type of characterization” (NCS) but did not include the environmental impact of the additional 20,000 m3 of DMSA waste. Now, approximately six months later, this addendum attempts to incorporate 17,600 m3 of the 20,000 m3 of DMSA waste even though the NCS characterization is still incomplete (EA Addendum pg.2-1.2: “until characterization of the waste is complete”). In the final EA the figures used to determine risk should be adjusted upward by approximately 200% because only approximately 1/3 of the waste identified as “disposition waste” was included in all types of analysis. Additionally it is our concern that much of the waste will ultimately be improperly characterized; as happened with past shipments of waste to NTS and Envirocare.</p>	<p>The 17,600 m3 is a revised estimate for the 20,000 m3 reported in DOE/EA-1339.</p> <p>Your concerns regarding improper characterization and shipment of wastes to off-site facilities are noted. Additional actions have been taken including the modification of site procedures to improve the characterization process as an attempt to prevent improper waste disposal.</p>
11.	<p>It is our opinion that in the Final EA DOE misleads stakeholders as to the actual disposition of large quantities of LLW and MLLW. This is demonstrated in table 1.1 (pg. 1) where under the proposed disposal option LLW and MLLW are cited X (LLW) and X (MLLW) for on-site disposal and X (LLW) and X (MLLW) for off-site disposal; leaving only the reader to discern what X signifies as that symbol is not otherwise in the table. Stakeholders are also misled (EA Final pg. 9-2.1.1) when under the proposed action they are assured “DMSA wastes that are not characterized as RCRA/TSCA waste would remain in storage until analyzed during D & D CERCLA actions.” Then, approximately six months later DOE decides (EA Addendum, pg.1-last para.) “to proceed with disposition of additional low-level waste in a timelier manner under the authority of the Atomic Energy Act, rather than waiting until D & D occurs.” It is our opinion that at the time of issuance of the Final EA, DOE knew the Atomic Energy Act allowed them to dispose DMSA waste, generally characterized as RCRA waste contaminated with low-level material in the C-746-U Landfill as well as send it to other approved sites. Lengthy and contentious litigation between DOE and the State of Kentucky had established what DOE could and could not do in that regard (United States v Kentucky-NO.00-5247, 6th Cir., June 5, 2001). Yet, DOE chose to misrepresent on-site disposal and disposition of DMSA</p>	<p>The character X is an editorial symbol for strike-out. The character should have been deleted from the document but was inadvertently left in place. However, the table correctly shows that LLW and MLLW are to be disposed off-site.</p> <p>At this time, 58% of the total volume of materials in DMSAs has been characterized. Of that total, less than 0.1% has been determined to be RCRA hazardous. No RCRA, low-level radioactive, or mixed wastes will be disposed in the C-746-U landfill.</p>

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	<p>waste in the EA Final where the proposed action and alternatives were considered in the total scheme rather than under the single issue of transportation as in the EA Addendum.</p>	
<p>12.</p>	<p>(EA Final, Pg. 5-Aquatic Biota) Further, the determination that “long-term impacts to aquatic biota would be beneficial after implementation of the proposed action, because much of the on-site waste would be removed reducing the amount stored on-site” becomes a very false premise when (EA Addendum, pg.5-4.1.3.1, 1st para.) “a large portion of the additional (DMSA) waste may be disposed on site.” To move stored and monitored waste to a leaky landfill in a wet environment would have a negative rather than positive effect. Additionally it is a false premise (EA Addendum, pg. 1-1.1, last para.) that DOE would “experience cost savings through reduction of surveillance and maintenance costs” if the waste is dispositioned to the on-site C-746-U landfill. The expense would still be Paducah Site expense shifted to leachate control, landfill monitoring and surveillance, etc. It is also false that (EA Final, pg.49-4.1.1.1, WD) “no (land use) impacts are anticipated at the Paducah site “because all of the wastes are proposed to be disposed off-site...”</p> <p>(EA Addendum, Pg. 1-1.0) “DOE must comply with NEPA by considering ... potential environmental impacts.” It is obviously the intent of Kentucky regulators to limit the amount of radioactively contaminated waste entering the C-746-U landfill as a means of protecting public health and the environment. By deferring to the AEA and not attempting to endorse or include more stringent environmental and health protective measures, DOE demonstrates a callous disregard for the protective measures provided under NEPA. Further, if DOE was indeed concerned about the “risk of spread of contamination to the environment” they would not transport approximately 7,900 m3 of low-level waste to the on-site C-746-U Landfill where, within the 10 year timeframe for waste disposition activities, that risk will become a reality. And finally, (EA final, pg. 30-3.9.2, 2nd. Para.) “because any adverse health or environmental impacts are likely to fall most heavily on the individuals nearest the Paducah facility” we oppose the proposed action and tentatively support the 2.2 Enhanced Storage Alternative for the 17,600 m3 of low-level waste added to disposition activities via this addendum.</p>	<p>DOE checked the statement on page 1.1 of the EA Addendum, that “DOE would experience a cost savings through reduction of surveillance and maintenance costs” and verified that it is an accurate statement.</p> <p>Section 4.1.1 of the EA Addendum considers land use impacts from the proposed action and alternatives.</p> <p>Comment noted regarding your support of the Enhanced Storage Alternative.</p>

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13.	4.1.1	“Land use may change from analysis.” Please clarify what is meant by this sentence.	Text has been revised to clarify that land use may change from that analyzed in DOE/EA-1339 in that some of the DMSAs would likely be turned over to the U.S. Enrichment Corporation upon removal of materials from the DMSAs.
14.	1.2 (pg.2)	Paragraph one states 17,600 m3 is low-level waste and 11,000 m3 is various types of waste. Paragraph two states all of the 28,600 m3 of waste is low-level.	Text has been revised to indicate that the 17,600 m3 is material being characterized and dispositioned and is not all low-level waste.
15.	General	Because the addendum introduces the shipment of low-level waste the EA should include a “definition” of what constitutes low-level waste. This definition should include a limit for alpha-emitters.	Low-level waste is defined in Section 2.0 Proposed Action, paragraph 2.
16.	General	How was the risk of low-level beta-gamma activity incorporated into the handling, packing, and shipping of low-level waste?	All radiological exposure impacts were analyzed in Section 4.1.3.
17.	General	The on-site C-746-U landfill is in a humid region in a wet location. It should not be considered an acceptable site for low-level waste disposal.	The EA Addendum (DOE/EA-1339A) states that only waste that meets the criteria for disposal in the C-746-U Landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification.
18.	General	If the 17,600 m3 of DMSA waste is no longer classified or considered CERCLA regulated waste does DOE order 5820.2A still apply to that waste?	DOE Order 5820.2A was replaced. DOE Order 435.1 applies to the portion of material determined to be radioactive waste.
19.	General	The manifesting of all waste shipments should include data on “waste physical and chemical characteristics, quantity of each major radionuclide present, weight of the waste, volume of the waste, other data for compliance with waste acceptance criteria.” (DOE order 5820.2A)	Waste shipments will be properly manifested in accordance with U.S. Department of Transportation regulations and DOE Order 435.1.

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20.	General	We did not receive a copy of the Final EA until May 28, 2003 even though we submitted written comments on the Draft version. Beginning in November 2002, Ruby English of Active Citizens for Truth (ACT) made numerous attempts to obtain copies of this document for review by ACT members and other local residents. On May 15, 2003 during a brief presentation on the EA Addendum at the Site Specific Advisory Board meeting, Vicki Jurka requested a copy of the final EA. Twelve days later, on May 27, Ruby English and Vicki Jurka visited the DOE Information Center and the SSAB office still seeking a copy of the Final EA (as well as other documents previously requested). On the evening of May 27, 2003, two copies of the Final EA were delivered to the English home allowing us one week to read the document and prepare comments.	Comment noted.
21.	General	The date and time of the public hearing for the EA Addendum was held exactly on the date and time of a previously announced community health seminar cosponsored by ACT and the University of Kentucky as well as on the same date and time of the local Audubon meeting. Consequently, community members who were involved in the Draft EA process and environmentalist who are interested in protecting the environment were unable to attend the public hearing.	Comment noted. For this reason, DOE also held a briefing on the EA Addendum at the Citizens Advisory Board meeting that you attended.
22.	General	Copies of the Addendum did not include the date the comment period closed or the address for submittal of comments.	The stakeholder letter accompanying the EA Addendum clearly states that comments were to be submitted to David Allen (address provided) prior to June 4, 2003.
23.	General	Review of several C-746-U landfill documents already show more waste slated for disposal there than the permitted capacity of the landfill.	DOE and Kentucky Oversight Regulators will monitor permitted capacity to insure permit compliance.
<i>Michael V. Welch, Manager Hazardous Waste Branch, Kentucky Department for Environmental Protection</i>			
24.	General	The Division strongly opposes use of the C-746-U Landfill for the disposal of low-level radioactive waste.	Text has been revised to indicate that the 17,600 m3 is material to be characterized and dispositioned and is not all low-level waste. Only waste that meets the criteria for disposal in the C-746-U Landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification.

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25.	General	DOE's primary exposure scenario envisions a rural resident drilling a groundwater well at the DOE property boundary near the landfill and subsequently being exposed to contaminated groundwater sourced from the landfill. DOE should also consider the possibility that a resident might construct a home and drinking water well directly on top of the landfill. While perhaps a remote possibility, the likelihood of this occurring at sometime in the future is not out of the question, especially when one considers the geologic timeframes associated with the decay of U-238 and other radionuclides of concern. What provisions will DOE make to insure that the landfill is not compromised in this way?	Text has been revised to indicate that the 17,600 m ³ is material to be characterized and dispositioned and is not all low-level waste. Only waste that meets the criteria for disposal in the C-746-U Landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification.
26.	General	DOE's addendum is deficient in that it fails to incorporate any land use control language. It would appear that DOE is preparing to place low-level radioactive waste into the C-746-U Landfill without first spelling out the controls that will insure that the landfill remains protective of human health and the environment. With regards to potential direct exposure to these wastes in the future, how does the DOE intend to insure that such exposures do not occur? At present the DOE has not committed to long-term stewardship of this facility. DOE must implement and maintain controls to insure that direct contact exposure is prevented.	Text has been revised to indicate that the 17,600 m ³ is material to be characterized and dispositioned and is not all low-level waste. Only waste that meets the criteria for disposal in the C-746-U Landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification.
27.	General	If low-level waste is eventually deposited in the landfill, the typical thirty (30) year postclosure groundwater-monitoring period required for a solid waste facility is no longer appropriate. In order to insure that the landfill remains protective of human health and the environment, monitoring should continue until such time as the radioactive materials stored in the landfill no longer pose a significant threat if released into the groundwater. Given the nature of these contaminants, groundwater monitoring may be required in perpetuity.	Text has been revised to indicate that the 17,600 m ³ is material to be characterized and dispositioned and is not all low-level waste. Only waste that meets the criteria for disposal in the C-746-U Landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification.
28.	General	The document is confusing in regards to the term "low-level waste". The document proposes that an additional 17,600 m ³ of low-level waste be disposed in the C-746-U Landfill. However in Section 2.3.1 the following statement is made: "Based on the Record of Decision for the Department of Energy's Waste management program: Treatment and Disposal of Low-Level Waste and Mixed Waste, (January 1998, 63 Federal Register 3629), DOE has determined that low-level waste should be disposed at the Nevada Test Site or the Hanford Site rather than constructing new landfills or landfill cells." DOE should clearly differentiate between the low-level waste proposed for disposition in the C-746-U Landfill and the low-level wastes proposed for disposition at the Nevada Test Site or the Hanford Site.	Text has been revised to indicate that the 17,600 m ³ is material to be characterized and dispositioned and is not all low-level waste. Only waste that meets the criteria for disposal in the C-746-U Landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification. The EA Addendum analyzes the impacts of transportation of low-level waste to the Hanford Site, Nevada Test Site, and commercial facilities.

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29.	General	Finally, the long term stewardship costs associated with the disposition of low-level wastes in the C-746-U Landfill have not been assessed. Additionally, DOE did not consider the alternative of dispositioning all low level wastes in existing low-level repositories at Hanford and the Nevada Test Site. The long-term stewardship costs and the alternative of off-site disposition of low-level wastes need to be rigorously evaluated within an Environmental Impact Statement and should include full public participation. The Environmental Impact Statement should also clearly differentiate between the low-level waste proposed for disposition in the C-746-U Landfill and the low-level wastes proposed for disposition at the Nevada Test Site or the Hanford Site.	Text has been revised to indicate that the 17,600 m3 is material to be characterized and dispositioned and is not all low-level waste. Only waste that meets the criteria for disposal in the C-746-U Landfill will be placed there. RCRA and low-level waste do not meet the criteria. Text of the EA Addendum will be revised for clarification.
<i>Mark Donham, Verbal Comments Received at Citizens Advisory Board meeting</i>			
28.	General	When you're determining whether or not an action is significant, the CEQ regulations guide you to the ten significance criteria in 1508.27, one of those is cumulative impacts. There has never been a sitewide EIS looking at the cumulative impacts involved with cleanup activities at one time, done for the Paducah Site.	The cumulative impacts of DOE/EA-1339 are still valid for the EA Addendum. DOE's position is that the impacts analysis is in compliance with National Environmental Policy Act (NEPA) requirements.
29.	General	I don't believe this EA looks at the impacts on the environment of waste disposal itself and the transportation.	The EA Addendum Sections 4.0 and 5.0 address the impacts associated with the proposed action and alternatives.