

Comments of the Oak Ridge Environmental Peace Alliance
on the
Department of Energy's
Environmental Assessment of the Emergency Operations Center Project
At the Y12 Nuclear Weapons Complex in Oak Ridge, TN

July 2015

The Oak Ridge Environmental Peace Alliance is pleased to submit these comments on the Environmental Assessment of the Emergency Operations Center Project (DOE/EA-2104), dated July 2015. The comments below address both general and specific concerns; comments on specific issues in the EA should not be construed as overriding or undermining our fundamental comment—this EA should be folded into the Supplement to the 2011 Y12 Site-Wide Environmental Impact Statement (S-SWEIS).

The EA and the S-SWEIS

The Environmental Assessment of the Emergency Operations Center Project establishes itself in the context of the 2011 Y-12 Final Site-Wide Environmental Impact Statement (hereinafter Y12 SWEIS). The analysis of the Y12 SWEIS resulted in a Record of Decision (2011 ROD) which made two critical decisions. First, the ROD announced construction of a one-building Uranium Processing Facility. Second, the ROD announced the Department of Energy/National Nuclear Security Administration would not construct a Command and Control Center.

Three years after the publication of the 2011 ROD, subsequent events have overtaken those decisions, rendering the decisions made in the 2011 ROD moot and, it could be argued, rendering the 2011 SWEIS itself moot. This is precisely the kind of unfolding of events foreseen by the National Environmental Policy Act which requires that site-wide EISes be reviewed every five years to verify they are still appropriate and applicable. We are only months away from the five year anniversary of the 2011 SWEIS, and events in Oak Ridge have created a perfect case-study of things changing so much on the ground that a new SWEIS is required.

This is significant because the decision to build a new Emergency Operations Center, coming so close to the Supplement to the Y12 SWEIS (S-SWEIS), should be held in abeyance and included in the S-SWEIS.

It may be argued by DOE/NNSA that the decision has not yet been taken to prepare an S-SWEIS for Y12, but given that the decision to prepare an S-SWEIS is far more likely than not. (The Department is current preparing a Supplement Analysis which is to determine whether or not a S-SWEIS is required. If it were an easy call not to prepare one, that Supplement Analysis would have been released months ago; the very fact that the SA is taking so long suggests the previous environmental analysis is less than sufficient to address the new, unfolding, situation.) Whether the decision

is made unilaterally by DOE/NNSA (which has the virtue of saving time for the agency) or with the assistance of the judicial branch of the government, it is overdue and, when delivered, will likely require a Supplement to the SWEIS.

The relationship between the EA and the 2011 SWEIS is noted in the EA, page 1-5, which states the EA is tiered from the 2011 SWEIS, though it appears to take pains to stretch the 2011 ROD—“ modified by subsequent actions, as well as new actions subsequent to the 2011 ROD that have undergone separate NEPA review”—without being explicit about either the subsequent or the new actions.

The EA attaches itself to the analysis in the SWEIS for the Command Center, noting the 2011 ROD did not select an alternative that included construction of the Command Center. OREPA believes it is not inappropriate to apply analysis from one facility to another similar facility that is similarly situated. DOE/NNSA should, though, fully explain here why the EOC itself was not considered three years ago, what the differences between the analyzed (but not selected) facility and the newly proposed facility are, why it is now appropriate to begin construction of a new facility after nominal environmental review when three short years ago it was not, and how the EOC concept ripened so quickly to reach the level of NEPA review, albeit in a less-than-rigorous EA.

SPECIFIC COMMENTS

1. Siting and security

The EA describes the proposed EOC as the “most efficient use of capital funds that also meets the safety and technical objectives required by plant operations.” This language may be appreciated for efficiency in its own right; it seeks to achieve its objective by what it doesn’t say, because there are worm cans the DOE/NNSA would prefer remain unopened, such as: Given that one of the most critical times for this facility to remain operational would be during a hostile attack on nuclear weapons production facilities in Oak Ridge, is the EOC situated in the best possible place to withstand a hostile attack by a determined force? Or is it vulnerable to external attack?

By not addressing that question forthrightly, DOE/NNSA are saying, in essence, that the siting is good enough, all things being balanced, on the “safety and technical objectives required by plant operations” front.

But security of a facility that is critical in the most perilous times conceivable cannot be subjected to a balance scale. It is non-negotiable.

If the survival of workers, the containment of highly enriched uranium, the health and safety of the workforce and the public, and the preservation of continued operations at Y12 is either necessary for national security (we are told it is) or highly desirable (we hope it is), then the EOC must be situated and constructed in

the most secure site and fashion possible. Given the capacity of the federal government to spend trillions of dollars every year, cost considerations cannot be employed to compromise worker or public health and safety.

The Project Site Layout (Figure 2.1-1) indicates the EOC fails the maximum security test on two counts—it is to be located outside the maximum security Personnel Intrusion Detection Assessment System (PIDAS) area, and it is situated in the middle of a narrow valley between two ridges (approximately 700 yards from high ground on either side of the valley).

If one were to imagine an attack by a determined and knowledgeable adversary, one might expect the assault to come from either ridge, or to be initiated by a force entering from either direction via Bear Creek Road or any combination of the four. In any case, one objective would be the production operations at Building 9212, a relatively soft target, and another would be the EOC, as the adversary would want to minimize response capability and create maximum chaos whether their objective was to obtain weapons grade material or simply to wreck US capacity for weapons production for an extended period of time. Unfortunately, one can all too easily conjure a scenario of devastating efficacy, aided and abetted by decisions made about siting facilities now in the interest of “the most efficient use of capital funds.”

An agency preparing an Environmental Assessment is accorded more discretion in the consideration of alternatives than when preparing an EIS but is not absolved of the responsibility to consider reasonable alternatives, especially when there is no consensus among stakeholders. In this instance, the EA should consider situating the EOC in a below grade facility, perhaps embedded in the side of a ridge, offering maximum protection and increasing the likelihood of habitability in the case of an extreme event. Such a position could also enhance the capacity for visual surveillance of the site during an event. If these advantages are being weighed against cost or other considerations, a complete discussion of that process should be included in the EA. Workers and the public have a right to know the precise nature of trade-offs considered and/or made in the siting of facilities.

2. Measuring environmental impacts

As part of the calculation of environmental impacts, the EA references benefits to be realized from the demolition of “vacated facilities. (p. 2-3)” Similar benefits were attached to the UPF proposal in the 2011 SWEIS. Subsequent events make it highly unlikely that those benefits will be realized any time soon (measuring in decades) due to security and funding issues. Absent a funding commitment, speculative references to cleanup activities should be left out of the EA or should be qualified or clearly labeled as speculative.

3. More information, please

The EA says the EOC will be located over the concrete slabs of buildings 9983 and

9711-1. Given that operations at Y12 have often had an impact on the soils beneath them, the EA should explain what took place in these buildings.

The EA says (p. 1-4) that soil and site characterization have not yet been done, and are planned for after Critical Decision-1. The EA relies on the fact that there are no known areas of soil contamination on the proposed construction site. As we learned when workers constructing the UPF haul road discovered an unexpected radioactive debris field, “no known areas,” while true, is neither a reliable nor a sufficient indicator of the character of the soil in the construction zone (including areas that will accommodate utilities, pipes, etc.) It will be premature, disingenuous and therefore inappropriate for DOE/NNSA to issue a Finding of No Significant Impact when it has no real idea what the disturbance of surface and subsurface soils during construction might hold. Soil and site characterization at a site with a legacy of indeterminate contamination should be included in an EA and must precede a FONSI. As the haul road experience has taught us, it cannot be left until later.

4. Seismic issues

The greatest single deficiency in the EA is its treatment of seismic issues. The EA says geotechnical investigation will be performed...so that “a satisfactory and economical foundation can be designed (p. 2-4).” The EA fails to analyze environmental impacts arising from this activity because, of course, it has not yet been done. But the challenge of designing a foundation that fully meets the requirements of DOE Order 420.1B is complicated, and it is important that trade-offs between “satisfactory,” and “economical,” and “survivable” be transparent to the public (and workers) who will be placed at increased risk should the facility fail in an earthquake.

The analysis of seismic issues appears to rely on data from DOE/EIS-0387 2011 and sources that predate that document. Much of this data has been overwritten by more recent findings of earthquake activity in the East Tennessee Seismic Zone and the August 2014 update of earthquake hazard maps by the US Geological Service. DOE-STD-1020-2012 (Section 9.2, page 65) requires a periodic review of assessments to determine if changes to data, models, or other input will result in different hazard calculations. The 2014 USGS hazard map report states: “Updates of the earthquake catalog, rates...and ground motion models have resulted in changes to ground motions in nearly all of the coterminous United States.” (USGS, *Documentation for the 2014 Update of the United States National Seismic Hazard Maps*, p. 178) This section of the EA must be updated; Map 3.3-3 on page 3-11, for instance, is no longer current.

DOE-STD-1020-2012 refers to design criteria for nuclear facilities, which the Y12 EOC is not. However, given the critical role the EOC would play in any incident, natural or otherwise, that might compromise nuclear facilities with a critical national security role, the EOC must be designed to out-survive the nuclear facilities—that is, to the maximum possible standards. It is in this context that we

find the commitment to design an “economical” foundation disturbing. In a worst case scenario, when the EOC would be most needed to perform its core function, workers, the public and the nation will rely on the EOC to coordinate a response that limits damage, exposure, and security risks arising from an incident which compromises other facilities at Y12.

The EOC EA, therefore, must provide a complete seismic analysis based on current data, models, and methods, beginning with the August 2014 USGS Update of the United States National Seismic Hazard maps which indicates an increased (over the 2008 estimates) risk for the East Tennessee Seismic Zone; the risk increase in the ETSZ is second only to the increase in risk in California’s high risk area. In addition, research by the University of Tennessee’s Robert Hatcher indicated, in 2011, that historic earthquake activity in the ETSZ exceeds that previously thought, with earthquakes of magnitude 6 as part of our historical record. (<http://orepa.org/wp-content/uploads/2014/08/UPF-update-August-2014.pdf>).

Despite NNSA’s refusal to formally publish plans for its multibillion dollar modernization effort at Y12, the public is aware that the current roadmap calls for construction of several new facilities designed to varying levels of seismic response, and to continue the use of aging facilities which do not meet current earthquake design standards for twenty years or more. The Defense Nuclear Facilities Safety Board says these buildings cannot be retrofitted to meet earthquake design standards. The fact that we know some facilities will likely fail in a large earthquake underscores the importance of an EOC that is designed to maximum survivability standards—the design process with regard to earthquakes should be transparent.

Summary.

As long as Y12 houses special nuclear materials and conducts operations with enriched uranium and other hazardous materials, whether in production or dismantlement operations, and as long as Y12 provides storage for large quantities of highly enriched uranium, it is critically important that Y12 is capable of managing emergency events. The EOC is a worthwhile investment of public money.

Analysis of the environmental impacts associated with construction of the EOC, or any other facility, should be made in the context of plans for ongoing operations at Y12 for the life of the proposed facility itself and the operational facilities at Y12. In this case, that means an updated Y12 SWEIS that would look at least 40 years down the road. It should, in the interest of efficiency, provide an unsparing look at the prospects of cleanup/remediation/decommissioning and demolition in scenarios where production operations are ongoing.

The EA for the EOC suffers from three primary deficits. First, the EA treats the EOC as just another building, cobbling together old analyses so the table of contents appears to cover all necessary topics. But the EOC is not just another visitor’s center or office building—it is one of the most critical facilities on the site. It cannot be

designed to less-than-maximum standards because its operational value becomes ever more crucial as accident/incident/natural phenomena scenarios grow more dire. It must be designed and built to be, quite literally, the last building standing in the worst case scenario.

Second, the EA relies on data from the 2011 SWEIS which is, especially in cases of seismic analysis, outdated. Third, the EA inappropriately limits consideration of alternatives—NNSA must consider and should ultimately adopt the alternative that prioritizes maximum survivability above all else. That alternative is not presented or analyzed in the EA in its current form.

Engaging the public in a conversation about this would provide the kind of input and reflection that NEPA foresees when it says public participation is intended to produce a stronger document and a better decision. Consideration of alternatives for the EOC as outlined in the EA are understandably limited primarily by budget and other considerations—a public that is less constrained by those concerns can offer creative and useful ideas, given the opportunity, that will ultimately result in a better decision and a more reliable EOC.

In recent years, the NNSA and DOE have become increasingly opaque, limiting the amount of information available to the public, erecting barriers to information, providing limited answers, if any, to inquiries, and reducing opportunities for meaningful public participation. This does not inspire confidence from the public; quite the contrary, it inspires curiosity and suspicion—what does our government have to hide from us? And why should it hide anything, except that which is required by the narrowest classification requirements, when our money is paying for all of it?

In the case of this EA, sections will now have to be reworked, leading to delay in the project, which could have been avoided had a hearing been held on a draft EA, or even less formal conversations with the public about their concerns. A simple scoping meeting might have surfaced the concerns raised here, in these very-late-in-the-day comments, and resulted in a stronger, defensible EA. NNSA chose not to provide those opportunities for public interaction, so we all now pay the price.

In the interest of efficiency and economy, the EA should be rolled into the S-SWEIS, which should be announced immediately. This would not only save taxpayers money, it would accelerate DOE's decision-making schedule.

Submitted by
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