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Nuclear Watch of New Mexico respectfully submits these comments for the Draft Site-Wide Environmental Impact Statement for the Y12 National Security Complex in Oak Ridge, Tennessee (DOE/EIS-0387), hereinafter “Y12 dSWEIS.” Nuclear Watch is a Santa Fe, NM-based watchdog organization that works both on nuclear weapons policy and related environmental issues, with a particular focus on the Los Alamos National Laboratory (LANL). However, we know that all National Nuclear Security Administration (NNSA) sites are integrated and interlocking parts of a national nuclear weapons complex, in which the whole exceeds the sum of its parts, and therefore take an active interest in Y-12 as well.

The Y12 dSWEIS Should Be Re-Scoped After the Pending Nuclear Posture Review

The original Y-12 SWEIS scoping period was over four years ago. We request that this dSWEIS be withdrawn and re-scoped, which we believe is particularly apt given the newly declared long-term national security goal of eliminating nuclear weapons and a new Nuclear Posture Review (NPR) scheduled for release within a month. It is unseemly for the agency to not wait one more month in the face of its long delay in releasing this Y12 dSWEIS.

More than just the ineffectual adverb “unseemly,” arguably NNSA is acting contrary to its legal obligations under the National Environmental Policy Act (NEPA). Council on Environmental Quality NEPA regulations, which the Department of Energy (DOE) had to adopt, states:

Environmental impact statements may be prepared, and are sometimes required, for broad federal actions such as the adoption of new agency programs or regulations (Sec. 1508.18). Agencies shall prepare statements on broad policy actions so that they are relevant to policy and are timed to coincide with meaningful points in agency planning and decisionmaking. CEQ Regulations for Implementing NEPA, §1502.4, parentheses in the original.

Clearly the soon to be released NPR is a huge “meaningful point in agency planning and decisionmaking.” Buttressing that, CEQ NEPA Regulations §1508.18 “Major Federal Action” states:

(b) Federal actions tend to fall within one of the following categories:

1. . . . Formal documents establishing an agency's policies which will result in or substantially alter agency programs.
2. Adoption of formal plans, such as official documents prepared or approved by federal agencies which guide or prescribe alternative uses of Federal resources, upon which future agency actions will be based.
3. Adoption of programs, such as a group of concerted actions to implement a specific policy or plan; systemic and connected agency decisions allocating agency resources to implement a specific statutory program or executive directive. *Ibid.*, § 1508.18

Again, clearly the pending Nuclear Posture Review falls within the ambit of all of the above.

The "Cover Sheet" to the existing Y12 dSWEIS states:

NNSA had originally planned to issue the Draft Y-12 SWEIS in late 2006; however, in October 2006, NNSA decided to prepare a supplemental programmatic environmental impact statement (SPEIS) related to transforming the nuclear weapons complex ("Complex Transformation SPEIS"). As a result, NNSA decided to delay the Draft Y-12 SWEIS until the programmatic decisions on the Complex Transformation SPEIS were made. On December 19, 2008, NNSA announced a Record of Decision related to the Complex Transformation SPEIS (73 FR 77644). In that decision, NNSA decided that the manufacturing, storage, and research and development missions involving uranium will remain at Y-12, and NNSA will construct and operate a Uranium Processing Facility at Y-12. This Draft Y-12 SWEIS assesses the potential environmental impacts of reasonable alternatives for implementing that programmatic decision at Y-12.

As the Complex Transformation SPEIS explains "The Nuclear Posture Review establishes the broad outline for future U.S. nuclear strategy, force levels, and infrastructure. The Nuclear Posture Review is a classified report prepared by the Department of Defense." CT SPEIS, p. 1-4. The predecessor to the CT SPEIS is the 1996 Stockpile Stewardship and Management PEIS (which, after all, the CT SPEIS is technically a "Supplement" to). The CT SPEIS continues, "The 1994 NPR defined and integrated past and present U.S. policies for nuclear deterrence, arms control, and nonproliferation objectives. At the time of the 1994 NPR, it was anticipated that the *START II Treaty* would enter into force in 2004. Based on this anticipation, the 1996 SSM PEIS analyzed the potential impacts of reasonable alternatives that might be implemented over a 10-year period." *Ibid.*, p. 2-3.

In Figure 2-1 – "Policy Perspective of the Stockpile Stewardship Program and Complex Transformation" the CT SPEIS depicts how the 2001 NPR is a major policy piece that with others (like international treaties and Presidential Decision Directives) sequentially drive the CT SPEIS' "purpose, need proposed action, and alternatives." It further states, "NNSA has been considering

how to continue the transformation of the Complex since the [Bush Administration] Nuclear Posture Review was transmitted to Congress in early 2002.” Ibid., 3-1. NNSA now states, “In this new Y12 SWEIS, NNSA continues to assess alternatives for the modernization of Y12, including implementation of the Complex Transformation SPEIS decisions.” Y12 dSWEIS, p. S-4.

One CT SPEIS decision was

Manufacturing and R&D involving uranium will remain at the Y-12 National Security Complex in Tennessee. NNSA will construct and operate a Uranium Processing Facility (UPF) at Y-12 as a replacement for existing facilities that are more than 50 years old and face significant safety and maintenance challenges to their continued operation. CT SPEIS Record of Decision, NNSA, 12/18/08.

The Obama Administration has stated that its new Nuclear Posture Review will be released this March 1. It was originally due before the end of 2009. NNSA first issued a Notice of Intent for a new Y12 dSWEIS on November 28, 2005. Yes, the Obama NPR is late, but we strongly argue that NNSA should have rescoped this Y12 dSWEIS after the release of the NPR. It is not sufficient to predict that the NPR will justify the UPF (maybe it will, maybe it won't). Especially galling, as a minimalist position, is NNSA's decision to not extend the deadline for designated public comment period until at least a few weeks after the release of the new Nuclear Posture Review.

The Y12 dSWEIS Should Be Re-Scoped Because NNSA Has Changed the Alternatives

The NNSA Federal Register Notice of Intent <<http://www.eh.doe.gov/nepa/noi/71270.pdf>> dated_11/28/05 notes under Alternatives for the Y12 dSWEIS:

Alternative 1 includes the No Action Alternative and proposes to modernize the Y-12 National Security Complex around a modern Uranium Processing Facility (UPF). Alternative 2 includes the No Action Alternative and proposes extending the life of existing facilities with only the most cost effective modernization possible without replacing the current structures. Alternative 3 consists of reducing site operations as facilities reach the point where they can no longer be safely operated without significant repairs or modernization.

However, this present Y12 dSWEIS is based on the 2001 Y-12 SWEIS, not the scoping that was done in December 2005 and January 2006, as the document states:

S.1.4 Scope of this Y-12 SWEIS and Alternatives

This Y-12 SWEIS (DOE/EIS-0387) expands on and updates the analyses in the 2001 Y-12 SWEIS (DOE/EIS-0309) (DOE 2001a), and includes alternatives for proposed new actions and changes since the 2002 Y-12 SWEIS ROD (see Section S.3 for a more detailed discussion of these alternatives). The No Action Alternative for this SWEIS is the continued implementation of the 2002 ROD, as modified by decisions made following analysis in subsequent NEPA reviews.

NSA errs in a disconnect between what it solicited for public scoping comment in 2005 and what it does now in this Y12 dSWEIS. Further, NNSA has expanded the range of legal alternatives from 3 in the 2005 Notice of Intent to five in the present Y12 dSWEIS. We argue this inappropriate course of agency action further buttresses the need to rescope this Y12 dSWEIS.

This Y12 dSWEIS Must Be Site-Wide and Not Just UPF Centered

The purpose of the Y12 SWEIS is to update the 2002 Y12 Site-Wide Environmental Impact Statement. The Department of Energy's NEPA regulations that require SWEISs also require a Supplemental Analysis every five years in order to determine whether a new SWEIS should be prepared. In this instance, DOE did not wait five years to begin preparing a new SWEIS—three years after the Record of Decision, which issued from the first SWEIS, on November 25, 2005, NNSA announced its intent to prepare a second SWEIS. This decision was not based on a Supplemental Analysis as required by NEPA regulations, but was driven by the desire to move forward with construction of the Uranium Processing Facility, a decision which NNSA declared not yet “ripe for consideration” in the initial SWEIS. Please explain the timing of this SWEIS.

The Y12 SWEIS is supposed to undertake a comprehensive presentation and analysis of ongoing and future operations, activities and facilities at Y12. The purpose of a SWEIS, rather than a more simple EIS on the Uranium Processing Facility alone, is to take a more comprehensive look—to place proposed actions in the broader context. The Draft Y12 SWEIS fails to provide such analysis and evaluation, describing instead two proposed new construction projects:

1. Facility(s) required to meet uranium production mission requirements (five alternatives are considered, including three sizes of a new Uranium Processing Facility); and
2. A new command post for security and emergency response operations (the Complex Command Center).

The environmental impacts of all current and foreseeable operations at Y-12 must be included in a final Y12 SWEIS. The dSWEIS includes a vague assurance that the location for the new CCC will be chosen to avoid CERCLA issues. The description of the new facility contains no evaluation or analysis of environmental impacts associated with the CCC, despite its seven acre footprint. The vague assurance provided in the dSWEIS Summary is insufficient to meet NEPA requirements for Categorical Exclusion let alone an Environmental Impact Statement. Since NNSA has determined that the CCC is covered by this SWEIS, a more thorough environmental analysis must be prepared. It must include consideration of locations (outside the security zone v. proximity for emergency response), impact on remediation activities, an assessment of vulnerabilities associated with a consolidated center, and a complete accounting of costs over the lifetime of the facility. Other reasonable alternatives must be considered, including a No Action alternative.

In today's economic climate—with a proposed three-year freeze on much federal spending and major sectors of the government being asked to endure sacrifices and reductions, NNSA must show that the benefits of the CCC justify the considerable expense of this elective project; it is not enough to declare up-front savings through a privatization scheme. The CCC may be a wise expenditure of public money, and the proposed location may be ideal; but given the absence of

information in the SWEIS, there is simply no way to tell. The public should be able to look at real plans and numbers to determine whether the CCC is a valid, justifiable expense and to comment *before* a Record of Decision is announced.

The vast majority of the dSWEIS is devoted to the facility(s) required to meet the uranium handling, processing and production mission requirements, including an analysis of five “reasonable” alternatives: No Action (NA); Upgrade-In-Place; a new Uranium Processing Facility with a throughput production capacity of 125 warheads/year (UPF125); the “Capability-Sized UPF” with a production capacity range of 50-80 warheads/year (UPF80); and the “No Net Production UPF, with a production capacity of 5 warheads/year (UPF5).

The Uranium Processing Facility Should Be Re-Missioned, Or Not Built at All

A key reference document for the Complex Transformation SPEIS, the *Independent Business Case Analysis of Consolidation Options for the Defense Programs SNM and Weapons Programs*, http://www.complexttransformationspeis.com/links_ref_pdfs.html (“TechSource 2007a”), noted that all existing nuclear weapons undergoing refurbishment through Life Extension Programs receive a rebuilt Canned Subassembly (i.e., secondary] with old secondaries as the feedstock. (Page 6-2). In many ways this appears to be the unpublicized but main programmatic driver for the Uranium Processing Facility to build these new secondaries.

The Y12 SWEIS should explain why rebuilt secondaries are necessary for refurbished US nuclear weapons. There is a plutonium component analogy here, where NNSA use to claim that the reliable lifetime of plutonium pits was on the order of 45 years. In contrast, a review by the independent JASONS concluded that plutonium pits last 85 years or more. It is generally accepted that secondaries are far less complicated and sensitive than plutonium pits. NNSA should specifically answer in Y12 SWEIS the question why rebuilt secondaries are necessary for refurbished US nuclear weapons.

Even in the event that rebuilt secondaries are necessary, NNSA needs to answer the question why a multi-billion dollar Uranium Processing Facility is necessary. Why can't the existing 9212 complex be sufficiently restored and/or upgraded, and related or not why can't some floor space be made available in the new ~\$700 million HEU Materials Facility for necessary residual secondary components production? The Y12 SWEIS needs to seriously examine these alternatives that could save American taxpayers serious money and better achieve the newly stated national security goals of suppressing nuclear weapons proliferation by example.

Presentation of Alternatives Must Be Made Clearer

The distinction between No Action, which includes a list of upgrades, maintenance and replacement activities already self-approved by NNSA, and Upgrade-in-Place is not clear from the analysis provided. Any assessment meant to inform a decision would have to include costs. None are provided, though statements about employment and economic impact, unsupported by real or estimated dollar numbers, are included in the assessment.

The physical distinction between the UPF80 and the UPF5 is not clear from the information presented in the SWEIS—the description suggests the two alternatives have identical floor space and equipment; the designations of throughput capacity appear to be a distinction without a difference. The only apparent difference is the number of people working, a difference that can be erased by an ad in the newspaper. If there is a real capacity difference between the UPF80 and the UPF5, the SWEIS should make it clear—the proliferation implications are enormous. The UPF80 expands US warhead production capacity and sends a powerfully provocative message to the rest of the world. The UPF5 is more supportive of US nonproliferation goals and indicates a serious US commitment to a nuclear weapons free future.

Failure to provide cost estimates is a serious deficiency. The United States is currently in a severe economic recession; funding for many social services and programs are being cut at the very time they are most needed. The cost of each of the proposed alternatives is a significant determinative factor. The SWEIS is long on benefits, especially of its preferred alternatives, and makes claims of cost savings through efficiencies, workforce and footprint reduction, etc. But no legitimate cost estimates of the five alternatives is presented which would allow a comparison of costs and benefits associated with each alternative. A final decision would certainly benefit from such an analysis. We argue that since NEPA requires an analysis of socio-economic impacts, the analysis must be included in the SWEIS and subject to broad scrutiny. Please provide the estimated costs of all alternatives. More strongly put, NNSA has made unsubstantiated claims that “Complex Transformation” will save taxpayers money. Great, we hope so, but in the strongest terms challenge NNSA to back up these claims with credible data.

The recent report of the General Accounting Office on DOE’s cost-estimating practice does not inspire confidence in the cost estimates that have been publicized to date about the UPF. Rather than follow accepted procedures for estimating costs, NNSA has provided estimates that apparently have no basis in reality and at least a 50% margin of error—the difference between two and three billion dollars is significant. NNSA should provide reliable cost estimates resulting from approved estimating procedures that allow a fair comparison of the cost/benefits of each alternative.

The Purpose and Need Of This SWEIS Are Based on Outdated Assumptions

This is the starting point for the SWEIS. The purpose and need are predicated on a number of documents and policies, which define the mission requirements at Y12. The SWEIS lists several of the documents, which govern current missions: the 2001 Nuclear Posture Review, the START Treaty (now expired), and the Moscow Treaty. Each of these demonstrates the continuing reduction of the US nuclear stockpile. Diminishing requirements have already led to the decision to downsize the Special Materials Complex.

While it is impossible to predict the future with certainty, it is clear that US nuclear weapons policy is in transition. Presidents Obama and Medvedev are preparing to sign a new START Treaty, which will reduce the current stockpile ceiling to 1,675 warheads. President Obama has called these reductions a “first step” toward deeper reductions. Most experts foresee a stockpile size of 1,000 warheads or less within the decade. The Nuclear Posture Review being prepared for President Obama is now expected to be released in March of 2010—it will provide force structure requirements, which will directly impact the mission requirements at Y12.

After delaying the release of the Draft SWEIS for several years, NNSA has now declined to hold the public comment period open an extra sixty days to allow for an informed engagement with the public after the Y12 mission requirements are clearer. NNSA says it has built in flexibility with alternatives that cover a range of possibilities. This is not preferable to a focused examination of a specific proposal; it is inefficient and places an unnecessary burden on the public to address hypothetical scenarios.

Within these constraints of uncertainty, it is still possible to reflect on the impact on Y12's mission requirements from what *is* known about the future of the US nuclear stockpile.

Five critical facts:

1. The stockpile will continue to get smaller. Reductions set in the START Treaty of 2010 will retire more than 500 warheads; President Obama has indicated his determination to pursue further deep reductions, and President Medvedev concurs.
2. The warheads that remain in the US arsenal will need to be maintained. Given the recent report of the JASON certifying the reliability of the US arsenal, it is clear that a program of surveillance and maintenance will be sufficient to guarantee the reliability of the existing US stockpile for the foreseeable future—at least forty-five years. There is no urgent need for expanded warhead production capacity.
3. There is currently a significant backlog, at least ten years and maybe as many as fifteen years, of retired warheads awaiting dismantlement. Reports from Y12 indicate storage capacity issues for secondaries and cases continue to grow. It is clear that existing capacity is not sufficient to address the dismantlement requirements from previous arms reduction agreements and warhead retirements.
4. The need for dismantlement capacity will grow, rapidly and urgently, as new arms control agreements enter into force. Current facilities, already stretched beyond their capacity, will be expected to absorb and process hundreds more secondaries and cases over the next decade.
5. The US has no need for expanded warhead production capacity. Statements from State Undersecretary Ellen Tauscher in January, 2010, affirm the US will not pursue new warhead design or expanded military capabilities for the nuclear arsenal.

Please explain the purpose and need of the proposed UPF in light of these on-going developments.

The Nonproliferation Impacts of UPF Alternatives Must Be Considered

The impact of the UPF decision on US efforts to constrain nuclear proliferation is perhaps more important than the local or regional environmental and socioeconomic impact analyzed in the SWEIS. The SWEIS does not address nonproliferation concerns in detail, which is a shortcoming that must be rectified in the final SWEIS—or addressed in a Supplemental EIS on Nonproliferation Impacts. The Y12 SWEIS refers instead to nonproliferation analysis prepared for the Stockpile Stewardship and Management PEIS in 1996, asserts the program is fully consistent with US obligations under the Nonproliferation Treaty, and further asserts the analysis remains valid.

The arguability of the 1996 assertion is obvious; it was not tested against the expectations or understanding of other NPT parties. To assert that a program designed to extend the life of the

US nuclear stockpile for the indefinite future is in compliance with the NPT, in which the US promised to pursue in good faith complete disarmament at an early date defies, common sense. The plain meaning of the words of the NPT contradict DOE's 1996 assertion.

The context—indeed the entire landscape—for nuclear nonproliferation discussions has changed so dramatically and so fundamentally that no clear-thinking person can imagine an analysis prepared in 1996 would be anything more than historically interesting. In other words, no analysis of nonproliferation concerns in 1996 can be relied upon with a straight face in 2010; to attempt to do so, as the Y12 SWEIS does, is either a demonstration of ignorance or a clumsy attempt to dodge the most serious and central concern attached to the proposal to build a new weapons production facility.

Whichever of these explanations lies closer to the truth is not important—what is important is the necessity of a serious, thorough consideration of the nonproliferation impacts, circa 2010, of the proposal to build a new nuclear weapons production facility as part of a complex-wide effort to reconstitute full-scale warhead production capacity.

If the NNSA believes it can move forward with a UPF, or a UPF80, or even an “expandable” UPF5 without undermining US nonproliferation efforts in 2010, it has a responsibility to explain its rationale and subject it to external review.

Purpose and Need Cry for A Reality Check

According to the recent JASON study analyzing the Stockpile Stewardship Program, the US has a safe, secure, and reliable stockpile. Since 1996, more than \$90 billion has been spent “modernizing” the nuclear weapons stockpile. By 2018 (the time a new UPF would come on-line) the US stockpile of refurbished “Life Extended” warheads will exceed the maximum number allowed by the START Treaty.

At this point, it seems clear that the idea of a full-scale UPF, or any Alternative that would maintain a production capacity throughput of 125 warheads/year, stands outside the bounds of what is “reasonable.” Construction of a \$3.5 billion-plus warhead production facility when the US is attempting to regain its stature as an international leader in nonproliferation efforts, to assuage concerns of non-nuclear weapons states on the eve of the NPT Review, and to dissuade Iran from further developing its nuclear capability is not only not reasonable, it is not rational.

The UPF125 is no longer NNSA's bomb plant of choice. Whether NNSA has abandoned its original proposal because it recognized the changing realities of US nuclear stockpile force structure or because it recognized a full-scale UPF would be a hard sell to Congress does not matter. What matters is that the NNSA no longer needs to be able to build 125 secondaries and cases/year.

By a not-so-remarkable coincidence, the warhead production capacity of the preferred alternative is 50/80 warheads per year—not 60/90 or 50/75—and 50/80 warheads per year matches the capacity of the Chemistry and Metallurgy Research Replacement-Nuclear Facility at Los Alamos. No explanation is given for this apparently arbitrary capacity or for the range of

warheads rather than a target number. Please explain the purpose and need of each of the alternatives' capacities.

At this point, it is clear that the equation of purpose and need has been significantly redrawn since the UPF was first proposed in 2005, and has continued to seek a new equilibrium since the Draft Y12 SWEIS was published in October 2009. The US has now disavowed new warhead production or design, and significant modifications to the existing stockpile. As Ms. Tauscher indicates, this shift is an effort to demonstrate the seriousness of the US commitment to nonproliferation. As the US commitment to nonproliferation grows, the "need" for the UPF80 evaporates.

This leaves on NNSA's table three alternatives: No Action, Upgrade-In-Place, and the UPF5. Each of these is, according to the Y12 SWEIS, examined because it is reasonable. The UPF5 proposes a new facility, cost undeclared, sufficient to meet the needs of a Stockpile Stewardship program that provides passive surveillance and maintenance of the stockpile and can produce a limited number of replacements for components lost during destructive testing. What is most important about the UPF5 is the number—5. NNSA says this is the capacity needed to maintain the existing arsenal.

NNSA identified the UPF80 as its preferred option in the SWEIS (pp. 3-41,42). *Every single benefit of the UPF80 listed accrues equally to the UPF5.* In other words, there is no distinguishing benefit of the UPF80 over the UPF5. On the other hand, the one distinctive difference—the UPF80 reconstitutes full-scale nuclear warhead production capacity—carries a profound liability; it undermines the President's commitment to demonstrate global leadership in disarmament efforts and it corrupts US nonproliferation goals.

The draft SWEIS does not adequately provide information to support the square footage requirements asserted for the space in the preferred alternative, what amount of the UPF would be used for what stated purpose and what amount of the facility is set aside for future purposes. This failure to adequately describe space requirements for the individual operational requirements of UPF violates NEPA and prevents the public, elected officials and decision makers from their ability to comment on the analysis. A much more detailed and thorough description of space requirements for the each purpose of the project, the amount of space set aside for future purposes and other information relevant to analyzing the adequacy of the size and scale of the facility proposed in the preferred alternative is required by law.

An Alternative 6 Must Be Analyzed: Dedicated Dismantlement Facility - Consolidate and Down-Size Production Capacity (5 warheads/year) in Existing Upgraded Facility.

As we did in our January 30 2006 Y-12 scoping comments, we again state that dismantlement activities must be more than casually addressed and that an expanded dismantlement alternative must be considered in this SWEIS.

We again suggest that the Y-12 SWEIS must make an agency-wide robust dismantlement program central to its analyses under all alternatives. We still think it best that a mission devoted overwhelmingly to dismantlements should be a sixth formal alternative, but clearly the activity is

relevant to NNSA's other proposed alternatives, all of which should be infused with expanded dismantlement activities.

Please analyze a sixth alternative to the five outlined in the Y12 dSWEIS. This alternative most fully addresses Y12 mission requirements for the foreseeable future. It has the added virtue of maintaining more jobs than the UPF80 or the UPF5, and achieves the cost savings of a reduced security footprint.

The draft SWEIS does not distinguish between the equipment "needs" for dismantlement of nuclear weapon secondaries at Y-12 and the equipment "needs" for their production, including the production of new and modified designs. While there is some crossover or dual use, it is nonetheless true that one can draw a line between equipment for dismantlement and equipment for production. They are not the same from a technical perspective. They are not the same from a NEPA compliance perspective. Further, the people of the US and the world can and do distinguish between disarmament and dismantlement of nuclear weapons and producing new ones. They are not the same in terms of policy and political impacts.

The draft SWEIS is fatally flawed by its willful refusal to substantively distinguish between these two different activities (production and dismantlements). All of the UPF options presented, including the "preferred alternative" fail to analyze a dismantlement-missioned UPF and distinguish it from the production oriented UPF options. Thus, the alleged alternatives in the draft SWEIS are reduced to being mere variations on the same production theme with only a marginal difference in square footage between them.

The future of Y12 is in dismantling tens of thousands of nuclear weapons. Because this part of Y12's mission has been largely neglected for decades, there is a 12-15 year backlog of retired secondaries and subassemblies awaiting dismantlement and disposition. The backlog is large enough to create storage issues and, on more than one occasion, criticality safety violations.

Y12 projects future dismantlement at a steady rate—but this is not enough to meet the country's needs and certainly not enough to persuade other nations we are aggressively acting to reduce our stockpile and meet our obligations under the NPT. Y12 should establish the capability to more than double its throughput for dismantling nuclear weapons; a new dedicated, single-use facility, with security, safeguards, and transparency designed in, should be built.

The current Y12 SWEIS pays little attention to dismantlement operations, treating them as an adjunct to the production mission of the UPF. Over the course of the next decade, however, the need for production capacity will continue to diminish, and the demand for dismantlement/disposition capacity will balloon. While there is some overlap of operations and equipment used in production and dismantlement operations, DOE/NNSA documents also suggest dismantlement operations can stand alone.

We propose construction of a new, single-purpose Dedicated Dismantlement Facility (DDF), equipped only with machines and equipment necessary for dismantlement. The DDF must avoid dual-use capabilities if it is to remain not provocative and internationally verifiable. The facility design should incorporate verification and inspection protocols as they are developed.

Production capacity for the purpose of stockpile surveillance and maintenance can be accomplished at a 5 warhead/year throughput capacity within an existing facility, a capacity now known to be “reasonable” according to the NNSA. In keeping with the goals of NNSA’s Integrated Facilities Disposition Project, operations can be consolidated and downsized in an existing facility, mostly likely Building 9212, which is slated to receive more than \$100 million worth of upgrades in the next decade. Envisioning US participation in an international verification regime during disarmament, safeguard and transparency protocols should be incorporated into the upgrades as they are designed. Throughput capacity of five warheads a year will be adequate to assure the safety and security of the current stockpile as it awaits retirement.

The location of the DDF should be determined by a balancing of mission, security efficiency, and environmental, safety, and health requirements.

The high security footprint could be reduced by as much as 60%. The new, dedicated dismantlement facility could be designed and built at considerable savings over the proposed UPF, and would provide the most efficient and effective technologies for this increasingly critical mission as well as safe working conditions for its workforce over its 50-60 year life span.

The currently operating production facilities can be upgraded to standards protective of worker and public health and safety as well as protective of nuclear materials themselves for \$100 million (NNSA’s estimate)—a dramatic savings over the estimated \$3.5 billion cost of the UPF.

Under NNSA’s proposals, a new UPF would have a significant detrimental economic impact on the Oak Ridge community and surrounding regions. Workforce reductions range from 40% (nearly 2,600 jobs lost) in the UPF80 scenario to 48% (3,100 jobs lost at Y12, nearly 11,000 jobs lost in the region) under the UPF5 alternative. Compounding the regional negative economic impact: the jobs to be cut would belong-term, high-salary jobs (annual DOE median salary is \$54,000) rather than lower-paying short term construction jobs (industry average \$26,000).

Alternative 6 provides a win/win for the local workforce and regional economy. Construction of a new Dedicated Dismantlement Facility along with ES&H upgrades to existing facilities would preserve construction jobs and maximize job security for operational workforces—an increase in dismantlement jobs might be expected to mitigate the impact of any job losses experienced due to the inevitable reduction in Y12’s production mission.

In any scenario, the increase in security efficiency combined with a reduction in the high security area footprint will result in a decrease in security employment. Reduction of the high security footprint should permit acceleration of demolition and cleanup projects at Y12 which are currently hampered by security concerns—an aggressive effort by local leaders to secure funding for cleanup could offset losses in the security sector and minimize the regional economic impact. This is true for Alternative 6 as well as NNSA’s.

Alternative 6 is the *only* alternative that fully supports the nuclear policy goals of the current Administration: it supports maintenance of a safe, secure and reliable stockpile through passive surveillance and maintenance as the stockpile diminishes toward zero in a way that bolsters US

nonproliferation efforts on the international stage by demonstrating leadership as called for by President Barack Obama in Cairo, Egypt. DOE's alternatives fail to walk this tightrope, sacrificing US nonproliferation/security goals on the altar of a reconstituted nuclear weapons production complex.

Finally, Alternative 6 has the potential to save billions of dollars, reducing the price tag for new construction from \$3 billion for a new UPF, to funding for a new dismantlement facility (cost to be determined, but likely in the neighborhood of \$1 billion) and upgrades to existing facilities (NNSA estimate \$100 million). The Final Y12 SWEIS should fully analyze the economic impact of Alternative 6. Given the recent findings of the General Accounting Office that "The cost estimates of the four projects we reviewed [one of which was the UPF] lacked credibility because DOE did not sufficiently cross-check the projects' cost estimates with ICEs, use best practices when identifying the level of confidence associated with the estimates, or sufficiently analyze project sensitivities," cost estimates for all alternatives should be subjected to a rigorous outside audit.

Seismic Events/Natural Phenomena Must be Analyzed

The SWEIS does not address seismic risks in detail. It asserts that, under the No Action alternative, there is no change in risk from earthquakes. In assessing the UPF, the SWEIS states new construction would incorporate protections into the design of the new facility that would reduce risks from seismic activity, but absent specific design information, the SWEIS says a full analysis of consequences of an earthquake are not possible. Nevertheless, the SWEIS declares a UPF designed to Performance Category 3 would be sustain damage "less frequently than in existing facilities."

While it is not necessary that Y12 production operations continue uninterrupted in the event of a natural phenomena event, it is crucial that building integrity be maintained for security purposes as well as for worker, environmental and public health protection. It is not clear from the description provided in the SWEIS, that a PC2 or even a PC3 designation provides that level of building integrity.

Similar analysis addressing risks from tornadoes and flooding must also be conducted; the location of Y12 in a narrow valley, combined with the naturally high water table in Bear Creek Valley, indicate a significant risk from floods. The immersion of HEU in water changes criticality calculations dramatically, adding a unique dimension to the analysis required in assessing risks from flooding.

An updated seismic hazards analysis must be done for the Y-12 site.

Accident Scenarios And Risk Analysis Of Release Events Must Be Given A More Thorough Analysis

The actions at Y-12 do not take place in a vacuum; the Y-12 site was added to the Environmental Protection Agency's National Priorities List (Superfund) in December 1989. The Superfund list documents the nation's most pressing environmental contamination challenges. All discussion of future activities and environmental impacts must start from this baseline. The draft Y-12 SWEIS

should discuss the effects of completed Superfund actions and the future effects of any proposed remedies or mitigation actions.

In light of the historic astounding releases of such a dangerous substance, the draft SWEIS should fully document past, present and projected future releases of mercury to all media (soil, water, air); explore the potential harm of past, present and projected future releases to humans, flora, fauna and the environment; and fully describe past, present and future cleanup of mercury in soil, water, and facilities. Generally, the SWEIS should elevate and prioritize Y-12 cleanup of all contaminants as a central mission, which we note is significant in its absence as a site mission in the SWEIS. The draft SWEIS should indeed posit cleanup as a central mission, and discuss future cleanup programs in full.

The SWEIS evaluation of accident scenarios cites methodologies used to “evaluate the potential consequences associated with a release of each chemical in an accident situation.” (p. 5-91) This language suggests multiple materials were analyzed for risks to workers, the environment and the public from releases. But the actual accident scenario description says, “the chemical analyzed for release was nitric acid,” suggesting only one chemical was used for computer modeling to evaluate consequences associated with a release. There is no indication that nitric acid is a reasonable or realistic substitute for all possible chemical releases—does it match anhydrous hydrogen fluoride, for instance in solubility, migration in soils, dispersion in air? Is nitric acid chosen as a representative of the worst possible chemical released?

Hydrogen fluoride, as used at Y-12, represents the potential for significant health and safety exposures to workers and the off-site public. Please describe and name the computer models used for off-site release scenarios. Please include the raw input data used for these models.

The draft SWEIS mentions lithium in numerous places but neglects to detail the forms in which it is used and the attendant environmental risks. Lithium hydride, for example, is "extremely hazardous" to health (requiring full protective suits); it is flammable and reactive. In particular, it reacts violently with water (including human perspiration).

Because little was said about lithium in the draft SWEIS, it is impossible to comment more fully on the specific hazards posed by lithium at Y-12 and how to mitigate them. We note, however, that the weapons activities at Y-12 that would use lithium generally would present all of the above-listed hazards. Therefore, a more complete analysis of lithium risks and mitigation measures must be included in the SWEIS. In this context, we note also the failure to include other hazardous materials used at Y-12 in this draft SWEIS.

The SWEIS should analyze a range of accident/spill scenarios, including multiple contemporaneous excursion events due to catastrophic events. Chemicals and hazardous materials that represent the full range of risks posed by materials used at Y12 should be analyzed. “The purpose of a SWEIS is to provide...an analysis of potential individual and cumulative environmental impacts associated with ongoing and reasonably foreseeable new operations and facilities,” [Y12 Draft SWEIS, p.1-22] not a narrow look at one scenario involving one hazardous material or an evaluation of impacts associated with one new facility or operation.

The bounding accident considered in the Y12 SWEIS is an aircraft crash/attack on the UPF. This may, in fact, be the bounding accident for the UPF, but it is not the bounding accident for Y12 site-wide, including the UPF. In the site-wide EIS, an earthquake of magnitude great enough to cause structural failure of several facilities—including the UPF and emergency response and security facilities (the CCC, if built, for instance), with ongoing or uncontrolled releases of hazardous materials—volatiles, fuels, toxic contaminants, uranium, lithium, beryllium, natural gas, mercury—into air and water, loss of material control. This apocalyptic scenario is actually not outside the realm of probability given the confined and compact location of facilities at Y12. A detailed analysis of the cumulative and compounding impacts possible in a severe earthquake or tornado event should be analyzed in the SWEIS as a “bounding event.”

Please state how DNFSB recommendation 2004-2, Active Confinement Systems, and DNFSB/TECH-34 are being implemented in the UPF. Passive confinement systems are not necessarily capable of containing hazardous and radioactive materials with confidence because they allow a quantity of unfiltered contaminated air to be released from an operating nuclear facility following certain accident scenarios. Please list the type of confinement for each Y-12 facility, including proposed facilities, and the plans for upgrading existing buildings to active systems. Please describe the effects of having these systems, or not, on releases.

The Impacts of D&D on Waste Streams Must Analyzed

Several of the alternatives proposed for the future of Y12—the UPF125, the UPF80, the UPF5, and the Dedicated Dismantlement Facility, will downsize the footprint of Y12’s controlled access area and will permit decommissioning and demolition of a number of facilities, some of which are contaminated with radioactive and hazardous wastes from past operations.

The SWEIS must analyze the waste streams generated by accelerated D&D, and all of the wastes streams must be fully characterized and quantified. Treatment, disposal and/or storage options for those wastes must be evaluated. In addition, the Y12 SWEIS should identify other cleanup operations which may have an impact on the environment that are likely to take place over the next five to seven years. In cases where waste streams might compete for limited storage or disposal space, the SWEIS should be clear about the criteria that will be used to make decisions. The use of off-site facilities, and the transportation hazards attendant to off-site shipments, should be evaluated and compared to the benefits and hazards of on-site treatment, storage or disposal.

The Draft SWEIS acknowledges that massive waste streams will be generated during D&D but does not analyze them, stating only that they “cannot be estimated without a detailed assessment of the facilities.” This is insufficient and does not meet the standard required of a “Site-Wide Environmental Impact Statement” in name. It may be true that it is not possible to fully characterize exact quantities of waste with specificity, but that does not mean gross generalizations are the only thing that can be said [e.g. “D&D activities would also cause health and safety impacts to workers (occupational and radiological), as well as potential health impacts to the public through the release of radiological materials...” p. 5-98]. The Final SWEIS must do better—either attempt a thorough characterization of waste streams, or propose a timeline for preparing a Supplemental EIS on Waste Streams from D&D.

At present, there is no other forum for a comprehensive analysis of environmental management activities at Y12. This segmentation of cleanup projects has obvious disadvantages—the SWEIS provides a vehicle for at least identifying cross-cutting issues and establishing a minimal level of information that can be used to coordinate cleanup/waste management activities. Since no such vehicle exists otherwise, the SWEIS should be a site-wide environmental impact statement (duh!).

The draft SWEIS fails to adequately analyze the existing contamination and then compounds the failure by not properly prioritizing cleanup in considering the future of Y-12. Cleanup and dismantlement of secondaries are examples of two crucially important (and reasonable and practical) future missions for Y-12 that must receive far more detailed consideration than given in this draft SWEIS.

Risks From Releases Must Be Given A More Thorough Analysis

The SWEIS treatment of potential releases to air and water is partial, incomplete and deficient. It does not list materials/contaminants used at Y12; does not provide information about scenarios in which materials might be released; and does not even use a probability/risk matrix to perform a cursory overview of risks posed by the various materials used in uranium processing operations at Y12. It may be true that some small fraction of these materials is classified, but the vast majority of materials have been documented elsewhere—in the Oak Ridge Health Agreement Steering Panel study, for instance. The SWEIS can provide detailed analysis of these materials and assessment of risks associated with release scenarios without disclosing their purpose.

In instances where releases are examined, the analysis must be complete and meaningful. With regard to uranium discharges to the atmosphere, for instance, the amount of uranium released is measured in curies. Uranium is also a toxic heavy metal that carries risks from its chemical properties; these risks must also be evaluated, along with an analysis that combines the biologic and radiologic risks. Use of curies as unit of measure gives no hint to the amount of material released or its particle size, or its toxic burden.

An example of the level of detail appropriate for analysis in the SWEIS can be found on pages 2-16 and 2-17 of the Draft SWEIS, where NNSA provides detailed descriptions, including quantities, of reductions in materials through the Pollution Prevention, Conservation and Recycling Programs.

Effects On Water Quality Must Be Analyzed For All Foreseeable D&D Projects

Water quality, particularly the negative impact of Y12's operations on East Fork Poplar Creek, continues to be a concern. The SWEIS indicates 70kg of uranium was released offsite through liquid effluent in 2007 (apparently the most recent year for which numbers are available). The SWEIS also indicates NNSA has appealed for relief from water permits, and that mercury releases at Station 17 exceed Tennessee Water Quality Criteria 75% of the time.

As noted above, D&D and likely new construction has the potential to add to this burden, and the site-wide EIS is the starting point for an assessment of the characteristics of that additional

burden. The effects on water quality must be analyzed for all foreseeable D&D projects and for all operations at the Y-12 site.

Nuclear Materials From Other Locations Must Be Analyzed

Y12's mission includes support for the Global Threat Reduction Initiative. Y12's role is to support the retrieval, processing and disposition of Special Nuclear Materials. The SWEIS addresses this mission (p. 5-94ff) and refers to documentation prepared for previous shipments of materials to Y12.

The treatment in the SWEIS of materials received from foreign sources is inadequate. Impacts are assessed only for Special Nuclear Materials. In reality, special nuclear materials are often only part of the total material received. During Project Sapphire, for instance, more than 100 barrels of waste were shipped to Y12; the amount of uranium was only 1,245 pounds, a miniscule fraction of the total amount of waste material imported to Y12. Environmental documentation ignored this other waste material. At the time the Project Sapphire EA was completed, and a Finding of No Significant Impact issued, DOE had not even fully characterized the accompanying materials to determine what hazardous or toxic materials might be present. It was asserted that characterization of a random sampling was sufficient, though the contents of 100 barrels were not homogenous.

The analysis of impacts from the GTRI must be comprehensive and detailed; the impacts of all materials, not just the Special Nuclear Material, must be included. In some cases this will be a relatively easy project. In other cases, like Project Sapphire, it may require an intensive effort. In all cases, workers and the public should be assured ahead of time ("before decisions are made," p. 1-22) that Y12 has the capacity and the capability to safely manage and dispose of *all* material associated with shipments under the GTRI, not just special nuclear materials.

Work For Others Must Be Analyzed

The Work for Others Program at Y12 has continued to grow over the last nine years, since the last SWEIS. Work for Others Program activities should be described in detail in this SWEIS, along with the facilities in which the work takes place, materials used, waste streams generated, potential impacts of releases, etc.

Analyze Climate Change Effects– Just Do IT

The DOE NEPA Lessons Learned Quarterly for June 2009 states, "Given the advances in climate science, extensive litigation, and potential regulation, there is a little doubt that DOE will need to analyze the reasonably foreseeable effects of greenhouse gas (GHG) emissions in its NEPA documents," said Eric Cohen, Office of NEPA Policy and Compliance, to participants at the NEPA Compliance Officers meeting. Currently, there is little Federal agency guidance on climate change and NEPA, he said, so DOE's guidance could be among the first. While guidance is being developed, Mr. Cohen recommended taking a "just-do-it" approach to considering GHGs in EAs and EISs" (pg. 12).

There is little doubt that DOE must evaluate GHG/climate change impacts under NEPA. Please use the Ten-Step Approach to Addressing GHG and Climate Change Impacts *from Ron Bass's presentation, "NEPA and Climate Change: What Constitutes a Hard Look?"* The recommended

10-step approach takes into consideration the existing provisions of the NEPA regulations, recent court decisions, and various state programs. The steps conform to the main elements of a NEPA document.

Affected Environment

Step 1 – Describe the existing global context in which climate change impacts are occurring and are expected to continue to occur in the future.

Step 2 – Summarize any relevant state laws that address climate change.

Step 3 – Describe any relevant national, statewide, and regional GHG inventories to which the project will contribute.

Environmental Consequences

Step 4 – Quantify the project's direct and indirect GHG emissions.

Step 5 – Convert the GHG emissions into carbon equivalents using an established "carbon calculator."

Step 6 – Discuss whether the project would enhance or impede the attainment of applicable state GHG reduction.

Step 7 – Describe the cumulative global climate change impacts to which the proposed action would contribute, i.e., the impacts of the project on climate change. (This may use the same information as in Step 1.)

Step 8 – Describe how the impacts of global climate change could manifest themselves in the geographic area in which the project is proposed, and therefore potentially affect the project, i.e., the impacts of climate change on the project (e.g., sea level rise could affect a coastal project).

Alternatives

Step 9 – Include alternatives that would meet the project objectives but would also reduce GHG emissions.

Mitigation Measures

Step 10 – Identify mitigation measures that would reduce GHG emissions, including both project design or operational changes and potential compensatory mitigation (e.g., carbon offsets).

Analyze All Potential Cumulative Environmental Effects Of Past, Present, And Reasonably Foreseeable Future Actions

The cumulative impacts of all nearby facilities, including ORNL and ETTP, must be examined, including accidents at nearby facilities. This project is connected to the already completed HEUMF, both physically and in terms of its environmental impacts. In addition the Consolidated Manufacturing Complex (CMC) that is planned for the near term future at Y-12 will also be linked to these facilities. The DOE is required by NEPA to analyze connected actions together in one Environmental Impact Statement. By improperly segmenting the HEU storage (HEUMF), HEU processing (UPF), and the "production operation zone" upgrades, (which are envisioned as developing into a small complex or possibly a CMC) the required "hard look" at the cumulative impacts of these facilities together is avoided.

Pursuant to the CEQ's NEPA regulations, "'Cumulative impact' is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions." 40 C.F.R. §1508.7. The cumulative impacts section of the draft SWEIS unreasonably fails to include a look at the connected impacts of the three facilities in one NEPA review document.

Cumulative impacts and synergistic effects of potential releases must be analyzed, include all other known existing and possible future contaminants. Describe any additional DOE or NNSA actions potentially impacting operations at Y-12. A 50km radius must be examined for potential cumulative impacts.

- End of Comments -

Respectfully submitted,

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