

Comments of the Oak Ridge Environmental Peace Alliance
on the Final Site-Wide Environmental Impact Statement
for the Y12 National Security Complex in Oak Ridge, Tennessee.
31 March 2011

I. The Y12 Site-Wide EIS is not site-wide

In November 2005, the Department of Energy/National Nuclear Security Administration announced its intention to prepare a Site-Wide Environmental Impact Statement for the Y12 National Security Complex in Oak Ridge, Tennessee. Located in Bear Creek Valley, Y12 occupies 5,400 acres and consists of 393 facilities covering nearly six million square feet of NNSA owned/leased space.

The preparation of a Site-Wide EIS was required by DOE's regulations requiring an assessment of environmental conditions every five years at major DOE facilities; the previous (first) site-wide analysis of Y12's environmental status was conducted in 2001, with a Record of Decision issued in 2002.

The Draft SWEIS focused almost exclusively on two proposed DOE actions— construction of a new Uranium Processing Facility and the construction of a Complex Command Center. In commenting on the Draft SWEIS, OREPA noted that DOE's regulations require the agency to prepare a site-wide EIS which would take a comprehensive look at the full range of activities, even those undertaken by other parties or under other jurisdictions, rather than the more limited analysis supporting construction of two new facilities laid out in the Draft.

The Final Site Wide Environmental Impact Statement (FSWEIS) was issued March 4, 2011. The FSWEIS maintain a narrow focus, providing only an analysis of the possible impacts of a new Uranium Processing Facility (several alternatives are considered, including a No Action alternative) with lesser documentation of environmental impacts for a proposed Complex Command Center. The SWEIS does not assess impacts of other Y12 operations and is not, therefore a "Site Wide" Environmental Impact Statement.

OREPA's comments are dismissed in the Final SWEIS with this assertion: *The SWEIS provides a comprehensive analysis of the current environmental situation at Y12, and of ongoing and reasonably foreseeable future operations, activities and facilities.* (Volume II, p.3-25, Response 2-F.) Regrettably, this assertion is not supported by the content of the FSWEIS. Instead, the FSWEIS describes some environmental monitoring activities but does not include the results of the monitoring except in rare instance.

The Y12 FSWEIS lists ongoing operations and activities in addition to production activities at Y12 including:

"Y-12 also dismantles weapons components, safely and securely stores and manages special nuclear material (SNM), supplies SNM for use in naval and research reactors, and dispositions surplus materials. Y-12 nuclear nonproliferation programs play a critical role in securing our nation and the globe and combating the spread of weapons of mass destruction by removing, securing, and dispositioning SNM, and down-blending weapons-grade materials to non-weapons forms suitable for use in commercial reactors.

"Y-12 conducts and/or supports nondefense-related activities including: environmental monitoring, remediation, and decontamination and decommissioning (D&D) activities of the DOE Environmental Management Program; manages waste materials from past and current operations; supports the production of medical isotopes; and develops highly specialized technologies to support the capabilities of the U.S. industrial base."

Chapter 2 of the Final SWEIS identifies a broad range of activities which may have significant environmental impacts, but no analysis of those impacts is included in the FSWEIS. In fact, the discussion of Y12 recycling of computer monitors and batteries is accorded more space than the "Work for Others" or "Nuclear Materials (including lithium) Management, Storage and Disposition" programs.

The Y12 SWEIS is largely silent on possible environmental impacts of any of these operations. As a result, the Y12 SWEIS considers the environmental impacts of the UPF and CCC

in a sort of vacuum, as though the Y12 site were not already a Superfund site. Ground and surface water contamination is acknowledged, but scant information is presented about it. The presence of legacy contamination in soils is acknowledged, but absent detailed information about the location and amounts of contamination in soil and water, the FWEIS fails to provide even a site-wide context for the UPF and CCC analyses, let alone a site-wide assessment. The absence of context falls far short of the claimed “*comprehensive analysis of the current environmental situation at Y12.*”

DOE asserts that a number of its operations dealing with legacy wastes and facilities are “covered” by other regulatory or planning mechanisms, including CERCLA and FIRP. While these regulatory and planning processes have a controlling authority over these activities, it does not exempt DOE/NNSA from considering the presence of wastes or the impacts of those operations in the FSWEIS. To leave out a detailed and comprehensive discussion of groundwater contamination is to leave unanswered critical questions about the characterization and disposal of wet soils and shale displaced by excavation in preparation for the UPF.

DOE/NNSA also fails to consider cumulative impacts from other non-DOE/private sources of contamination as required. Although DOE/NNSA state they captured information about present and future actions from city, county, state and federal sources as well as any known plans in the private sector, the Y12 SWEIS does not mention B&W’s own proposal to for a 125MW modular light water reactor at the Clinch River Breeder site or the proposed incineration of millions of pounds of radioactive waste by Energy Solutions/Duratek—both of which have the potential to affect the environment or other considerations at Y12.

OREPA reiterates: DOE is required by its own regulations to update the 2002 Site-Wide EIS *in toto*, not to suggest that nothing much has changed so NEPA’s requirement can be set aside in favor of a limited environmental analysis of two proposed new facilities. DOE’s assertion that it is relying on the 2002 EIS stands directly counter to the purpose of the requirement to update EISs.

II. The Final SWEIS relies on outdated nonproliferation assessment

In the Draft Y12 SWEIS, DOE/NNSA identifies its activities as part of the “nuclear security enterprise,” a term of art that includes “the stockpile, nuclear non-proliferation, nuclear counter-terrorism, incident response, emergency management, etc” and notes that Y12’s nonproliferation programs are critical to national security. OREPA commented in its initial scoping of the Y12 SWEIS that, as it had in the past, DOE/NNSA should conduct an assessment of the proliferation impacts of its proposal to construct new weapons production facilities.

DOE/NNSA could have declined to consider nonproliferation impacts in the Y12 SWEIS, but it did not. Instead, in the Draft SWEIS, DOE/NNSA declared it would rely on the nonproliferation assessment prepared in 2006 for the SSM-PEIS. (Comments, p.3-9) OREPA commented that changing realities rendered the 2006 analysis so outdated as to be irrelevant and that, since a key FSWEIS decision identified by DOE—the actual size and throughput capacity of the UPF—was directly related to significant policy decisions, stockpile size projections and timetables, nonproliferation analysis must be updated. OREPA noted that significant public figures, including the Four Horsemen (Henry Kissinger, George Shultz, Sam Nunn and William Perry) have called for a dramatic reassessment of US weapons policy, and President Barack Obama declared the firm commitment of the United States to a “world free of nuclear weapons.”

In the Final SWEIS, DOE/NNSA dismisses OREPA’s concern and asserts a continuing reliance on the 2006 analysis—despite the fact that the signing and ratification of the new START Treaty significantly undermines the needs to maintain a large stockpile, despite the shifting timetable that puts the UPF out-of-sync (Life Extension operations will be completed for virtually all US warheads before the UPF comes on line), and despite the US commitment to negotiate even further deep cuts in the US stockpile prior to the completion of the UPF.

Add to this the counter-productive nature of new production facilities at the same time the US is seeking to persuade other nations to eschew nuclear weapons capability, and the crucial role of nonproliferation analysis becomes clear. OREPA believes the 2006 nonproliferation analysis can not longer be considered adequate and an updated analysis is required.

III. The Final SWEIS fails to fully describe and analyze environmental impacts of excavation related to seismic integrity

Subsequent to the publication of the Draft SWEIS and the close of the comment period for the Draft SWEIS, DOE/NNSA made a determination that massive soil excavation would be required to increase the UPF's resistance to seismic events. While this activity was alluded to in the "Wetlands Assessment" announced by DOE/NNSA, no substantive information about the excavation, soil characterization, transportation or disposal was included in the Wetlands Assessment, nor has any information been provided to the public by DOE/NNSA since.

In comments on the Wetlands Assessment, OREPA noted the excavation of massive amounts (hundreds of thousands of cubic yards) of possibly contaminated wet soil (likely to contain contaminants deposited in the past, including mercury and uranium and possibly PCBs and residues from VOCs) should be fully addressed in the SWEIS.

Except for an oblique reference to hundreds of thousands of cubic yards of soil and a handful of passing references to excavation, the Final SWEIS is silent about the excavation of soil and the characterization of excavated soil, treating it as if it is of no significant environmental relevance.

This same action—massive soil excavation, the building of a concrete batch plant and supporting infrastructure, *even absent the wetlands disturbance factor*—at CMRR-NF* at Los Alamos, precipitated the preparation of a Supplemental EIS—in Oak Ridge it is not even accorded its own paragraph in the Final SWEIS; no public notice of the excavation/ concrete batch plant proposal was given, and no public comment was taken.

DOE/NNSA have yet to provide the public with documentation of its plan to excavate soils. The Final SWEIS indicates some soils will be used as fill for the construction of a haul road and other soil will be disposed of elsewhere, but no information is provided about the characterization of the soils or spoil material.

In fact, the FSWEIS provides more detailed information about the preparation of the laydown area for construction support and temporary parking (p.5-2) than it does about site preparation and the foundation of the UPF itself.

The only solid information presented are oblique references in response to comments to "hundreds of thousands of cubic yards" of excavate material and "thousand of truckloads that would operate for many months" (Comments, 3-49; comment response 12.T.6), and a description of the use of excavated soil to provide fill for the haul road being built across wetlands. (Comments, 3-48; comment response 12.T.5)

The Final SWEIS describes a Wet Soils Drying Area to be created to handle soil excavated from the UPF construction site but does not provide information about the quantity, type or characterization of the soil.

In responding to OREPA's comments requesting full information on excavation plans (included in our comments on the Wetlands Assessment since no other vehicle was provided the public), DOE/NNSA points to two sections of the FSWEIS for a description of "soil disturbance," sections 5.1.2 and 5.5.2. The information provided (in its entirety) about the materials to be excavated from the UPF site responsive to our comment, in these two places is "During construction, excavation of soil, limestone, and shale bedrock would occur." Response 12.T.13 (Comment document, p.3-52) does not come even remotely close to responding to OREPA's request for information about the quantity, type and characterization of excavation spoil.

* Federal Register Notice for CMRR-NF SEIS:

"Proposed Action: The Proposed Action is to construct the CMRR-NF at TA-55. Over time some aspects of the proposed CMRR-NF Project plans have changed. These proposed changes include, for example:

- Changes to the CMRR-NF structure required for seismic safety based on new information from additional geotechnical investigations conducted at the site. These changes involve incorporating additional structural steel and concrete into the building construction and increasing the quantity of material that must be excavated for the building foundation;
- Changes to the infrastructure to support the CMRR-NF construction activities, such as concrete batch plants, construction material lay-down areas and warehouses, and temporary office trailers and parking areas. Some of these changes involve the use of

additional acreage. Most of these proposed changes are temporary in duration;

- Changes to the CMRR–NF structure to ensure 10 CFR part 830 nuclear safety basis requirements are met for facility engineering controls to ensure protection of the public, workers, and the environment; and
- Changes to incorporate additional sustainable design principles and environmental conservation measures. These changes minimize the environmental impacts of construction and operation of the CMRR–NF. The potential environmental impacts of these and similar changes will be analyzed in the CMRR–NF SEIS.”

Federal Register/Vol. 75, No. 190/Friday, October 1, 2010/Notices, 60745

IV. The Final SWEIS provides inadequate analysis of seismic risks and steps taken to ameliorate risks

In a March 15, 2010 letter to the Department of Energy, the Defense Nuclear Facility Safety Board raised concerns about the foundation of the UPF related to the structure’s ability to withstand seismic motion. This issue is one that has been consistently raised by the public since 1994, when the first Environmental Assessment was prepared for Y12. DOE/NNSA acknowledges seismic concerns about current facilities, some of which fail to meet current standards, and uses seismic inadequacies as an argument for a replacement facility.

Responding to the DNFSB, DOE/NNSA developed a plan that calls for massive excavation of soil to be replaced by a thick concrete slab.

Seismic issues are central to the safety and environmental impacts associated with any facility in Oak Ridge, located in the East Tennessee seismic zone, an area of high seismic activity. The adequacy or inadequacy of seismic design can not be determined from information in the SWEIS. The Final SWEIS fails to provide any detailed information about seismic concerns or the steps taken to address them, leaving the public in a “trust us” position. The public has an interest and a right to have seismic issues fully discussed in the SWEIS.

The FSWEIS bases its seismic analysis on the seismic history in East Tennessee. Oak Ridge is in the East Tennessee Seismic Zone, a high activity seismic region; a 1994 article in *Science Magazine* by researchers from the University of North Carolina suggested the high incidence of low-level activity should not be taken as predictive of the future, but rather seen as indicating the likelihood of more significant activity in the future.

V. DOE/NNSA fails to provide adequate public comment opportunity for wetlands proposal announced after close of Draft comment period: response to public comment inadequate

After the publication of the Draft SWEIS and the close of the comment period, NNSA published a Wetlands Assessment disclosing that construction of the UPF would require the construction of a separate, remote concrete batch plant and a haul road that would traverse nine wetlands areas, disrupting conditions in most of them and virtually destroying three of them. NNSA announced an 18-day comment period on the Wetlands Assessment and did not indicate in that or any subsequent announcement that the Assessment was part of the SWEIS.

OREPA commented that the wetlands disruption, massive excavation of soil, and construction of a concrete batch plant was a significant action, that NNSA should reopen the Draft SWEIS or, at the very least, make sure everyone who commented on the Draft was made aware of the Wetlands Assessment and given an opportunity for comment.

DOE/NNSA declined to reopen the Draft SWEIS or to inform SWEIS commenters or to provide any additional comment opportunities, declaring instead in the FSWEIS that the wetlands impact presented no significant new circumstances relevant to environmental concerns.

The effect of DOE/NNSA’s meager public involvement process can be seen in the numbers; 351 people commented on the Draft SWEIS, only 2 on the Wetlands Assessment. It is simply not true that less than 1 in 100 people who cared enough to comment on the Draft SWEIS had concerns when reading the Wetlands Assessment; what is true is that very, very few people were even aware of the availability of the Wetlands Assessment because DOE/NNSA made no effort to make them aware.

VI. DOE/NNSA inappropriately declares environmental impact of wetlands disruption “not relevant” to EIS.

The declaration in the Final SWEIS that the disruption of nine wetlands areas, and destruction of three of them is of “no relevant environmental significance” is indefensible. Taken together, the excavation, transportation and disposal of massive quantities of soil, the construction of a concrete batch plant, and the construction of a haul road which will disrupt or destroy nine wetlands areas is of environmental significance far exceeding a similar proposal at the CMRR-NF at Los Alamos, where the simple excavation and concrete fill warranted preparation of a Supplement to the Environmental Impact Statement.

“NNSA determined that there were no substantial changes in the proposed action that are relevant to environmental concerns, nor significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.”

The language used by DOE/NNSA is intended to insulate itself; it mirrors the language in the Council on Environmental Quality’s NEPA Regulations requiring a Supplement to a draft or final EIS if changes are “relevant to environmental concerns.” DOE/NNSA’s application of this language to the wetlands impact in the FSWEIS is wrong; the use of a negative assertion does not make it true.

VII. The Final SWEIS fails to provide adequate analysis of Alternative 6, proposed by OREPA and supported by broader public, which provides a reasonable, unexamined alternative to those considered in the FSWEIS.

NEPA does not require a federal agency to consider every possible reasonable alternative in reaching a decision about its path forward, but it does require an agency to consider a full range of reasonable alternatives in order to facilitate the best possible decision.

The Draft SWEIS provided a limited range of alternatives addressing the stated mission of Y12, failed to address the need for dismantlement facilities, and provided less than comprehensive analysis of economic factors, including the cost of various options.

OREPA submitted a detailed proposal, Alternative 6, which was supported by a significant number of commenters: Alternative 6 a Consolidate/Right-size/Upgrade in place option and a Dedicated Dismantlement Facility; it is a reasonable alternative.

In response, the FSWEIS includes limited additional information about dismantlement activities.

The Final SWEIS provides analysis only of the previously identified reasonable alternatives. Cost comparisons of the various alternatives are not included. OREPA’s proposal, Alternative 6, offers an alternative that expands the range of possibilities in a way that meets mission needs, achieves many of the gains of other alternatives, including footprint reduction, and has the added virtue of dramatic cost savings over DOE/NNSA’s preferred alternative—currently estimated to cost \$6.5 billion.

VIII. DOE’s Preferred Alternative does not match “purpose and need” as closely as less-expensive No Net Production Alternative

The purpose of an Environmental Impact Statement is not only to assess specific impacts on the physical environment affected by major federal actions, but to assist the federal agency preparing the document in making the most appropriate decision.

The Draft SWEIS indicates the purpose and need for new facilities is to meet mission requirements for stockpile surveillance and life extension programs. This need can be met, according to the Draft SWEIS, by the No Net Production Capability-Sized UPF.

The Final SWEIS continues to list the Capability-Sized UPF as its preferred option even though it acknowledges the No Net Production UPF is sufficient to meet its mission requirements. The Final SWEIS indicates a decisive factor is the NNP UPF’s limitations on increasing production in the future—something that is *not* in the Y12 mission, nor is it indicated by US policy or DOE/NNSA planning documents.

Since the preparation of the Final SWEIS, experts have noted the delay in construction undermines the DOE/NNSA statement of need. In an article in the *Knoxville News-Sentinel*,

David Overskei, chair of the Secretary of Energy Advisory Board's Nuclear Weapons Infrastructure Task Force, raised questions about the timetable for completing the UPF. "As scheduled, construction will not be finished until 2020 or thereafter, with full operations not starting until 2024. Overskei said that means the new facility won't be available for some of the most important life-extension work on nuclear warheads currently scheduled."

DOE/NNSA should revisit its decision, based on a statement of need that conforms to the prescribed mission of NNSA, considers the diminishing requirement for the Life Extension mission over time, and reflective of the necessity of fiscal conservatism in the current economic climate.

IX. The Final SWEIS declaration that demolition/disposal of existing facilities arising from relocation of operations to a new UPF "not ripe" is wrong

In commenting on the Draft SWEIS, OREPA noted that since it was a Site-Wide EIS, and intended to address activities across the Oak Ridge Reservation, it was appropriate for the SWEIS to include analysis of the environmental impacts of demolition and disposal of facilities rendered surplus as a result of decisions arising from the activities covered in the SWEIS—in particular, the buildings or portions of buildings no longer needed when the UPF (or an alternative) is completed.

NNSA has responded in the Final SWEIS that demolition and disposal of surplus facilities is not yet ripe for analysis in the SWEIS. If it intends to maintain this position, it should outline what factors not present now will contribute to the ripening of the D&D issue since it is assumed in other parts of the FSWEIS. Otherwise, DOE/NNSA is adopting a "have-cake-and-eat-it-too" posture that does not meet its obligations under NEPA.

Despite DOE/NNSA's denial, the demolition of existing facilities is an indirect effect that, while later in time, is reasonably foreseeable. This is the criteria set by NEPA for inclusion in environmental analysis. While the passage of time will move us temporally closer to the demolition of the facilities, it will not significantly "ripen" the buildings or the conditions surrounding their demolition and disposal. In fact, DOE/NNSA considers the reduction of footprint resulting from the demolition of surplus facilities a significant argument in favor of its proposal to consolidate operations in a new UPF. It must therefore also consider the costs of demolition and disposal of contaminated materials and demolition wastes—economic and environmental—to balance the ledger.

Since DOE/NNSA assert the water quality of surface streams in the vicinity of the Y12 complex is affected by current and historical legacy operations (p.5-52), it is likely that demolition and the accompanying transportation and disposal of contaminated waste material will impact surface water in an area where surface water contamination is already well documented. DOE acknowledges as much on page 5-54 of the SWEIS. Table 4.7.2-2. shows surface waters at one checkpoint exceed allowable criteria 75% of the time, ranging as high as 80 times the allowable amount of mercury!

DOE/NNSA must include an analysis of the impacts of D&D of no-longer-utilized facilities in the Final SWEIS before issuing a Record of Decision.s

Finally, OREPA notes the Tennessee Division of Radiological Health is not listed as a consulting agency. They should be given an opportunity, and time, to comment on the Final SWEIS before any Record of Decision is issued.

Submitted on 2 April 2011
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