



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

March 10, 2011

Mr. John Eschenberg
Assistant Manager for Environmental Management
DOE-Oak Ridge Office
P.O. Box 2001, EM-90
Oak Ridge, TN 37831

Dear Mr. Eschenberg:

Recommendation 196: Revised Recommendations on Alternatives to Memorialize the K-25 Building at East Tennessee Technology Park and Manhattan Project Exhibits in Oak Ridge, Tennessee

At our March 9, 2011, meeting the Oak Ridge Site Specific Advisory Board approved the enclosed recommendation related to historic preservation of the K-25 Building at East Tennessee Technology Park and other Manhattan Project exhibits in Oak Ridge.

The recommendation is based on two recent reports by Degenkolb Engineers and Informal Learning Experiences and our own Recommendation 176 of February 2009 regarding historic preservation/interpretation of the K-25 Building at East Tennessee Technology Park and other Manhattan Project activities that took place in Oak Ridge.

We ask that DOE-Oak Ridge consider these recommendations as it formulates its own mitigation plan for historic interpretation in Oak Ridge that will be presented later this year at a meeting of the signatory and consulting parties to a "Bridge" Memorandum of Agreement for Site Interpretation of the East Tennessee Technology Park issued on May 28, 2010.

Sincerely,


Ron Murphree, Chair

Enclosures

cc/enc:

Dave Adler, DOE-ORO
Cate Brennan, DOE-HQ
Fred Butterfield, DOE-HQ
Ron Woody, Roane County Executive
Pat Halsey, DOE-ORO

Connie Jones, EPA Region 4
Myron Iwanski, Anderson County Mayor
Melissa Nielson, DOE-HQ
Mark Watson, Oak Ridge City Manager
John Owsley, TDEC



**Oak Ridge Site Specific Advisory Board
Recommendation 196:
Revised Recommendations on Alternatives to
Memorialize the K-25 Building at East Tennessee
Technology Park and Manhattan Project Exhibits
in Oak Ridge, Tennessee**

Background

Various methods to acknowledge and to commemorate the historical significance of the K-25 facility during the Manhattan Project and ensuing years have been the subject of discussion and debate for several years. A review of these approaches is presented in the Background Section of the March 24, 2008, Oak Ridge Site Specific Advisory Board (ORSSAB) Recommendation 167 to the Department of Energy (DOE), “Recommendation on Historic Preservation of the K-25 Building at East Tennessee Technology Park” (along with a minority opinion from some of the ORSSAB members).

This 2008 submittal was superseded when ORSSAB unanimously approved an alternative approach to memorialize the K-25 effort (Recommendation 176, “Alternatives to Memorialize the K-25 Building at East Tennessee Technology Park,” presented below) sent to DOE on February 12, 2009, following an announcement by DOE that indicated the entire North Tower of the K-25 Building would have to be razed and would not be available for construction of an interpretive center, as was suggested in the earlier Recommendation 167.

Later in 2009, DOE hired two subcontract firms to prepare reports dealing with the subject of memorialization of the K-25 activities. One of these reports, by the Degenkolb Engineers, deals strictly with the structural integrity of the North Tower of the building and ways in which the tower (or portions of it) can be reinforced for potential use as an interpretive center for historical purposes. The second report, by Informal Learning Experiences, Inc. (ILE), deals with a broader approach to commemorating the K-25 effort, as well as suggestions for memorializing the entire Oak Ridge contribution to the Manhattan Project and the science that has since emerged at Oak Ridge and elsewhere. These two reports were issued in December 2010. ORSSAB was asked to review these reports and to evaluate them relative to its 2009 Recommendation 176 and to consider issuing a new recommendation, if necessary.

Following are presentations of the 2009 ORSSAB Recommendation 176, the Degenkolb report, and the ILE report, plus associated and relevant discussion for each. Discussion of the ORSSAB recommendation, in light of the new reports, is presented, followed by a new and modified ORSSAB recommendation.

The 2009 ORSSAB Recommendation 176

The recommendation, which was an outgrowth of the minority opinion to Recommendation 167 noted above, presented *verbatim*, follows:

“Because it appears DOE will not be able to implement ORSSAB’s Recommendation 167 and yet Mr. McCracken [then DOE manager of Oak Ridge Environmental Management] is still looking for options to commemorate K-25, ORSSAB makes the following recommendations based on points enumerated by Messrs. Bass, Murphree, Olson, and Stow, authors of the original minority opinion:

1. DOE-Oak Ridge Office should raze the North Tower of K-25 and establish an unmanned interpretive center. The preferred location is in the area of the end of the legs of K-25. The center

would contain displays, photographs, artifacts, representations, etc. that explain the history of the Manhattan Project, as well as the role and history of K-25.

2. DOE should determine who will own and maintain an East Tennessee Technology Park (ETTP) interpretive center prior to committing any actions to build a center. DOE should consider retaining possession of the center and maintaining it itself.
3. Related Manhattan Project exhibits at the American Museum of Science and Energy (AMSE) should be expanded to include a manned interpretive center that makes use of AMSE personnel and takes advantage of existing infrastructure, artifacts, and space.
4. A business and development plan should be prepared to reasonably forecast income and expenses for the K-25 interpretive center at ETTP.

Discussion, leading to this recommendation and contained in the transmittal to DOE, dealt with the following important related points:

- ORSSAB fully supports the concept of construction of an interpretive center at the K-25 site and other actions associated with historic preservation.
- ORSSAB believes that the interpretive center should be unmanned and less expansive than proposed by PKP (Partnership for K-25 Preservation), thus saving considerable capital and operating expense.
- ORSSAB suggests that consideration be given to expansion of appropriate exhibits at AMSE, in addition to the unmanned center at the ETTP/K-25 site. Advantage should be taken of existing infrastructure, artifacts, staff, and available space at AMSE.
- Estimates of 65,000 visitors annually at K-25 along with associated income at \$8 per head, seem overly optimistic in light of the paid attendance at AMSE and the per-head charge there (\$3-\$5).
- Liability of ownership to DOE and/or the community is lessened if a modest, unmanned interpretive center is constructed, rather than a manned museum-type facility.

The 2010 Degenkolb Recommendation

The Degenkolb report did not contain a “recommendation,” *per se*. Rather, it compared four alternatives (schemes), with estimated conceptual construction budgets:

1. Retention of one-third of the North Tower with process equipment, primary piping and historic structure, representing one operating unit of equipment (\$24,900,000).
2. Retention of one cell of the North Tower with process equipment, primary piping, and historic structure, representing about one-twelfth of the North Tower. A 500 square-foot visitors’ center with HVAC (heating/ventilation/air conditioning) is included (\$8,600,000).
3. Raze entire North Tower and construct new visitor’s center (interpretive center) displaying a recreated converter stage with original equipment, with a 10,000-square-foot, covered, open-air exhibit space and an elevator tower for elevated viewing (\$4,000,000).
4. Decontaminate and demolish all of the North Tower except for a portion of the façade frame and wall, retaining a small portion of the original cell floor to support one stage or one converter of original equipment, and provide adjacent area for exhibits. Elevator tower and HVAC capabilities will be included, as is a 7,000 square-foot covered area. This alternative could be operated attended or unattended (\$5,200,000).

Discussion, found within the more detailed text describing each of the four alternatives, covers the following important and related points:

- Alternatives 1, 3, and 4 would be operated as an attended (manned) facility, although all alternatives could be unmanned.
- Restroom facilities will be available in all alternatives.
- HVAC would be available in all four alternatives.

- Original asbestos panels would be retained for alternatives 1, 2, and 4.
- Artifacts would be exhibited in the basement area for alternatives 1 and 2, and in the open-air covered areas for alternatives 3 and 4.

The 2010 ILE Recommendation

The ILE report contains the following recommendation, presented *verbatim* (page 31):

“This study recommends the retention of a portion of the original building rather than construction and operation of the K-25 History Center (KHC). If, as is suggested here, the exhibits and activities of AMSE are expanded and become a more inclusive and in-depth interpretation of the Manhattan Project and its consequences, and if a portion of K-25 is preserved with original equipment and a modest (emphasis added) interpretive center inserted or added, the K-25 History Center is not needed. As we consider the current attendance at AMSE, the projected attendance at KHC, which is similar to that projected at the authentic K-25 and the annual attendance of other atomic-themed museums in the United States, the two facilities would be in direct and unnecessary competition, likely causing both to suffer if not fail altogether.” (table of attendance is presented in the report)

In addition to the recommendation cited above, additional (or explanatory) points are presented in the “Recommendations” section (p. 40-41). The following are summary statements taken from this section:

1. The interpretation of the significance of K-25 should be part of a larger interpretive package that includes the entire Oak Ridge Reservation (ORR) before, during, and after the Manhattan Project. The ideal location for the K-25 part is within a portion of the North Tower.
2. The “hub and spoke” concept should be followed as the history of the Oak Ridge facilities and community, as well as their contributions to science and technology, is described and displayed. AMSE’s (potential) involvement with Oak Ridge Associated Universities is very important.
3. A Manhattan Project National Park is an extraordinary opportunity.
4. There is a long list of stakeholders involved with diverse interests and concerns, needing a focal point. This focal point should be AMSE, as the “hub.”
5. A general statement about costs and funding is made, but with no specifics, except to say that “new forms of external funding from public or private sources” may be available in the future.

Further discussion in the ILE report deals with the following important relevant points (in no particular order):

- The establishment of a Manhattan Project National Park by the National Park Service (NPS) could be very beneficial for the Oak Ridge community, including AMSE (pages 2, 13-14, 35).
- Recognition of historic significance should be reservation-wide, with K-25 and other sites integrated into the whole package (pages 2, 4, 23-24).
- One option for the K-25 Building is “replica reconstruction” to original specifications but not necessarily on the actual K-25 site (page 2).
- Effort should be directed toward emphasizing pre-Manhattan Project history of the ORR and the post-project science and technology that has been developed at the three facilities (pages 20, 24).
- The history of Happy Valley should be told and shown (pages 33-34).
- Annual attendance at AMSE should increase and that at each site (K-25, Y-12, and X-10) it will reach 65,000 as exhibits are added and marketing is enhanced (page 36). NOTE: this attendance figure does not appear to be derived by any systematic analysis.
- Various advantages/disadvantages and DOE risks (financial) and management alternatives are briefly noted. The issue of interpretive center “ownership” is alluded to, but not defined (page 38).

Discussion

Review of the 2009 ORSSAB Recommendation 176 in Light of the Two New Reports

Evaluation of the 2009 ORSSAB Recommendation 176 in light of those of ILE and Degenkolb shows parallelism in numerous areas. For example, alternate 3 of the Degenkolb report - the least expensive alternative - well reflects the Recommendation 176 of ORSSAB (razing the entire North Tower). ORSSAB suggested the location of the new interpretive center to be at the southern end of the former K-25 building, rather than in the vicinity of the North Tower (as suggested by the two new reports) strictly because that was the preferred location of the PKP proposal for the center. The North Tower vicinity is equally acceptable to ORSSAB.

The ILE recommendation suggests that a “modest” interpretive center be constructed (preferably in association with remnants of the North Tower). ORSSAB specified an “unmanned” (i.e., modest) center in its first recommendation - primarily in order to avoid competition with AMSE, as supported by the ILE recommendation, and to prevent unnecessary operating/maintenance costs and associated liability.

Further, the ILE recommendation is strongly supportive of elevating the status of AMSE (as the “hub”) and placement of exhibit resources there, in addition to resources at the K-25 interpretive center. Such a recommendation is similarly found in the third recommendation of ORSSAB Recommendation 176.

The ORSSAB recommendations dealt with ownership of the K-25 interpretive center (second recommendation in Recommendation 176), while the ILE report only alludes to this issue. However, the ILE report clearly specifies the continued DOE involvement with the K-25 and ORR historic preservation initiatives, in no way precluding DOE ownership of certain facilities.

The ORSSAB Recommendation 176, recommendation 4 suggested development of a business and development plan to assure fiscal support for the K-25 interpretive center. The ILE report alludes to this through attendance projections and the possibility of “new forms of external funding from public or private sources.”

At the time that the 2009 ORSSAB Recommendation 176 was developed, ORSSAB was not asked to look beyond the more immediate needs of commemorating the K-25 effort, while ILE was specifically charged to address the subject in a broader, reservation-wide approach. Accordingly, the ILE report contains considerable insight on the “hub-and-spoke” approach with the importance of AMSE emphasized, the potential involvement of the NPS, and emphasis on pre- and post-Manhattan Project stories and scientific development, including Cold War issues. ORSSAB supports all of these facets and feels that they are essential to telling the Oak Ridge story.

Recommendation

Revised SSAB Recommendations

In summary, it can be said that the 2009 ORSSAB Recommendation 176 (page 1 of this recommendation) appears to be well supported by the two new reports. We reiterate those 2009 recommendations below, with slight modifications, and add two additional ones which are reflective of a broad, reservation-wide and temporally-wide approach to historic preservation:

1. DOE-Oak Ridge should raze the North Tower of K-25 and establish an unmanned interpretive center. The location could be in the area of the end of the legs of K-25 or in the vicinity of the (razed) North Tower. The center would contain displays, photographs, artifacts, representations, etc. that explain the history of K-25 related to that of the entire Manhattan Project. ORSSAB realizes there are other views of preserving the North Tower of K-25. If technologically and fiscally feasible, ORSSAB would support an interpretive center inside a preserved portion of the North Tower.

2. DOE should retain ownership of a K-25 interpretive center.
3. Related Manhattan Project exhibits at AMSE should be expanded to include a manned interpretive center that makes use of AMSE personnel and takes advantage of existing infrastructure, artifacts, and space. AMSE should be considered to be the “hub” of a reservation-wide historical preservation undertaking that operates on the “hub-and-spoke” principle.
4. A business and development plan should be prepared to reasonably forecast income and expenses for the K-25 interpretive center at ETTP.
5. DOE should work with the NPS and encourage development of a Manhattan Project National Park with appropriate emphasis on the Oak Ridge story. DOE should consult with the NPS to determine the degree of interest in K-25 preservation activities within the framework of a Manhattan Project National Park.
6. Historical preservation efforts should include relevant information on pre-Manhattan Project history for the ORR and post-Manhattan Project emphasis on science and technology growing out of project activities. DOE should take responsibility for decontamination of all artifacts prior their public display.