



## Department of Energy

Oak Ridge Operations Office  
P.O. Box 2001  
Oak Ridge, Tennessee 37831—

January 18, 2002

Mr. Luther Gibson  
Chair  
Oak Ridge Site Specific Advisory Board  
P.O. Box 2001, EM-90  
Oak Ridge, TN 37831

Dear Mr. Gibson:

**RESPONSE TO RECOMMENDATION: COMMENTS ON ENGINEERING  
EVALUATION/COST ANALYSIS FOR THE DECONTAMINATION AND  
DECOMMISSIONING OF THE K-25 AND K-27 BUILDINGS AT THE EAST TENNESSEE  
TECHNOLOGY PARK (DOE/OR/01-1917&D3)**

Enclosed you will find the letter transmitting the *Action Memorandum for the Decontamination and Decommissioning of the K-25 and K-27 Buildings, East Tennessee Technology Park, Oak Ridge, Tennessee* (DOE/OR/1988&D1). Enclosed with the letter is a copy of the Board's comments and other public comments received on this document and Department of Energy (DOE's) response to these comments.

Thank you for your continued advice and recommendations. If you have questions, you may contact Pat Halsey (576-4025) of my staff.

Sincerely,

A handwritten signature in cursive script that reads "Lori Fritz".

Lori Fritz, Acting Assistant Manager for  
Environmental Management

cc w/enclosures:  
Pat Halsey, EM-922, ORO  
Jim Kopotic, EM-911, ORO  
Myrna Redfield, EM-91, ORO  
Connie Jones, EPA 4  
John Owsley, TDEC

REC'D OCT 26 2001



Department of Energy

Oak Ridge Operations Office  
P.O. Box 2001  
Oak Ridge, Tennessee 37831—

October 25, 2001

Ms. Martha Berry  
U.S. Environmental Protection Agency  
Region 4  
Atlanta Federal Center  
Atlanta, Georgia 30303-3104

Mr. Randy Young  
DOE Oversight Division  
Tennessee Department of Environment  
and Conservation  
761 Emory Road  
Oak Ridge, Tennessee 37830-7072

***ACTION MEMORANDUM FOR THE DECONTAMINATION AND DECOMMISSIONING OF THE K-25 AND K-27 BUILDINGS, EAST TENNESSEE TECHNOLOGY PARK, OAK RIDGE, TENNESSEE (DOE/OR/01-1988&D1)***

***WASTE CHARACTERIZATION PROCESS FOR THE K-25/K-27 HAZARDOUS MATERIALS ABATEMENT, EAST TENNESSEE TECHNOLOGY PARK, OAK RIDGE, TENNESSEE (DOE/OR/01-2001&D1)***

***REMOVAL ACTION WORK PLAN PHASE 1, HAZARDOUS MATERIALS ABATEMENT FOR THE DECONTAMINATION AND DECOMMISSIONING OF THE K-25 AND K-27 BUILDINGS PROJECT, EAST TENNESSEE TECHNOLOGY PARK, OAK RIDGE, TENNESSEE (DOE/OR/01-1989&D1)***

***SAMPLING AND ANALYSIS PLAN K-25 AND K-27 HAZARDOUS MATERIAL ABATEMENT (DFS-K25-SAP-001 REVISION D)***

Dear Ms. Berry and Mr. Young:

Enclosed are copies of the above four subject documents. As requested by the Environmental Protection Agency (EPA) and the Tennessee Department of Environment and Conservation (TDEC), submittal of the *Action Memorandum for the Decontamination and Decommissioning of the K-25 and K-27 Buildings, East Tennessee Technology Park, Oak Ridge, Tennessee* (DOE/OR/01-1988&D1) was delayed two weeks to satisfy your requests that this document be submitted with the *Removal Action Work Plan Phase 1, Hazardous Materials*

Martha Berry  
Randy Young

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October 25, 2001

*Abatement for the Decontamination and Decommissioning of the K-25 and K-27 Buildings Project, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-1989&D1).* Submittal of the action memorandum fulfills the Federal Facility Agreement milestone to provide the D1 version of this document to EPA and TDEC by October 31, 2001.

Also enclosed are copies of the *Waste Characterization Process for the K-25/K-27 Hazardous Materials Abatement, East Tennessee Technology Park, Oak Ridge, Tennessee (DOE/OR/01-2001&D1)* and the *Sampling and Analysis Plan K-25 and K-27 Hazardous Material Abatement (DFS-K25-SAP-001 Revision D)* for your review and comment. A copy of the proposed Administrative Record Index dated October 8, 2001 has also been enclosed for your review and comment.

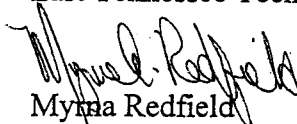
The Department of Energy (DOE) would like to initiate characterization activities in November 2001 for the asbestos removal phase of work. DOE would appreciate if a focused and accelerated review of the Waste Characterization Process and the Sampling and Analysis Plan documents be completed within 20 calendar days. The actual asbestos removal/abatement activities will not begin until the Action Memorandum is finalized and signed, and the comments are resolved on the Removal Action Work Plan.

If you should have any questions or comments regarding this project or the enclosed documents please contact Jim Kopotic at (865) 576-9441.

Sincerely,



Donna Perez, Site Manager  
East Tennessee Technology Park



Myrna Redfield  
Project Manager  
Federal Facility Agreement  
ORR Remediation Management Group

cc w/ enclosures:  
Judson Lilly, DOE-HQ  
Myrna Redfield, DOE, 55 Jefferson  
Robert Jolley, TDEC  
Constance Jones, EPA  
ETTP Site Office Library

see page -3- for continued cc list

Martha Berry  
Randy Young

-3-

October 25, 2001

cc w/o enclosures:  
SSAB  
LOC

<p>DOCUMENT: <i>Engineering Evaluation/Cost Analysis for the Decontamination and Decommissioning of the K-25 and K-27 Buildings at the East Tennessee Technology Park, Oak Ridge, Tennessee</i></p> <p>DOCUMENT NUMBER: DOE/OR/01-1917&amp;D3</p>	<p>DATE COMMENTS ARE DUE:</p>
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**OAK RIDGE PROGRAM DIVISION DOCUMENT REVIEW FORM**

<p>NAME OF REVIEWER: Public comments received during extended 60 day comment period</p>	<p>ORGANIZATION: Public Comments</p>
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COMMENT NO.	SECT/PAGE	COMMENT	RESPONSE
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<p>1.</p>	<p>SUBMITTED by e-mail</p>	<p>Similar comments received regarding waste acceptance issues are as follows:</p> <ul style="list-style-type: none"> <li>• How will issues of size, void space, and placing and protecting classified material be addressed within the EMWWMF?</li> <li>• How will DOE evaluate acceptability of the converters relative to the EMWWMF WAC?</li> <li>• How will DOE survey the converters?</li> </ul>	<p>EMWWMF has issued a document entitled "<i>Attainment Plan for Risk/Toxicity-Based Waste Acceptance Criteria at the Oak Ridge Reservation</i>," DOE/OR/01-1909&amp;D2 that includes requirements for physical waste acceptance criteria (WAC). The physical WAC are derived from operational constraints and contractual agreements between DOE and the Integration contractor, Bechtel Jacobs Company, LLC, (BJC) and its EMWWMF operations subcontractor. Exceptions to the physical WAC can be requested by response action subcontractors and obtained through negotiations between the subcontractor and the EMWWMF operations subcontractor. These physical parameters include weight, size, and concentration restrictions and must not compromise the integrity of the cap or liner. A review of the structural integrity of a converter was evaluated to assess the potential for EMWWMF subsidence as a result of equipment collapse. The results indicate that the converters could withstand the loading at the bottom of the EMWWMF and therefore subsidence of the EMWWMF due to</p>
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1			<p>collapse of the equipment is unlikely. The EMWWMF will be capable of accepting classified equipment such as the K-25 and K-27 equipment and will include appropriate operating and physical controls to ensure the protection of classified materials. Because the classified materials are internal to the sealed equipment, placement in the EMWWMF will not be a visual security concern.</p> <p>Acceptability of the converters relative to the EMWWMF WAC will be determined following the <i>Attainment Plan for Risk/Toxicity-Based Waste Acceptance Criteria at the Oak Ridge Reservation</i>, DOE/OR/01-1909&amp;D2. DOE intends to characterize the converters and other equipment by sampling and analysis techniques to develop a waste profile for use in determining their acceptability to meet the EMWWMF WAC. An EMWWMF WAC Attainment Team will review the waste profile and approve or disapprove the waste for disposal in the EMWWMF. Equipment that does not meet the EMWWMF WAC will be sent to Nevada Test Site (NTS) for disposal. Regulatory oversight of this process will occur by both the Tennessee Department of Environment and Conservation and the Environmental Protection Agency.</p>

1 Continued

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1 Continued			Concerning survey of the converters, the converters came in contact with radioactive process gas and will therefore be treated as radioactive material. They will not be subject to the surface survey process for free release of surface contaminated items. The converters will be packaged for shipment in accordance with Department of Transportation regulations. The packaged equipment and conveyance will be surveyed (both removable contamination survey and dose rate survey) to Department of Transportation requirements.
2.	SUBMITTED by e-mail	How will macroencapsulation be performed?	The EE/CA D3 recommended removal action alternative does not include macroencapsulation as an alternative for the containment of radionuclides.
3.	SUBMITTED by e-mail	It is the nature of the level of documentation required for this type of action that a range of demolition technologies is presented without a thorough evaluation of the emissions that will be produced and that the viability of some of the options won't be evaluated further until the design phase. Not sure how this can be addressed without opening up the discussion on CERCLA vs. NEPA.	The EE/CA documents a decontamination & decommissioning (D&D) project. As stated in the EE/CA, the selected alternative, controlled demolition to slab is protective of human health and the environment, and will meet applicable or relevant and appropriate requirements. The demolition techniques presented in the EE/CA are standard industry practices that are in current use at ETTP and other DOE sites. Use of these techniques is cost effective and environmentally compliant including emissions produced during their use. Monitoring is conducted during the demolition phase to ensure the emission controls are effective to maintain environmental compliance.

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3 Continued			<p>DOE issued a "Secretarial Policy Statement on NEPA" stating that DOE will rely on the CERCLA process for review of actions taken under CERCLA, and that CERCLA documents will incorporate NEPA values to the extent practicable. NEPA values were evaluated in this EE/CA as stated in section 5.6. In addition, background NEPA analyses for a broad scope of actions were considered within an environmental assessment (EA) prepared to evaluate the proposed expansion of the program of leasing land and facilities. The EA also provides a complete description of the area potentially affected by the D&amp;D actions being considered in the EE/CA, and is considered additional information about the existing environment at the ETTP.</p>
4.	<p>SUBMITTED by LOC</p>	<p>The Citizen's Advisory Panel (CAP) is concerned that this EE/CA is another document in a series of documents that do not follow either the <i>Annotated Outlines for Documents Required by FFA and CERCLA for Oak Ridge Reservation Sites DOE/OR/01-1077</i> or <i>Annotated outlines for Documents Required by FFA and CERCLA for Oak Ridge Reservation Sites DOE/OR/01-107&amp;DI, Rev. 2</i>. After transition from the Management and Operations prime contract to the Management and Integration prime contract, FFA and CERCLA documents lost any semblance of order and consistency. It is difficult for a reviewer to know if all required entries are present in these documents. The CAP recommends that DOE promptly finalize, adopt, and strictly implement the new and revised Annotated Outlines.</p>	<p>The development of the EE/CA began prior to the preparation and issuance of the current version of the Annotated Outline document, DOE/OR/01-1077/R1. The EE/CA does not strictly follow the current outline, however, the content of the document is similar although section titles may differ. Additionally, a review of the EE/CA against the outline was performed to ensure completeness of the EE/CA. The current annotated outlines have been issued for use but are still under review by the regulatory agencies. Minor changes are likely in the future.</p>



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5.	SUBMITTED by LOC	The CAP agrees with the selection of Alternative 4-b as the preferred alternative, but only if combined with broadly acceptable historic preservation activities.	DOE has been undergoing the required consultation process required under Section 106 of the National Historic Preservation Act to arrive at the broadly accepted historic preservation activities for the project. The consultation process includes the Tennessee State Historic Preservation Officer, the Federal Advisory Council on Historic Preservation, and local interested parties such as the City of Oak Ridge and the Oak Ridge Heritage and Preservation Association. Based on the consultation meetings and using the input from the public comment period of the EE/CA, DOE is negotiating the Memorandum of Agreement (MOA) that documents the terms of historical preservation for work performed in the K-25 and K-27 Buildings. The MOA will be finalized with the consulting parties and other interested parties to set forth the measures to preserve the history of these facilities. DOE will ensure that these stipulations will be implemented in order to preserve the historic significance of these properties
6.	SUBMITTED by LOC	This complex document has a number of potential errors, but the CAP is not properly educated to make a determination. For instance, in Alternative 3 the summary rejection of any liquid treatment either for this alternative or the fraction meeting the Waste Acceptance Criteria of the CERCLA Waste Cell seems arbitrary. Likewise the analyses for industrial reuse restrict the consideration to a single tenant. One last example is purging. From the descriptions given for purging, it is not clear how purging works, but as one of our CAP members	See comment 14 for the response to the Alternative 3 liquid treatment comment. Because of the current physical condition of the buildings and the past processes that occurred in the buildings, no beneficial reuse for the K-25 or K-27 buildings have been identified. Reuse of other usable facilities has occurred with over 30 commercial tenants currently

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6 Continued		postulated "maybe it isn't important to know." The CAP recommends that DOE have an impartial outside review of this document to test not only the logic but also the scientific assumptions and technical declarations.	at EITP. A description of the purge units and their usage during diffusion plant operations is found in Section 2.2.3 page 2-15. DOE believes that EPA and TDEC are impartial external reviewers.
7.	SUBMITTED by LOC	The removal action seems to include the removal of stored wastes and other materials as well as the D&D of the buildings. These should be two separate actions, and it is not clear that the former requires any sort of decision document as these wastes and materials were stored for a variety of purposes and programs.	Various equipment and materials stored within the K-25 and K-27 buildings are currently not included within the scope of this CERCLA action. Those items assigned to specific organizations or programs are currently planned for removal. Any materials remaining will be then added to this removal action, and disposition based on regulatory requirements will be determined at that time.
8.	SUBMITTED by e-mail	What cost was considered for the security concerns during the D&D remediation of the buildings?	The project cost estimates considered security personnel for workers working in each of the three major phases of the project; Hazardous Material Abatement; Process Equipment Removal; and Building Decontamination and Demolition.
9.	SUBMITTED by e-mail	Of the four options provided for consideration in the D&D of buildings K-25 and K-27, the first option of "no action" does have a cost. Security and other issues remain. If you dropped surveillance and maintenance, security cost may decrease (from current cost) but some level of security will still be required. That security costs.	If Alternative I were implemented, all actions come to a halt and there would be no cost. However, this is not a viable alternative.
10.	Section 5.4.1.1 SUBMITTED by e-mail	In section 5.4.1.1 and similar discussions, there seems that an exemption to DOT regulations will be implemented by temporarily closing public highways on the reservation. The logistics and frequency need to be explained.	Specific details describing the logistics used to transport process equipment to accomplish the activities required by the chosen alternative will be developed after an alternative is approved. A plan will be written by the phase II subcontractor.

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11.	Page 1-6 SUBMITTED by e-mail	On page 1-6, last paragraph, discussion should recognize traces of neptunium and plutonium as hazards (reference page 2-19)	Samples were analyzed for neptunium and plutonium. Sampling results reported these TRU radionuclides present only in trace quantities and are not the controlling radionuclide of concern for worker health. Therefore they are not included as "hazards to the worker."
12.	Section 2.4, Summary of Nature and Extent of Contamination SUBMITTED by LOC	This section, pages 2-19 through 2-27 is interesting, but public input is left out of the final decision on disposition (see end of paragraph on page 2-26). The criteria for disposition of the remaining contents should be listed.	Various equipment and materials stored within the K-25 and K-27 buildings are currently not included within the scope of this CERCLA action. Those items assigned to specific organizations or programs are currently planned for removal. Any materials remaining will be then added to this removal action, and disposition based on regulatory requirements will be determined at that time.
13.	Page 1-1. Section 1.1 SUBMITTED by LOC	The summary rejection of any liquid treatment, either for Alternative 3 or for increasing the fraction meeting the WAC of the Bear Creek cell, seems arbitrary. The main contamination in pipes and equipment appears to be uranyl fluoride and technetium, almost certainly Tc (VII). Both of these are highly soluble in water. Plutonium and neptunium contamination would also likely be soluble. It is true that there could be worries about criticality in the operation, but inclusion of a neutron poison in the flush should control this. Liquid would easily get into the nooks and crannies where possible buildup of material could then be removed. In addition, there might be some value in recovering the uranium in the washes. The worries. About proliferation security, contamination escaping the building, and the dangers to workers engaged in S&M would be greatly reduced even if the equipment were left in place after washing. It probably wouldn't suffice to make	The use of liquid treatment was not evaluated further because of technical and cost effectiveness issues as well as worker exposure and security concerns. Liquid decontamination treatments were used during operations of the gaseous diffusion plant after equipment was removed from the system and disassembled. The pieces were subjected to acid washes that removed much, but not all of the contamination. The wash was performed under safe geometry controls to ensure nuclear criticality safety. The use of a wash in-situ to the equipment, even with the addition of a neutron poison, would

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13 Continued		the preservation alternative of a visitor walkway isolated from the building (pg B-129) acceptable, but liquid treatment might reduce the real and expensive concerns about shipments to NTS.	be both difficult and expensive to meet current standards for nuclear safety as extensive batch and moderation controls would be required to prevent buildup of an unacceptably enriched uranium solution. Even assuming the flush was technically feasible, the cracks and crevices either untouched or inaccessible in the equipment would not allow the equipment to be cleaned to free-release levels and the equipment would still need to be disposed of as Low Level Waste either at EMWMF or NTS. Additionally, a liquid treatment would not eliminate security because the equipment would still remain classified. These technical and cost issues coupled with increased worker exposure and security concerns make this approach less feasible than the preferred approach to dispose of the equipment directly.
14.	SUBMITTED by e-mail	In alternative 3, there's no stated volume of waste generated (although there is in alternative 4). A cost estimate is not possible without this volume. Same problem in Appendix D.	Alternative 3 volume estimates were generated for use in preparing the cost estimates but not included in the EE/CA.

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	<p><b>SUBMITTED</b> by card</p>	<p>Many comments detailed historic preservation concerns. A compilation of these comments follows:</p> <ul style="list-style-type: none"> <li>As part of its designated status among the Manhattan Project sites, representative and in-tact parts of the K-25 Building must be saved, reconstructed, and displayed as evidence for future generations of the engineering significance that the gaseous diffusion process played. An entire cell is the smallest representative piece of the process itself. Other artifacts at minimum should include a process gas analyzer, a control panel, a Valley Iron Pump, and others as appropriate. A few sections of the transite panels would add to a display, as well as other artifacts.</li> <li>I really feel strongly that a section of K-25 needs to be kept, and made accessible to the public. The barrier needs to be removed and replaced with metal tubing. The insides of the seals need to be removed. There are no more classification restrictions. Clean it up, paint and show it off.</li> <li>What provisions are in place for removing historical items (from small equipment &amp; loose artifacts to cell structures) before K-25 becomes off-limits to all but demolition crews?</li> <li>Should be speaking about preservation instead of demolition. Should have a sit down meeting instead of show &amp; tell.</li> <li>As a resident of Oak Ridge since 1945 I am extremely disappointed in the way this meeting was held. Most residents of Oak Ridge thought this would be a sit down meeting with DOE explaining their views and a time for citizens</li> </ul>	<p>DOE recognizes the K-25 building as one of the most historical facilities in the DOE complex and has been undergoing the required consultation process required under Section 106 of the National Historic Preservation Act. The consultation process includes the Tennessee State Historic Preservation Officer, the Federal Advisory Council on Historic Preservation, and local interested parties such as the City of Oak Ridge and the Oak Ridge Heritage and Preservation Association. As part of the consultation, a study was prepared to evaluate the possibility of avoiding demolition of the K-25 Building. The study looked at different approaches that might be taken to avoid demolition while still meeting CERCLA cleanup objectives, eliminating the security issues from the enriched uranium and classified materials contained throughout the building's equipment, and making the building safe for access. The report titled "Alternative Study on Avoiding Demolition of the K-25 Building Located at the East Tennessee Technology Park, Oak Ridge, Tennessee" (BJC/OR-921) is included in the EE/CA Appendix B. The conclusion in the report was that the structure preservation alternatives studied either did not meet the cleanup objectives or were not cost effective compared to the base case of demolishing the structure to achieve cost effective cleanup goals.</p>
15.	<p><b>SUBMITTED</b> by card</p>		

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SUBMITTED by card	SUBMITTED by card	<p>to respond. A most cut &amp; dry meeting. Most DOE employee's I talked with had no idea what the Manhattan Project was or even (<i>what it</i>) means to most Oak Ridgers and America. Very sad DOE wants to destroy American History.</p> <ul style="list-style-type: none"> <li>• The K-25 Bldg is a premier symbol of the dawning of the atomic age and should be preserved as a major landmark and legacy of Oak Ridge and the nation. As an alternative to total demolition, the massive structure could be abandoned in place, with the roof and sides repaired to prevent water leakage. A security fence could also be built around the entire structure. This would retard its continuing deterioration until some 'future technology' provides a much less costly cleanup of the facility, or perhaps even a massive containment to entomb this superstructure permanently.</li> <li>• My father worked at K-25 from 1945 until 1961. Considering the bomb was the biggest event to happen in the last 10 years. I think it has the greatest historical significance (K-25) and some of it needs to be saved.</li> </ul>	<p>Further study of structure preservation alternatives was not considered. Following a review of this report, the Tennessee State Historic Preservation Office has issued DOE a letter stating "We believe that your most recent report makes a good case for your agency's assertions that you have taken the significance of these two buildings into account and have made a good faith effort to examine alternatives to demolition. Therefore, we are willing to discuss with you the preparation of a memorandum of agreement that will stipulate how project effects will be minimized and mitigated."</p> <p>The recent EE/CA Public Review satisfied the public involvement requirements under Section 106 for input on historic preservation of the K-25 Building as well as the proposed CERCLA action. Based on the consultation meetings and using the public input from the comment period on the EE/CA, DOE is negotiating the Memorandum of Agreement (MOA) that documents the agreed upon terms of preservation of the historical significance for the K-25 and K-27 Buildings. The MOA will be finalized with the consulting parties and with the participation of other interested parties to set forth the measures to preserve the history of these</p>
15 Continued	SUBMITTED by card		

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	SUBMITTED by card	<ul style="list-style-type: none"> <li>DOE should study and plan a proper place for collection, preservation, exhibition, display samples or part of the K-25/K-27 history and 1940's technology. Buildings could be saved in part by leaving "ghost structures" to give future historians, visitors, etc. an idea of the building, equipment sites. This material should be displayed appropriately on-site, by local museums, and in the Smithsonian in D. C.</li> <li>Fact: plumbing requirements almost unbelievable. 3 million feet of corrosion-proof piping (stretch from Chicago to St. Louis and back). New pumps, seals and connections had to be invented and manufactured to confine uranium gas. Even the barriers had to be clog-proof. With all this special care in the building, (this) don't you feel that many more special materials were used? This building was built to last. It's the largest of its kind and will never be again. Clean it up. Maintain its importance. Preserve its history. The building speaks for itself. Oak Ridge needs all the attraction it can get. It help save the world.</li> </ul>	<p>facilities. Actions being considered to commemorate the history associated with the K-25 and K-27 Buildings include preserving selected equipment such as the Roosevelt Cell and other artifacts from the building, historical monuments and markers of the building boundary, models, etc. Documentation including photographs, drawings and specifications documenting the design and current conditions and surrounding landscapes around Buildings K-25 and K-27 would also be made available.</p> <p>Upon approval of the MOA, DOE will ensure these terms will be implemented in order to preserve the historic significance of these properties.</p>
15 Continued	SUBMITTED by card	<ul style="list-style-type: none"> <li>If the entire K-25 Building cannot be saved, then at least preserve and display a portion of it with a cell, old-style compressors, and original manually-operated controls (Roosevelt cell in K-303-7). Also, the entire outline of the "U" should be distinctively and permanently marked to show future generations the extent of the project.</li> </ul>	
	SUBMITTED by card	<ul style="list-style-type: none"> <li>Install permanent markers that clearly show the impressive size of the K-25 Building. Save at least 1 cell for display.</li> </ul>	

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RESPONSE

SUBMITTED  
by card

- DOE has a responsibility to the citizens of the USA, Tennessee, and the City of Oak Ridge to preserve and fund a part of the legacy of the "Manhattan Project." It is inexcusable to continue destroying "all" of our history without regard to its historical importance. DOE contractors, etc. should also be charged with a responsibility to collect and display, preserve items of historical importance - i.e. the graphite reactor.

SUBMITTED  
by LOC

- The CAP and the LOC strongly support historical preservation of the K-25 facility and we are uneasy about the pending D&D of this Manhattan Project Signature Facility. The dismissive tone of the EE/CA and the lack of a broadly acceptable historical preservation planning process add to our concern. Clearly, the EE/CA is not an acceptable substitute for a historical preservation plan, which must be in place before any D&D activities begin. Such a plan should incorporate input from the public, both local and nationwide, and should be undertaken by an architectural/engineering firm with experience in restoration and preservation of distressed historic buildings.

15 Continued

SUBMITTED  
by ANS/ORKS

The American Nuclear Society Oak Ridge/Knoxville Section (ANS/ORKS) would like to voice its support to the local community's efforts in the historical preservation of the K-25 facilities or portions thereof. ANS honors historically significant locations by declaring them Nuclear Historic Landmarks. This designation has been applied to the K-25 Building. While it is not in the mission of ANS/ORKS to preserve historical facilities, we do have strong educational outreach activities. For example, we propose to have a "Manhattan Project Trail" similar to the Civil War Trails in Virginia and Tennessee. The trail would include the American Museum of Science and Energy, the Graphite Reactor, Katie's Kitchen, K-25, the calutrons, etc. The historic as proposed would benefit science education immensely. Before



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		<p>complete demolition of this historic K-25 building is planned, we strongly urge the DOE to consider all options for historic preservation. We understand that preserved sites cannot be maintained by the DOE, and that such sites would require commitment, organization, and funding from community sources. We urge DOE to support the community by 1) defining specific actions that must be taken by community groups to demonstrate commitment and plans for maintenance, and 2) allowing a reasonable amount of time for submission of these plans to the DOE before decisions are made.</p> <ul style="list-style-type: none"> <li>The American Nuclear Society Oak Ridge/Knoxville Section (ANS/ORKS) wrote you (copy of letter attached) on September 6, 2001, to voice support for the "local community's effort in the historical preservation of the K-25 facilities." The American Nuclear Society (ANS) recognized the importance of the K-25 Gaseous Diffusion Process Building when our Board of Directors approved the site for an ANS Nuclear Historic Landmark Award in May 1990. That award identifies and memorializes sites or facilities where outstanding physical accomplishments took place which were instrumental in the advancement and implementation of nuclear technology and the peaceful uses of nuclear energy. In her letter to you, Bernadette Kirk, the Chair of ANS/ORKS, urged that DOE consider all options for historic preservation. I would like to add the voice of ANS to that of the ANS Oak Ridge/Knoxville Section supporting the local community's efforts for historical preservation of the K-25 facilities. I urge that DOE will take into account the historic and scientific significance of the K-25 site as well as the support and recommendations offered by the local section of ANS before final decisions are formulated.</li> </ul>	

15 Continued

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	SUBMITTED by letter	<p>The preferred option 4b projects that after an expense of \$250 to \$300 million we end up with two concrete pads, one forty acres and the other ten acres. In the process, virtually everything of K-25's historical significance to the Manhattan Project will have been demolished. This may be the best we can do, but local citizens can be forgiven for raising questions. As I read it, equipment will be disassembled, but not decontaminated, and disposed of in the projected Bear Creek facility if it meets the waste acceptance criteria, and in NTS if it doesn't. This represents about 56% of the total cost (Table on page D-23), presumably including transportation and tipping charges. If decontaminated, this line becomes about 70% of the total (Alternative 3, page D-15). The difference in the two numbers, about \$130 million, is presumably mainly the cost of decontamination, although the other operations packed in the figures are of course somewhat different for the two cases. Decontamination costs are estimated for laborious dry procedures (likely risky for workers), apparently because of the danger of critical excursions if liquids are used. The options provided by the high solubility of uranyl fluoride and of the technetium (probably present as Tc (VII)) in water are therefore precluded. We certainly don't want any repeats of the event at Y-12 in the fifties, and the moderating properties of water, at least in the sections where there is significant enrichment of U-235, are definitely a concern, maybe a prohibitive one. Criticality is not a subject on which I am knowledgeable, but I wonder if including neutron sinks in the water, say cadmium or boron salts, along with geometry controls on the decontamination solution, would make dissolving the main contaminants safe. It certainly should be cheaper than the methods used in the comparisons and might alleviate uneasiness about transporting and burying substantial quantities of U-235 sealed up in equipment, even with safeguards incorporated. There might be a small cost offset in the recovered enriched material. I think the document should discuss</p>	
15	Continued		

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this possibility. If liquid decontamination were feasible, it might open other options for historical preservation (B-115 to B-130). Some of the concerns about Case 3 (leaving the building in place with only essential structural improvements, like a new roof, and isolating the public in an enclosed walkway) might be alleviated, at some cost, if equipment could be cheaply freed of proliferation-sensitive material and the possibility of escape of dangerous substances from the building reduced. Or Case 4 (preservation of the North section) incremental costs might be reduced. The equipment display in at least some of the cases is contemplated to be only of the shells. Although this would probably be satisfactory, decontamination without major disassembly might make it allowable and cheaper to leave inside components in place. In any case, before irreversible actions, more possibilities should be considered. Bureaucratic barriers on funding can be overcome politically, if there are viable alternatives. We sped a lot of money preserving and exhibiting old battlefields, and the K-25 Site is at least as important as most of them.

The "U" building at K-25 is a national asset without a current function. Any plan to convert this structure into a pristine green plain is totally without merit because of economic and national defense considerations. During the Cuban Missile Crisis, drinking water and emergency food were stored in this, virtually nuclear bomb proof facility. Today, methods of mass destruction exist complete with delivery techniques too horrible for public discussion and dissemination. Because of the Dept. of Energy's determination to get out of the enrichment business and leave no vestige of the past, intrinsic value is compared to demolition costs. Any demolition cost estimate is unpredictable. I question whether any demolition company has had experience with a structure of this shape or in drilling aged concrete made from river bed silica rock. Further more, pre-explosive drilling will produce massive quantities of fine silica dust mixed with small amounts of alpha

15 Continued

SUBMITTED  
by letter

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15 Continued		<p>particle radioactive contamination. Anyone working on or near this project could become a candidate for class action health litigation extending far into the future. Health safety efforts cannot prevent or avoid future perceived or inferred radioactive, injury claims. When all the concrete is reduced to small pieces and dust, where will it be disposed of? If the building is retained for storage or unforeseen hazardous activity existing radioactivity is not as relevant and does not have to be completely removed - only contained and monitored. Similar action would apply to water leakage on the flat roof. A program of minimal maintenance, "where or when as needed" should be considered to a "maintain as good as new" concept. Adjacent to K-25 exists unlimited and suitable for industrial use, complete removal of the "U" would result in only the addition of a few acres of the world's most expensive real estate.</p>	<p>As stated in the EE/CA, the selected alternative, controlled demolition to slab is protective of human health and the environment, and will meet applicable or relevant and appropriate requirements. The demolition techniques presented in the EE/CA are standard industry practices that are in current use at ETPP and other DOE sites. Use of these techniques is cost effective and environmentally compliant including emissions produced during their use. Monitoring is conducted during the demolition phase to ensure the emission controls are effective to maintain environmental compliance. Disposal of concrete is discussed in Section 6.3 Waste Management of the EE/CA.</p>
16.	SUBMITTED by card	<p>DOE Environmental Personnel have kept their promises to me with respect to high Tc-99 content barrier. I am satisfied with their planning. As part of the project there needs to be construction to minimize any possible high neutron exposures and to honor workers who died and all who suffered because of U-enrichment. I suggest distribution of waste from K-25 and K-27 in some consolidated form in the shape of a star for peace. The legs of the star should be covered with impervious clay and then with soil and colorful ground cover. This could be referred to as a star of peace. A small tower in the middle could represent the dove of peace. A memorial sign in a place available for public reading should honor K-25 workers who died and risked their lives. The memorial should also honor all people harmed by nuclear reactions.</p>	<p>Specific cleanup objectives for this CERCLA project include the elimination of the potential health and safety hazards to on-site personnel, criticality safety issues, and high security concerns. These objectives would not be met considering this comment.</p>

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17.	SUBMITTED by LOC	<p>The familiar name, EMWMF, is used throughout this document to represent the Record of Decision (ROD) for the Disposal of Oak Ridge Reservation Comprehensive Environmental Response, Compensation, and Liability Act of 1980 Waste (CERCLA), Oak Ridge, Tennessee, DOE/OR/01-1791&amp;D2, Oak Ridge, Tennessee. Although the full name and reference was included in the list of references under Section 7, it is not clear to the casual reader that EMWMF is the same facility referenced in (DOE 1999a) on page 7-1. A more descriptive familiar name would be the "CERCLA Waste Facility," which is also in keeping with the title of the ROD. Any future use of the term "EMWMF"—barring adoption of the CAP's proposed familiar name—in any document as a common name descriptor should clearly couple it with the ROD.</p> <p>Many comments detailed demolition concerns. A compilation of these comments follows:</p> <ul style="list-style-type: none"> <li>The safe demolition and disposal of these buildings in a timely manner is critical to the reindustrialization of the site, and to the revitalization of Oak Ridge and the surrounding area. Removal of dangerous and unusable facilities would be a positive step forward. Continuing to maintain and protect such facilities requires high cost of taxpayer resources while providing almost no return on the money spent. It is time to move beyond this situation.</li> <li>In the interest of Roane County and this country's taxpayer, I strongly feel the K-25 and K-27 demolition should proceed as quickly as possible. The health and safety concerns, along with yearly expense to monitor and maintain the building should be eliminated as soon as possible. I am a supporter of historic preservation, however given the circumstances I don't feel this building should be preserved. People will not be able to actually visit the buildings with the health and safety (security) concerns. Photos and video</li> </ul>	<p>The acronym "EMWMF" is commonly used in this EE/CA and other CERCLA documents to maintain a specific reference to the facility.</p>
18.	SUBMITTED by card	<p>Agreed. Specific cleanup objectives for this CERCLA project include the elimination of the potential health and safety hazards to on-site personnel, criticality safety issues, and high security concerns</p>	

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18 Continued	SUBMITTED by card	<p>should be adequate to preserve the history. Given the wood construction of the building, it will not last forever, therefore it should be demolished before it becomes more unsafe to work in and around.</p> <ul style="list-style-type: none"> <li>The K-25 and K-27 Buildings should be demolished as soon as possible. Not only are these buildings ugly and useless, but they also eat up a lot of tax money which could be used more effectively. The area where K-1001 used to stand looks much better now with landscaping and a flag court. The same needs to be done with K-25 and K-27. K-25 must be decommissioned and demolished. It must be done in a safe, but expedient manner and must not "stretch out" beyond 2008. The building is a danger to health and safety and American taxpayers should not be expected to pay for security and maintenance of an archaic, useless, dangerous eyesore. If there is any hope of the brownfield "reindustrialization" process being a success, K-25 and K-27 must be removed within the next 6 years.</li> </ul>	
19.	Page 1-4, Section 1.2.4 SUBMITTED by LOC	<ul style="list-style-type: none"> <li>This section should mention that Poplar Creek's water quality has also been affected by treated sewage and untreated sanitary sewer overflow from the City of Oak Ridge and by the mercury (and other contaminants) discharged from DOE's Y-12 Plant.</li> </ul>	<p>The purpose of describing EITP hydrology is to establish the general watershed characteristics in the area of this CERCLA project. The comment discusses issues beyond the scope of this project.</p>
20.	SUBMITTED by LOC Page 2-5	<ul style="list-style-type: none"> <li>This plan of the vaults is confusing. Where are 16A, 16, 15, 15A, and 7A?</li> </ul>	<p>The comments are acknowledged and will be taken into account in the preparation of future documents.</p> <ul style="list-style-type: none"> <li>Figure 2.3 represents a general layout of the basement and vault configuration for both the K-25 and K-27 Buildings. It is not intended to be specific to individual vaults. The comment</li> </ul>

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	Page 4-17	<ul style="list-style-type: none"> <li>MARSSIM is not in the table of acronyms.</li> </ul>	<p>is acknowledged and will be taken into account in the preparation of future documents.</p> <ul style="list-style-type: none"> <li>The acronym MARSSIM refers to the <i>Multi-Agency Radiological Survey and Site Investigation Manual</i>, as stated on page 4-13</li> </ul>
	Table 5.1	<ul style="list-style-type: none"> <li>In comparison of the alternatives, it is not specified that Alternative 4 and its sub alternatives also involve D&amp;D.</li> </ul>	<ul style="list-style-type: none"> <li>Table 5.1 refers to building demolition in the description of Alternative 4.</li> </ul>
	Figure 6.5	<ul style="list-style-type: none"> <li>SAP is not in the table of acronyms.</li> </ul>	<ul style="list-style-type: none"> <li>The acronym SAP refers to <i>Sampling and Analysis Plan</i>.</li> </ul>
	Page B-15, Section B.14	<ul style="list-style-type: none"> <li>Census data for 2000 should be used, rather than that for 1990. The data projected by M. N. Murray should be verified as correct based on the most recent census figures and his reference validated.</li> </ul>	<ul style="list-style-type: none"> <li>Census data for 2000 was not available when the EE/CA was drafted.</li> </ul>
20 Continued	SUBMITTED by e-mail	<ul style="list-style-type: none"> <li>On page 2-7, table 2.1 does not mention surge tanks.</li> </ul>	<ul style="list-style-type: none"> <li>The level of detail in table 2.1 does not support the addition of surge tanks, or other specific items. The surge tanks are included within the scope of the project. The purpose of the EE/CA document is to present the four project alternatives based on an evaluation for their effectiveness, implementability, and cost.</li> </ul>
	SUBMITTED by e-mail	<ul style="list-style-type: none"> <li>In figure 2.4, the cross-section of process equipment needs a detailed stage layout.</li> </ul>	<ul style="list-style-type: none"> <li>The level of detail in figure 2.4 does not support detailed stage layout drawings. The purpose of the EE/CA document is to present the four project alternatives based on an.</li> </ul>

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COMMENT NO.	SECT/PAGE	COMMENT	RESPONSE
20 Continued	Page 1-2. Figure 1.1 SUBMITTED by LOC	<ul style="list-style-type: none"> <li>The Oak Ridge Reservation (ORR) and surrounding communities. -- This map is not correct. It shows the City of Oak Ridge as a distinct entity relative to the ORR. Almost the entire ORR is inside of the city limits, excepting 806 acres in the northwest corner. Please refer to the 1999 Oak Ridge Reservation Annual Site Environmental Report, page 1-3, Figure 1.2 titled The Oak Ridge Reservation. This map clearly shows the correct boundaries for the City of Oak Ridge and the Oak Ridge Reservation</li> </ul>	<ul style="list-style-type: none"> <li>evaluation for their effectiveness, implementability, and cost.</li> <li>The map has been corrected for future documents</li> </ul>