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U.S. Department of Energy
Oak Ridge Office of
Environmental Management

**Community Outreach Plan for the
Environmental Management Disposal Facility**

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ACRONYMS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOE	U.S. Department of Energy
EMDF	Environmental Management Disposal Facility
EMWMF	Environmental Management Waste Management Facility
EPA	U.S. Environmental Protection Agency
ETEBA	Energy Technology and Environmental Business Association
FFA	Federal Facilities Agreement
OREM	Oak Ridge Office of Environmental Management
ORNL	Oak Ridge National Laboratory
ORSSAB	Oak Ridge Site Specific Advisory Board
RI/FS	Remedial Investigation/Feasibility Study
TDEC	Tennessee Department of Environment and Conservation
Y-12	Y-12 National Security Complex

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1.0 INTRODUCTION

As part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, the U.S. Department of Energy (DOE) Oak Ridge Office of Environmental Management (OREM) is working with other parties of the Federal Facilities Agreement (FFA), U.S. Environmental Protection Agency (EPA), and Tennessee Department of Environment and Conservation (TDEC) to finalize a path forward for a proposed onsite disposal area.

OREM is providing this document to share the full range and scope of its outreach efforts regarding the proposed disposal area, known as the Environmental Management Disposal Facility (EMDF). The desire from all FFA parties is to provide opportunities for local residents to learn more about the project, location, and alternatives before confirming a site.

There are four (4) onsite alternatives under consideration for the disposal facility, ranging from approximately 0.8 to 1.14 miles from the nearest resident. DOE, EPA, and TDEC want to ensure appropriate education and interaction occurs with Oak Ridge residents, especially from the Scarboro community and Country Club Estates which are the closest residential areas to the proposed site(s) on DOE land.

Together, DOE, EPA, and TDEC are releasing this document to convey the diversified outreach initiatives to reach residents and stakeholders nearest the proposed site(s). OREM's previous and future communications to the local community are detailed in this document. As major developments occur, OREM will update this document to reflect those changes as necessary. For more information about OREM's overall community engagement efforts and opportunities for public input, please reference DOE's Public Involvement Plan.

2.0 EXPANDING COMMUNICATION OPPORTUNITIES TO RESIDENTS AND STAKEHOLDERS

Due to the nature of this project, OREM is conducting a proactive outreach that extends beyond its normal audiences. Depending on the needs of the audience, OREM implemented, and will continue to implement, activities that vary in size from large groups to individual, personalized meetings. OREM has already spoken with state, county, and city officials; nearby residents; businesses; and other community representatives with more interactions and meetings planned in the months ahead.

OREM is especially mindful of its host community and local residents as it plans the EMDF. As part of OREM's public outreach for the project, interested stakeholders have been, and will continue to be, identified to include elected officials, community and business organizations, and neighborhood communities near the proposed site(s). Outreach continues through discussion groups, presentations, and tours.

3.0 SHARING INFORMATION ON THE SITE SELECTION PROCESS

OREM has exerted significant efforts in providing technical information supporting the CERCLA remedy selection process to the public. Briefings and public discussions surrounding the proposed disposal area have incorporated the results from extensive siting studies, results from past Remedial Investigation/Feasibility Study (RI/FS) efforts, and available results from the ongoing RI/FS effort associated with this project.

In multiple public forums, OREM has shared and made information available on the performance of the existing disposal facility, geotechnical information on the various sites under consideration, information on current waste acceptance criteria and waste acceptance protocols, and available information on the risks and projected costs of the various alternatives. Since the RI/FS for the project has not yet been approved by EPA and TDEC, there are limitations on its use in public discussions. However, in its discussions and presentations, OREM works to educate stakeholders about where the RI/FS is in the process and how the public can provide input to help shape planning and decisions.

The RI/FS is currently in revision to address regulatory comments. Community concerns will be addressed both in the RI/FS and the Proposed Plan in compliance with all applicable regulatory requirements and EPA guidance. More information about the CERCLA process is available in OREM's Public Involvement Plan.

4.0 INVOLVEMENT WITH THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

OREM is committed to working cooperatively with EPA and TDEC on all CERCLA items, including the proposed EMDF. OREM relies on EPA and TDEC for valuable, independent assessments and perspective to help guide the organization's activities. OREM will formally notify and include EPA and TDEC on all communication pertaining to CERCLA-driven meetings and correspondence about EMDF. Also, to the extent practical, OREM will keep both parties aware of other meetings and outreach pertaining to this project.

5.0 CAPTURING QUESTIONS AND CONCERNS FROM THE COMMUNITY

OREM is committed to public participation in its decision-making process to entail listening to any questions and concerns from our host community, its residents, and local stakeholders. OREM collects questions it receives during each outreach activity and has consistently addressed the questions/concerns or included responsive information in subsequent public information and presentations.

All formal meetings with the Oak Ridge Site Specific Advisory Board (ORSSAB) are memorialized with official meeting notes and visual recordings. Additionally, all ORSSAB recommendations and written correspondence received on EMDF are answered with written responses. OREM will use the standard protocols for memorializing formal public comment on the upcoming Proposed Plan, including maintenance of an Administrative Record.

To date, many community members have expressed an understanding that deteriorating facilities at the Y-12 National Security Complex (Y-12) and Oak Ridge National Laboratory (ORNL) need to be addressed as quickly as possible. Disposing soil and debris in a properly designed, constructed, and operated facility is preferable to delaying cleanup due to the extremely high cost for offsite disposal. The common concerns and interests that have been recorded include:

- Negative stigma associated with the waste site to prospective businesses or residents
- Close proximity to residential neighborhoods
- Ensuring thorough geologic assessments of the proposed site(s)
- Understanding waste acceptance criteria and what will be placed at the site
- Preventing offsite contamination
- Lack of compensation from DOE to the City of Oak Ridge for hosting the disposal facility

The frequently asked questions from the City of Oak Ridge and local residents along with OREM's responses are provided in Appendix B. If you wish to contact OREM about this project, please contact Ben Williams, Community Involvement Coordinator, at Ben.Williams@orem.doe.gov.

6.0 COMMUNICATION AND OUTREACH

6.1 MEDIA

OREM has participated in interviews and submitted multiple op-eds to local papers regarding EMDF. The goal was to inform readers and residents about the importance of the project and the cleanup work it would enable.

- **Interview with the Knoxville News Sentinel Editorial Board:** On July 15, 2015, Sue Cange, OREM Manager, met with the Knoxville News Sentinel Editorial Board. The goal of this interview was to use the newspaper's larger distribution to inform readers about the importance and impact of this OREM's ongoing work and raise awareness about EMDF. She discussed OREM's ongoing projects and the agency's strategy and plan to continue its progress to clean up Oak Ridge's three (3) major sites which are: East Tennessee Technology Park (ETTP), Y-12, and ORNL. During her time with the Knoxville News Sentinel Editorial Board, she specifically discussed the proposed EMDF and how it is a crucial component that will enable a majority of the subsequent cleanup planned for the site.

- **Op-ed in The Oak Ridger:** On July 9, 2015, Ken Rueter, President of URS | CH2M Oak Ridge LLC, submitted an op-ed titled, “Staying the Course,” in the Oak Ridger. In it, he discussed URS | CH2M Oak Ridge LLC’s current work at ETTP and the shrinking capacity at the current disposal area, the Environmental Management Waste Management Facility (EMWMF). Without a new disposal area onsite, it would force OREM to send hundreds of millions of pounds of waste by truck to repositories across the country. The substantial costs required for this cross-country transportation would result in fewer cleanup activities in Oak Ridge and add years to the cleanup schedule. Specifically, this would directly and significantly impact the planned cleanup at Y-12 and ORNL.
- **Op-ed in the Oak Ridger:** On June 17, 2015, Sue Cange, OREM Manager, submitted an op-ed titled, “Finishing the Job,” to the Oak Ridger. In it, she describes the two (2) greatest needs to continue OREM’s cleanup work beyond ETTP without interruption. First is the Mercury Treatment Facility at Y-12, and the second is an onsite disposal area. The existing disposal area has operated safely for 15 years and saved hundreds of millions of dollars. Those savings have been poured back into actual cleanup, which has allowed OREM to accelerate its cleanup mission in Oak Ridge. The proposed area would offer the same.

6.2 BRIEFINGS TO ADVISORY BOARDS

OREM has regularly communicated the latest developments and plans for EMDF with its Federally-appointed citizen panel, the ORSSAB. These monthly meetings, which are open to the public, include representatives from all FFA parties and many of the communities surrounding the Oak Ridge Reservation. The Board provides a crucial and valuable interaction point with the public for feedback and recommendations. It is composed of up to 22 members that are chosen to reflect the diversity of gender, race, occupation, views, and interests of persons living near the Oak Ridge Reservation.

- **ORSSAB - January 13, 2016 – “Waste Management Practices on the Oak Ridge Reservation”:** In this briefing, representatives from OREM made presentations and discussed waste management practices on the Oak Ridge Reservation. Specifically, Brian DeMonia, Bill McMillan, and Brian Henry spoke on behalf of OREM to the Board. They discussed the various forms of waste on the Oak Ridge Reservation and where each form is sent for disposal. This information provides a deeper understanding and context for future discussions on the subject. It also addressed waste acceptance criteria, which is one (1) of the key questions from the community regarding the proposed EMDF.
- **Roane County Environmental Review Board - November 5, 2015:** Laura Wilkerson, OREM’s Y-12 Federal Portfolio Director for cleanup, provided a briefing to the Roane County Environmental Review Board. During her time with the Roane County Environmental Review Board, she discussed OREM’s ongoing projects, including the proposed EMDF. She was also able to provide clarity on the subject and answered questions they had on the subject.

- **ORSSAB - September 9, 2015 – “Y-12 Mercury Cleanup Strategy and Plan for a Y-12 Water Treatment Plant”**: Jason Darby, OREM representative, provided a presentation and led a discussion about OREM’s plan to clean up Y-12. While he did not spend time discussing EMDF, he provided an account for the environmental risks at Y-12 and why cleanup is needed.
- **ORSSAB - May 13, 2015 – “Meeting with Oak Ridge City Manager about the city's perspective on DOE EM work on the Oak Ridge Reservation”**: ORSSAB invited Mark Watson, Oak Ridge City Manager, to talk to the Board about the City of Oak Ridge’s perspectives regarding OREM. One (1) of the most significant topics during the meeting was EMDF. The City of Oak Ridge is interested in a number of issues related to the project: What will be the impact on the community especially the nearby residential areas; what are the long-term costs; what are the long-term benefits; and what are the cost comparisons of onsite disposal opposed to shipping waste offsite.
- **ORSSAB - February 11, 2015 – “Sufficient Waste Disposal Capacity on the Oak Ridge Reservation”**: Laura Wilkerson, OREM’s Y-12 Federal Portfolio Director for cleanup, gave a presentation to the ORSSAB about the status of Oak Ridge’s existing disposal area, the EMWMF. She discussed the waste that is currently going to that area, the projections of when it will reach capacity, and the need to begin planning for uninterrupted cleanup. Finally, she discussed the needs for an additional disposal area to accept the soil and debris of the remaining cleanup projects.
- **ORSSAB - August 13, 2014 – “ORSSAB receives suggestions from DOE, EPA, and TDEC on topics to consider in FY 2015”**: In Fiscal Year 2015, DOE, EPA, and TDEC requested ORSSAB to make suggestions on two (2) subjects: EMDF and the Mercury Treatment Facility. DOE’s request: Current schedules call for issuance of a Proposed Plan for addressing future disposal capacity needs in the spring of 2015. DOE will seek ORSSAB input on both the desirability of constructing additional disposal capacity and input on potential facility locations. EPA’s request: Planning is underway to prepare and submit a revised RI/FS for a new onsite land disposal facility. Issues raised in the review pertain to applicable or relevant and appropriate requirements for landfill waste water discharges, lessons learned from the existing EMWMF, and the hydro-geologic setting of the proposed onsite landfill. The alternatives will include combined waste water discharges from both the current operating landfill and the proposed landfill. The ORSSAB’s involvement in the issues raised in the review of the evaluation of alternatives will assist in efforts to incorporate input from the greater Oak Ridge community into the ongoing remedy evaluation and selection process. TDEC’s request: Ongoing siting and design of the EMDF will need to be evaluated to ensure lessons learned from the construction and operation of EMWMF are taken into account when planning for this new facility. The ORSSAB may assist in a programmatic look at future onsite waste disposal on the Oak Ridge Reservation, including topics like potential facility location, the viability of volume reduction technologies, and offsite versus onsite disposal for various types of waste. This should include the suitability of the onsite disposal for the mercury contaminated soils and debris. If deemed suitable, acceptable levels of mercury for disposal and the need for the treatment of effluents for mercury must be considered.

- **ORSSAB - January 8, 2014 - “Sufficient Waste Disposal Capacity for the Oak Ridge Reservation”:** Laura Wilkerson, OREM’s Y-12 Federal Portfolio Director for cleanup, gave a presentation to the ORSSAB about the status of Oak Ridge’s existing disposal area, the EMWMF. She discussed the waste that is currently going to that area, the projections of when it will reach capacity, and the need to begin planning for uninterrupted cleanup. Finally, she discussed the needs for an additional disposal area to accept the soil and debris of the remaining cleanup projects.
- **ORSSAB - May 11, 2016 - “Update on CERCLA Waste Disposal Capacity for the Oak Ridge Reservation”:** In May, OREM provided an update and briefing about the proposed EMDF project to the ORSSAB and members of the public who attended. OREM discussed and explained the different alternatives being considered.

6.3 PRESENTATIONS TO LOCAL ORGANIZATIONS

OREM recognizes the importance of an informed community, and it made significant efforts to communicate to numerous local organizations to reach the widest audience possible. Since some City of Oak Ridge officials expressed concerns about this project relative to the perception of Oak Ridge, OREM scheduled presentations to talk with businesses and organizations across the Oak Ridge area.

- **Presentation to Energy Technology and Environmental Business Association (ETEBA):** On March 24, 2015, Sue Cange, OREM Manager, was the guest speaker at the ETEBA monthly dinner meeting in Oak Ridge. The dinner is open to members and non-members. She spent a majority of her time discussing the plans and impact of EMDF on the progress of OREM’s work.
- **Friends of ORNL:** On February 19, 2016, Dave Adler, OREM representative, gave a presentation to the Friends of ORNL. During his time with the group, he discussed OREM’s ongoing projects, including the proposed EMDF. He spoke about the role this facility plays in the future cleanup plans for the site. He also provided an opportunity for questions and answers on the subject.
- **16th Annual ETEBA Conference:** On December 8, 2015, Sue Cange, OREM Manager, provided a keynote address at the annual ETEBA Conference. ETEBA is a non-profit trade association that represents approximately 200 small, large, and mid-sized companies that provide environmental, technology, energy, engineering, construction, and related services to government and commercial clients. The annual conference attracts hundreds of attendees from across the region. She talked about OREM’s current work and the path and strategy needed to continue cleanup progress onsite.
- **League of Women Voters, Oak Ridge Chapter:** On November 17, 2015, Laura Wilkerson, OREM’s Y-12 Federal Portfolio Director for cleanup, gave a presentation to the Oak Ridge Chapter of the League of Women Voters. During her time with the group, she discussed OREM’s ongoing projects, including the proposed EMDF. She spoke about the role this facility plays in the future cleanup plans for the site. She also provided an opportunity for questions and answers on the subject.

Oak Ridge Luncheon Rotary Club: On November 5, 2015, Laura Wilkerson, OREM's Y-12 Federal Portfolio Director for cleanup, gave a presentation to the Oak Ridge Luncheon Rotary Club. During her time with the Oak Ridge Luncheon Rotary Club, she discussed OREM's ongoing projects, including the proposed EMDF. She spoke about the role this facility plays in the future cleanup plans for the site. She also provided an opportunity for questions and answers on the subject.

- **Oak Ridge Breakfast Rotary Club:** On October 7, 2015, Laura Wilkerson, OREM's Y-12 Federal Portfolio Director for cleanup, gave a presentation to the Oak Ridge Breakfast Rotary Club. During her time with the Oak Ridge Breakfast Rotary Club, she discussed OREM's ongoing projects, including the proposed EMDF. She spoke about the role this facility plays in the future cleanup plans for the site. She also provided an opportunity for questions and answers on the subject.
- **Oak Ridge Community School:** On September 29, 2015, Dave Adler, OREM representative, spoke on the topic, "How does EM identify and prioritize cleanup," to the Oak Ridge Community School. The annual initiative is sponsored by the League of Women Voters, and it brings in speakers and local leadership to educate participants about the missions and activities happening in the region. During his presentation, he discussed the strategies and factors used to prioritize cleanup, with EMDF being a relevant subject to that discussion.
- **Oak Ridge Community School:** On September 22, 2015, Sue Cange, OREM Manager, provided an overview of the OREM Program to the Oak Ridge Community School. The annual initiative is sponsored by the League of Women Voters, and it brings in speakers and local leadership to educate participants about the missions and activities happening in the region. During her presentation, she talked about OREM's current work and the path and strategy needed to continue cleanup progress onsite.
- **East Tennessee Economic Council keynote:** On August 7, 2015, Sue Cange, OREM Manager, provided the keynote address to the East Tennessee Economic Council, an independent, regional, non-profit membership organization dedicated to supporting the Federal government's missions in Oak Ridge as well as encouraging new opportunities to fully utilize the highly-skilled talent, cutting-edge technologies, and unique facilities that make up the Federal reservation. Most attendees are from the regional business community. She talked about OREM's current work and the path and strategy needed to continue cleanup progress onsite.

6.4 DISCUSSIONS, TOURS, AND INTERACTIONS WITH STATE, COUNTY, AND CITY OFFICIALS

As mentioned above, the City of Oak Ridge sent a list of questions to OREM regarding the details and potential impact of the EMDF. OREM scheduled meetings with all interested City of Oak Ridge council members and local and State officials to participate in personalized tours of the organization's current waste disposal area, view the proposed site(s), and answer any questions regarding the proposed project.

- **Chuck Hope, Oak Ridge City Council member:** On February 26, 2016, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Kelly Callison, Oak Ridge City Council member:** On December 14, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Randy McNally/Ken Yager, Tennessee State Senators:** On September 25, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Warren Gooch, City of Oak Ridge Mayor:** On September 10, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Charles Hensley, Oak Ridge City Council member:** On September 2, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Rick Chinn, Oak Ridge City Council member:** On September 1, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Terry Frank, Anderson County Mayor:** On August 26, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Mark Watson, City Manager for City of Oak Ridge:** On August 25, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Ron Woody, Roane County Mayor:** On August 19, 2015, OREM provided a briefing and tour of the current EMWWMF disposal area. The tour also provided a view of the proposed EMDF site. During this time, OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.

6.5 CONVERSATIONS WITH RESIDENTS AND PUBLIC MEETINGS

OREM continually seeks feedback and perspective from local residents and stakeholders about its ongoing activities. When residents of the Scarboro community expressed uncertainty or concerns about EMDF, OREM worked to set up individual and groups meetings to address their

concerns, provide details about the project, and answer any questions. Additionally, OREM has participated in public meetings with the City of Oak Ridge and community that were open to all residents.

- **ETEBA Public Information Session:** On July 27, 2016, a public information session about the different alternatives listed in the RI/FS for the EMDF. The majority of the event was spent discussing the differences of the four (4) onsite alternatives for EMDF. The goal of the meeting was to raise awareness and educate the public and stakeholders about the different options before the Proposed Plan is released. Upon release, attendees are now equipped with the information necessary to share their perspective and provide meaningful comments. DOE, EPA, and TDEC all participated in a panel to share their perspectives on the project and answer questions from the audience. The event was covered by the local NBC television affiliate, the Knoxville News Sentinel, and the Oak Ridger newspaper.
- **Oak Ridge City Council meeting to respond to questions:** On March 22, 2016, Sue Cange, OREM Manager, and other Federal and contractor staff participated in a public city council meeting. During the meeting, OREM responded to questions surrounding EMDF which had been sent earlier in a resolution from the City of Oak Ridge. A list of many of the questions and OREM responses is available in Appendix B.
- **Meeting and tour for Scarboro residents:** On December 16, 2015, OREM provided a briefing and tour of the current EMWDF disposal area to interested residents. OREM Manager Sue Cange attended the meeting portion, and other Federal and contractor employees led the follow-on tour. The tour provided a view of the proposed EMDF site. OREM employees worked to answer any questions regarding OREM's waste management activities and the proposed site.
- **Public meeting with residents:** On November 17, 2015, the League of Women Voters hosted a meeting with OREM and community members to learn more about the proposed EMDF project. It provided an opportunity to discuss plans and answer questions surrounding the project.
- **Meetings with concerned residents:** On September 24, 2015, Sue Cange, OREM Manager, met with residents from the Scarboro community at the Y-12 New Hope Center who had questions or concerns about the proposed EMDF site. She provided answers and information regarding OREM's plans for the site and any potential impact.
- **Meetings with concerned residents:** On July 21, 2015, Dave Adler, OREM representative, met with residents from the Scarboro community who had questions or concerns about the proposed EMDF site. He provided answers and information regarding OREM's plans for the site and any potential impact.
- **Meetings with concerned residents:** On June 24, 2015, Dave Adler, OREM representative, met with residents from the Scarboro community who had questions or concerns about the proposed EMDF site. He provided answers and information regarding OREM's plans for the site and any potential impact.

7.0 PLANNED OUTREACH

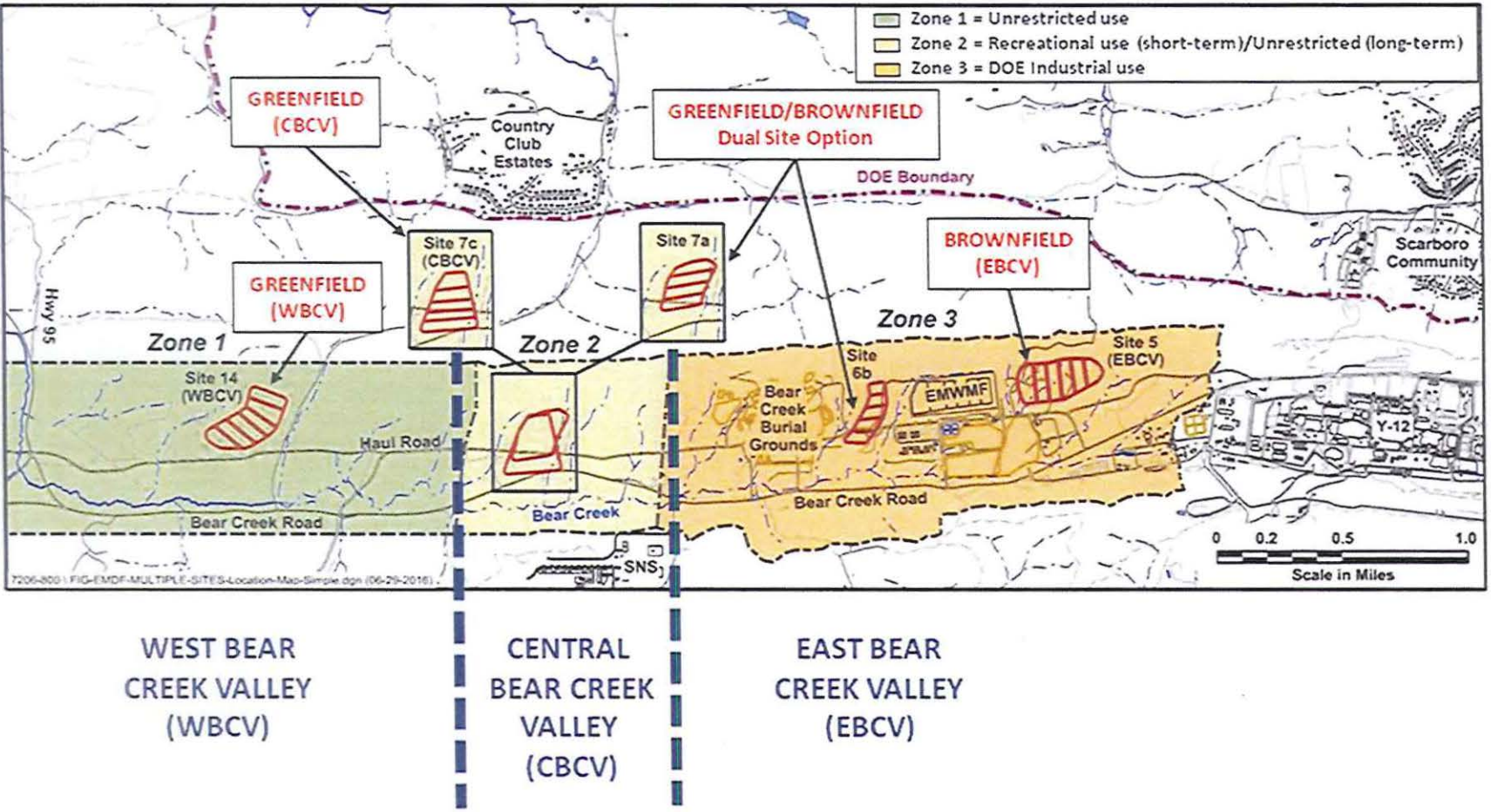
While OREM has already conducted extensive outreach and education about the proposed EMDF, OREM will continue to share information and updates as the planning for the project continues. OREM will again increase outreach opportunities as the project advances through the CERCLA process, which is designed to invite and gather public input to facilitate the best decisions for the community. As the project continues through the various steps of the CERCLA process, more details will be known about the project to share for discussion and input. Additionally, OREM will provide periodic updates through briefings, presentations, and news stories as the project enters the design and construction phase. Due to the factors under consideration and project's complexity, the timeline below may change. If that occurs, OREM will update this section of the document to reflect the most current information.

- **July - October 2016:** DOE, EPA, and TDEC will have joint interaction with the City of Oak Ridge representatives to discuss the Proposed Plan and project and work through alternatives.
- **October - December 2016:** OREM plans to conduct three (3) public meetings/work sessions about the proposed EMDF. These meetings will be scheduled when the Proposed Plan is released. At that time, OREM will be able to discuss the alternatives and details surrounding the project with local residents and stakeholders. OREM will work to raise awareness and invite community members to these meetings through a combination of outreach venues. All upcoming DOE public meetings will be highlighted in the local newspapers and on OREM's website and social media accounts. Additionally, OREM will reach out to community leaders in the areas closest to the onsite alternatives to enhance outreach through word of mouth. OREM has developed a working relationship with these leaders through previous meetings and tours after concerns were raised about the project from some of the individuals in the Scarboro community in 2015.
- **To be determined:** OREM has already met with residents from the Scarboro community on several occasions. They will also be able to obtain additional information at the planned public meetings/work sessions prior to and following the release of the Proposed Plan. However, OREM is also open to meeting with residents from this area again if they desire. OREM will inform the Scarboro community leaders about any upcoming meetings regarding the project. OREM will also provide postings online and in the local newspapers. OREM will rely on feedback received from residents through email, phone calls, or at the scheduled public meetings to determine if additional meetings are needed.
- **To be determined:** Upon a request from the residents of the Country Club Estates, OREM will conduct interactions or a meeting to provide information about the EMDF project. These residents can obtain additional information at the public meetings/work sessions prior to and following the release of the Proposed Plan. OREM will conduct a meeting specifically for these residents if they desire. OREM will publicize any upcoming meetings regarding the project in online postings and the local newspapers. OREM will rely on feedback received from residents through email, phone calls, or at the scheduled public meetings to determine if additional meetings are needed.

CERLCA Public Involvement Opportunities	
Submit EMDF Proposed Plan for Regulatory review	June 2016
Issue Proposed Plan for public comment; hold joint public meeting	October 2016
Allow 45-day public comment period on Proposed Plan	November-December 2016
Project Completion (Record of Decision signed), additional small and large group interactions as opportunities are identified	August 2017

APPENDIX A.

LOCATIONS IDENTIFIED FOR ONSITE DISPOSAL ALTERNATIVES



APPENDIX B.

**U.S. DEPARTMENT OF ENERGY RESPONSES TO
FREQUENTLY ASKED QUESTIONS REGARDING
THE ENVIRONMENTAL MANAGEMENT WASTE
MANAGEMENT FACILITY AND THE
ENVIRONMENTAL MANAGEMENT DISPOSAL FACILITY**

SELECTING A SITE

1. Who is the approval authority of DOE's disposal facility?

Regulators from both TDEC and the EPA must approve all aspects of the proposed disposal facility. The regulators are involved in an extensive review that includes analysis of design and modeling of the facility and the process by which waste would be accepted. Additionally, DOE has its own internal mechanisms in place to provide safety oversight and accountability for the design and operation of the proposed disposal area.

2. How is a new disposal facility location selected?

DOE initially examined 16 sites on the Oak Ridge Reservation to determine their suitability for a disposal facility. Six (6) sites were eliminated for a variety of reasons, including geotechnical considerations. Of the remaining ten (10) sites, four (4) options in Bear Creek Valley were identified for detailed analysis in the revised RI/FS. The report will be submitted to State and Federal environmental regulators in August 2016. This process will evaluate onsite and offsite alternatives that will lead to the identification of a preferred alternative in the Proposed Plan for formal public review and comment, followed by a selection of a preferred alternative in a Record of Decision.

3. What technical reports have been written about the new disposal facility, what reports have yet to be written, and will these reports be accessible to the public?

DOE produces a number of documents throughout the process of planning for this kind of project. The RI/FS is a detailed report that examines the justification for a disposal facility, and it develops and evaluates options for disposal including alternatives to building an onsite facility. DOE is currently working on this report with State and Federal regulators and hopes to finalize the document in the summer of 2016.

Subject to approval of the RI/FS by TDEC and EPA, DOE will develop a Proposed Plan for the waste disposal facility. This document presents a site recommended by DOE, EPA, and the State of Tennessee. This document will be available for public comment. Comments will be addressed in the Record of Decision, a document that records the final decision for site selection of the facility. The Record of Decision will be followed by subsequent reports that include design details of the new waste facility at the selected site.

4. Are the proposed sites physically suitable for the new disposal facility?

DOE will only consider sites that are suitable for the safe operation of a new disposal facility. Modern engineering technologies make it possible to design and safely operate facilities at the sites selected for consideration on the Oak Ridge Reservation. As evidence, DOE has

safely operated the current waste disposal facility for nearly 15 years without impacting local residents or human health. There is a virtual universal agreement among technical experts familiar with disposal facility construction so a new facility can be designed and operated safely. The RI/FS will evaluate and compare the onsite alternatives and designs.

5. *What are the key differences in the alternative sites listed in the RI/FS?*

DOE examined 16 sites on the Oak Ridge Reservation to identify the best locations based on geological characteristics and identified 4 potential locations in the Bear Creek Valley for the disposal facility. Together, these locations comprise four (4) onsite alternatives:

- The East Bear Creek Valley option contains enough capacity to complete Oak Ridge's cleanup, and it is already in a designated brownfield land-use area. Additionally, the site is close to the current disposal facility's infrastructure. The total lifetime estimated cost is \$717 million.
- The West Bear Creek Valley option also contains enough capacity to complete Oak Ridge's cleanup; however, it is in a forested area with a greenfield end land-use designation. It is removed from the current disposal facility's infrastructure which increases costs. The total lifetime estimated cost is \$733 million.
- The dual site option requires two (2) disposal areas to reach the capacity levels required to complete Oak Ridge's cleanup. One of the sites is located in a brownfield area, and the other is in a greenfield designated area. Additionally, only one (1) of the two (2) sites is in close proximity to the current disposal facility's infrastructure. It is the most expensive onsite alternative with a total lifetime cost estimated at \$900 million.
- The Central Bear Creek Valley option is an extension of one of the proposed dual site options, the one located in a greenfield designated area. This site requires rerouting Bear Creek Road, but it is able to provide the needed capacity to complete the Oak Ridge Reservation cleanup in a single footprint. The total lifetime estimated cost is \$715 million.

6. *Will DOE test the earth underneath the disposal facility to ensure it will permanently contain the waste?*

Yes. DOE will develop a detailed design for the new disposal facility that includes comprehensive data on the site's characteristics. This data will be used to determine how groundwater flows in, around, and through the site; the volume and direction in which contaminants might move; the best elevation to place the waste; precautions that protect against accidents and natural events; and how best to protect water, the public, and ecological receptors.

7. *Are there any sink holes around the current disposal facility or potential sites identified for the future disposal facility?*

DOE has found no evidence of sink holes at the current disposal facility or at sites being considered for a possible future disposal facility. When considering sites for existing and future disposal facilities, locations on the Oak Ridge Reservation that have Karst formations where sink

holes could be found have been specifically avoided. In the event an onsite location is identified as the preferred recommendation for a new waste facility, DOE will collect extensive data to confirm that sink holes are not present.

PUBLIC SAFETY

8. How close will the disposal facility be to the public? Can the public access it? Is the public protected?

While DOE has not yet selected the preferred site, the onsite alternative that is closest to residents is approximately 0.8 miles. At all locations, a large ridge keeps the sites physically isolated from the public. The ridge serves as a groundwater divide. Engineering design will prevent releases from the disposal facility; however, should a release occur, water flow on the side of the ridge containing the facility is directed away from residential areas due to the natural groundwater divide. It will be located on DOE property with no plans to allow public access to the area.

The more significant health risk to the public is the high number of contaminated buildings exposed to the environment at the nearby Y-12 plant. Located 0.1 miles from the closest Oak Ridge community, these buildings have deteriorated to the point that some have been condemned due to their unsafe condition. The new waste disposal facility will make it possible for DOE to tear down these buildings, address the contaminated soils and groundwater located beneath them, and remove their environmental risk to the community. It will also clear the way for DOE to access and address the contaminated soil and groundwater beneath those facilities.

9. How would the disposal facility design protect the environment?

The proposed disposal facility has several features designed to protect the environment. Approximately 15 feet of protective liners and other material will be constructed beneath the waste. Storm water that comes in contact with the disposal facility and is shed from the cover system or collected in a cell that has not received waste will be monitored for signs of contamination. If needed, water that comes in contact with the waste will be treated before released into the environment.

When the disposal facility is completely filled, it will be covered by a multi-layer cap composed of low-permeability clays and synthetic sheeting. The engineering design will greatly reduce percolation of rain water into and through the waste. The top of the cap will be a four (4)-foot thick erosion control layer of soil and grasses that provide further protection. During operations, and for many years after it is closed, water that contacts the waste will be captured and treated, if needed, to remove contaminants. Water will not be discharged to the environment prior to meeting all applicable regulatory standards.

10. What long term measures will be in place to ensure the disposal facility remains safe?

If an onsite disposal facility alternative is selected, it will be monitored as long as waste remains in place that could pose any risk to human health or the environment. Additionally, if any release is detected, actions will be triggered to ensure these releases are addressed and removed immediately.

11. What environmental impacts will the new disposal facility create?

Depending upon the preferred site, forested areas, seeps, springs, a small stream, and wetlands could be eliminated when the disposal facility is constructed. As an offset, new wetlands will be recreated in another location. During construction and operation, storm water and sedimentation will be controlled to prevent impacts to natural stream environments.

12. In what direction does the water under the proposed waste facility travel?

Ground and surface water in Bear Creek Valley, where the existing disposal facility and proposed disposal facility sites are located, travels into Bear Creek and then west towards the Clinch River. The water moves away from the center of Oak Ridge.

13. How will you treat mercury in the disposal facility?

Strict regulations prevent the placement of mercury-contaminated waste in the landfill prior to proper treatment. Several processes will be used to treat the mercury before disposal, but in all cases, the concentration of mercury must be below safe levels before being disposed in the landfill.

14. Will the disposal facility slump? How will it react to earthquakes?

As waste is received, it will be mixed with soil to fill voids and compacted with heavy equipment so that empty spaces are filled. This process greatly reduces the possibility of future slumping. DOE has monitored the current site since its construction and observed only minimal subsidence that would be expected in a disposal facility of this type.

The ability of a disposal facility to withstand effects of an earthquake is considered in detail during design. The design will be tested in models and adjusted as needed to account for such occurrences. DOE will make any adjustments needed to accommodate the stresses placed on the disposal facility's features.

OPERATION OF THE WASTE FACILITY

15. Will the new disposal facility be built and operated like the existing facility?

The new disposal facility will operate with the same safety standards as the existing one. Like the current facility, the new EMDF will have a specially-engineered liner system and other protective features that will isolate waste from the groundwater. When the facility is full and

operations cease, a permanent cover (consisting of clay, rock, and geosynthetic material) will be placed on top of the waste. The cover will isolate the waste and prevent storm water from passing into the waste.

The current disposal facility has operated safely for nearly 15 years. During this period, OREM has developed new procedures for operational items such as piping size, the placement of equipment, and the movement of water. The lessons OREM has learned at the current facility will enable us to implement new procedures to strengthen the safety and efficiency of the new facility.

16. At the existing disposal facility, what water do the workers drink?

Workers at the EMWMF use the same water as Oak Ridge residents. There is not a separate water supply for the workers at DOE facilities.

17. At the existing disposal facility, when and how long are the workers there?

A staff of approximately 40 people operates the disposal facility 4 days per week with 10-hour shifts. Additional personnel are on call around the clock in case of an emergency. Security is always present at the site.

18. What facilities will be disposed of in the new disposal facility?

The current disposal facility is large enough to accept the remaining waste generated from cleanup activities at ETPP. When that work is completed in 5-7 years, approximately 350 facilities at Y-12 and ORNL must be removed. The large majority of the debris from this work will be disposed onsite. As is the case with the current disposal facility, highly contaminated waste that does not meet waste acceptance criteria will be shipped to repositories in western states. Oak Ridge's disposal facility will not receive waste from other cities or states.

19. Will the disposal facility be big enough to handle all future DOE clean-up wastes?

Yes, DOE has a sound estimate of the facilities and waste volume that needs to be housed in a new disposal facility. It will be designed with sufficient capacity to accept all remaining waste from environmental cleanup of the Oak Ridge Reservation. This will be the last disposal facility that OREM will construct to complete its cleanup mission at the site.

20. Are there any efforts to reduce the volume of wastes?

DOE practices a hierarchical volume-reduction process when completing a cleanup project. Materials are recycled or reused if possible. The wastes generated during a demolition are characterized to determine if some portion can be placed in other disposal areas. For example, some debris may be placed in another landfill that accepts nonhazardous solid waste while other wastes that have contaminants or levels of contaminants not acceptable at the EMDF will be disposed offsite at appropriate facilities. DOE's requirement is to dispose only of waste that

meets the acceptance criteria. Additionally, OREM works to sequence the disposal of different types of waste (such as building debris, concrete, and soil) in an order that allows maximum efficiency and requires less space.

21. How will DOE ensure that only acceptable wastes are disposed?

The disposal facility will employ a stringent waste acceptance process that sets specifications for disposal. The specifications are agreed upon and regulated by the State of Tennessee. A team of technical experts ensures that wastes accepted at the disposal facility meet regulatory requirements and all results are documented.

22. Are the contaminants that will go into a new disposal facility different from those in the existing disposal facility?

The contaminate waste disposed in the new disposal facility will include only low-level and mixed low-level waste, similar to wastes in the existing disposal facility. The current facility has been focused primarily on safely storing building demolition debris, equipment, and soils from ETP. The new facility will receive similar wastes from cleanup activities at Y-12 and ORNL. Contaminants associated with these sites include mercury, as well as residual radioactivity and chemicals utilized during former research and production activities in Oak Ridge. As is the case with the current facility, more hazardous wastes will continue to be shipped to repositories in western states. The EMDF will only accept CERCLA waste originating for DOE's work in Oak Ridge. It will not accept any waste from industry or other DOE sites across the country.

23. Who samples the water that is discharged from the existing disposal facility's operations?

The disposal facility's operating contractor samples the water before it is discharged to ensure release limits set by the State of Tennessee are met. The water is sampled again before entering Bear Creek. An independent commercial company is responsible for verifying the results. The State of Tennessee conducts random sampling and analysis to confirm releases are within established limits.

24. Is the existing disposal facility prepared for severe weather?

EMWDF workers are highly trained and have experience dealing with severe weather events. Standard practice keeps water storage ponds and tanks as empty as practicable to maintain a high margin of safety for unforeseen weather events. Facility infrastructure is designed with specific consideration given to severe weather.

25. How long will the cap and liner last?

The synthetic sheeting materials used in the liner and cap have been thoroughly tested and can be expected to last for several centuries. The compacted clay layers of the cap are expected to remain effective for as long as needed. A quality assurance contractor will oversee the installation of these layers to ensure they are installed correctly.

26. *How long will the disposal facility's underdrain and surface water drains last? Will they clog?*

Drainage layers are composed of appropriate diameter rock, selected for its resistance to weathering to ensure the rocks do not crumble or dissolve over time. The underdrains and surface water drains are layered with graded diameter material (sand, gravel-sized rock, larger rock) that reduces the chance of clogging. Appropriately built drainage layers will last indefinitely.

27. *How much will it cost to build and operate the disposal facility?*

The disposal facility will be built in phases and with a full capacity of six (6) cells. The East Bear Creek option has a total estimated cost of \$717 million. Subject to design and location, the first and most expensive phase contains the disposal facility's infrastructure and the initial two (2) cells at an estimated cost of \$125 million. Phase II is estimated to cost \$44 million. Phase III is estimated to cost \$31 million, with closure of the facility estimated to cost \$65 million. Once open, operation of the facility will cost approximately \$15 million annually.

The West Bear Creek option has a total estimated cost of \$733 million. The dual site option has a total estimated cost of \$900 million. The Central Bear Creek option has a total estimated cost of \$715 million. A hybrid option, which entails a smaller onsite disposal facility with a majority of the waste being shipped offsite, has a total estimated cost of \$1.37 billion. Finally, shipping all of the waste offsite is estimated to cost \$1.57 billion.

28. *How will the new disposal facility impact Oak Ridge and surrounding communities?*

The new landfill will have a positive environmental and economic impact on Oak Ridge and the surrounding communities. Completion of cleanup activities at Y-12 and ORNL will improve the community's environmental quality and support the missions of the region's two (2) largest employers. Continuation of DOE's cleanup program will sustain thousands of existing jobs, create new jobs for the construction of the waste facility, and generate approximately \$17 million in annual tax revenues for Oak Ridge, Anderson, Knox, and Roane counties.

Specifically, the proposed onsite disposal facility adds significant economic impact to the Oak Ridge community by providing high-quality jobs and boosting local tax revenues. A second disposal facility is anticipated to support 6,800 jobs over the life of the project, with 5,700 of those jobs originating in Anderson, Roane, and Knox counties. An additional \$54 million in sales tax revenues are expected to be generated from the purchasing of goods and services needed in the design and construction of the disposal facility.

29. *Why doesn't DOE just send the waste out of state?*

OREM believes onsite disposal is the best option for a variety of reasons. Transporting the waste by truck more than a thousand miles would add enormous cost (estimated at more than one [1] billion dollars), greatly increase the risk of transportation accidents, and extends current cleanup schedules by decades. Out of state disposal would result in substantial reduction of jobs

and tax revenues in the area economy. Perhaps most important, attempting to dispose of waste in other states would place Oak Ridge at the mercy of communities and elected officials who could suddenly and arbitrarily halt waste shipments. The ability to manage cleanup activities in Tennessee with the Tennessee officials has been a critical aspect of our success.