COMMENT RESPONSE DOCUMENT, CHAPTER 3: COMMENT SUMMARIES AND RESPONSES

INTRODUCTION

This chapter summarizes all of the comments the National Nuclear Security Administration (NNSA) received on the *Draft Site-Wide Environmental Impact Statement for the Y-12 National Security Complex* (Y-12 SWEIS) and provides NNSA's responses to those comments. As discussed in Chapter 1 of this Comment Response Document (CRD), NNSA received 353 comment documents on the Draft Y-12 SWEIS from Federal agencies; state, local, and tribal governments; public and private organizations; and individuals. In addition, during the public hearings that NNSA held, 108 speakers made oral comments. NNSA has placed this material, including the names of commentors, comment summaries, and the public hearing transcripts on the project website (www.y-12sweis.com).

Although the public comment period for the Draft Y-12 SWEIS closed on January 29, 2010, NNSA was able to process all comments related to the SWEIS that it received. This CRD includes responses to all comments that were received. Comments that were received on the Wetlands Assessment of the Haul Road extension are also contained in this CRD.

HOW NNSA CONSIDERED PUBLIC COMMENTS

NNSA assessed and considered public comments on the Draft Y-12 SWEIS, both individually and collectively. Some comments led to SWEIS modifications; others resulted in a response to answer or explain policy questions, to refer readers to information in the SWEIS, to answer technical questions, to explain technical issues, or to provide clarification. A number of comments provided valuable suggestions on improving the SWEIS. As applicable, the responses in this chapter identify changes that NNSA made to the SWEIS as a result of comments.

The following list highlights key aspects of NNSA's approach to capturing, tracking, and responding to public comments on the Draft SWEIS:

- At the beginning of the public comment period, NNSA reviewed the prior scoping comments to develop a list of major issue categories as a starting point for capturing and tracking public comments that were anticipated on the Draft SWEIS. As comments were received, they were reviewed and "binned" into applicable issue categories, or into new issue categories that were created. Because binning was a continuous process during the public comment period, issue categories were expanded and augmented as necessary to ensure that comments were binned into a proper issue category. If an existing comment bin was not specific enough, a new bin was created. Additionally, because comments relevant to some of the original issue categories were not raised by the public, some of the issue categories developed by NNSA were not used.

- NNSA reviewed and considered every comment received, including written and oral comments made during the public hearings, to identify, categorize and summarize those

comments. As shown in Chapter 2 of this CRD, the written documents received have been annotated with sidebars and comment codes. Those sidebars and codes provide the information that identifies where those comments are addressed. In some cases, multiple comment codes were assigned to a comment to indicate that an identified comment was considered in multiple comment summaries and responses. Chapter 2 of this CRD also identifies the oral comments that were made during the public hearings.

- After comment identification, NNSA grouped individual comments by categories and assigned each comment group to an expert in the appropriate discipline to address the comment.

- Comment summaries are intended to capture the substantive issue(s) raised by a comment. Comments grouped and summarized for response are, of necessity, paraphrased, but NNSA made every effort to capture the essence of comments included in a comment summary. If the meaning of a comment was not clear, NNSA attempted to interpret the comment and respond based on that interpretation. In some cases, NNSA used specific language from one or more commentors to develop a particular comment summary. This should not be interpreted to mean that NNSA considered any comment to be more or less important than other comments received relative to that comment summary; rather, NNSA felt that a comment's particular language was a reasonable articulation of many comments for a particular subject. In some cases, a commentor submitted a comment that was unique, so that it was responded to individually.

- In some instances, a comment summary and response are related to another comment summary and response. In these instances, the comment response directs the reader to that related comment summary and response.

- Each comment summary and response in Chapter 3 was reviewed by a variety of experts to ensure technical and scientific accuracy, clarity, and consistency, and to ensure that the response addressed the summarized comments.

In this process, NNSA has attempted to provide an accurate record of the comments received, as well as NNSA's responses to those comments. The responses indicate whether any changes were made to the Y-12 SWEIS and the reasons for making those changes. Section 1.3 of this CRD describes the organization of this CRD and the tables provided in Chapter 1 are designed to assist readers in tracking their comments to the appropriate comment summary and response. Each commentor should readily be able to locate their comment, the comment summary in which those comments were summarized, and the response that addresses those comments.

ORGANIZATION OF COMMENT AND RESPONSE SUMMARIES

The comment summaries and responses that follow are organized within issue codes, as shown in Chapter 1, Table 1.3-1, of this CRD. For example, issue code 1.0 contains comments related to nuclear weapon policies. Within this issue code, specific comment summaries and responses related to topics such as Presidential Decision Directives, the Nuclear Posture Review (NPR), new weapons design, the *Comprehensive Test Ban Treaty*, and nonproliferation may be found.

Depending upon the comments that were received on the Draft SWEIS, some topics within an issue code contain many comment summaries and responses. Comment summaries and responses within issue codes are not presented in any particular order of importance.

In some instances, a similar topic is addressed in multiple comment summaries and responses. This occurred due to the fact that comments were often intertwined, and the binning process captured these comments in multiple issue codes. While this resulted in some redundancy within some of the comment summaries, NNSA decided that redundancy was preferred to the potential of omitting some comments. In those instances where similar topics are addressed in multiple summaries and responses, cross-references are provided to the similar summary and response.

COMMENT SUMMARIES AND RESPONSES

1.0 NUCLEAR WEAPON POLICIES - GENERAL

1.A NUCLEAR POSTURE REVIEW, JASON REPORT

Commentors stated that the SWEIS does not consider studies which had not yet been published, but which will have a profound impact on the very premise of the Site-Wide EIS. Commentors expressed the opinion that these reports and events over the next seven months are likely to further erode the power of arguments for the UPF. Commentors offered an example of the JASON Report ("Lifetime Extension Program"), which states there is no evidence that the stockpile is at risk, refuting the primary arguments being put forward for new production capacity as part of the modernization discussion. Commentors stated that NNSA must incorporate the JASON Report, the NPR, the Strategic Arms Reduction Treaty (START) renewal, and the actions of the U.S. leading up to and during the Nuclear Nonproliferation Treaty (NPT) review. Commentors stated that the SWEIS was proceeding based on the 2001 NPR without waiting for the President's new NPR. Commentors stated that completion of the SWEIS should be delayed until the release of the pending Nuclear Posture Review so that the UPF can be more fully assessed. One commentor stated that NNSA should wait until Y-12's mission requirements are clearer because until then it is inefficient to focus examination on a specific proposal and place an unnecessary burden on the public to address hypothetical scenarios.

Commentors raised the following major issues related to the NPR and JASON Report:

- The SWEIS process is flawed and presumptuous because it fails to take into account the anticipated changes that will be implemented in the new NPR due in 2010. In order to be timely and reasonable, the Draft SWEIS should proceed on the basis of the 2010 NPR and its force structure so that the public can better comment on alternatives.
- According to the recent JASON report certifying the reliability of the U.S. arsenal, a program of surveillance and maintenance will be sufficient to guarantee the reliability of the existing U.S. stockpile in the foreseeable future. There is no need for expanded warhead production capacity.

Response: *NNSA considered relevant reports and studies that were available to determine the need for Y-12 activities and operations, the purposes to be achieved, the reasonable alternatives*

to be analyzed, and the scope of the SWEIS. Section 1.5 of the SWEIS addresses national security considerations relevant to the SWEIS. The NPT and other arms control treaties, such as treaties with Russia, are discussed in Section 1.5.1. The 2010 START Treaty with Russia ("New START") is discussed in Section 1.5.1. Relevant national security requirements, including the 2010 NPR, are discussed in Section 1.5.2.

NNSA thinks the SWEIS alternatives are consistent with, and supportive of, any reasonably foreseeable national security requirement. The requirements NNSA uses to define its programmatic needs are established by: the current Presidential Decision Directives (PDDs), which define the current and projected stockpile levels; the Nuclear Weapons Stockpile Plan (NWSP), which specifies the types of weapons and quantities of each weapon type by year; policies and statutes (such as annual appropriation acts); and the judgment of NNSA in consultation with the Department of Defense (DoD) and experts at NNSA's national laboratories. Based on these requirements, NNSA makes reasonable predictions as to the necessary configuration and capacity of the nuclear security enterprise for the future. The SWEIS analysis is consistent with and supports these national security requirements and policies. All of the alternatives in the SWEIS provide a capability to perform the functions necessary to maintain a safe, secure, and reliable stockpile. As a result, NNSA does not think it is necessary to delay the SWEIS.

The SWEIS was designed to cover a range of stockpile/capacity options that could result from the 2010 NPR. As discussed in Section 1.5.2, the 2010 NPR specifically concludes that a UPF is a key investment required to sustain a safe, secure, and effective nuclear arsenal. The UPF would be designed with a weapon production and dismantlement capacity consistent with the 2010 NPR and New START Treaty.

NNSA has considered the JASON Report mentioned by the commentor and agrees that one of the major conclusions of that report was that there is no evidence that accumulation of changes incurred from aging and the Life Extension Program (LEP) have increased risk to certification of today's deployed nuclear warheads. However, NNSA does not agree that this report refutes the need for new production capacity as part of the modernization discussion. See comment-response 1.C for a discussion of the NPT.

1.A.1 SIZE OF PROJECTED U.S. STOCKPILE

Commentors stated that by the time a new UPF would come online in 2018, the U.S. stockpile of warheads will exceed the maximum number allowed by the START Treaty. Commentors believe that there is no need for expanded warhead production capacity because a significant backlog of 10–15 years of retired warheads is awaiting dismantlement. Commentors stated that there is an expectation that the demand for production capacity will decline to near zero over the next 40 years, while demand for dismantlement/disposition capacity will increase. Commentors believe that the need for new production facilities should be predicated on this expectation.

Response: *The number of weapons in the U.S. nuclear weapons stockpile is consistent with all arms control treaties. The New START Treaty is discussed in Section 1.5.1. As discussed in that section, the New START Treaty would reduce deployed warheads to 1,550, which is about*

30 percent lower than the upper warhead limit of the Moscow Treaty, which entered into force in 2003 and commits the U.S. and Russia to deep reductions (i.e., to a level of 1,700-2,200 operationally deployed strategic nuclear warheads by 2012).

NNSA has no reason to believe that the nuclear weapons stockpile in 2018 will not be consistent with all arms control treaties. The size of the U.S. stockpile will be consistent with requirements established by PDD, the NWSP, policies, statutes, and the judgment of NNSA in consultation with DoD and experts at NNSA's national laboratories. The UPF would be designed with a weapon production and dismantlement capacity consistent with the 2010 NPR and New START Treaty. For information on dismantlements, see comment response 9.D. For information on a "zero stockpile," see comment response 1.C.

1.B PRESIDENTIAL DIRECTIVES, PUBLIC LAW, AND CURRENT POLICIES

Commentors stated that U.S. nuclear weapons policy should renounce first strike use, abandon implicit threats of use against non-nuclear countries, and end all actions that drive non-nuclear countries to seek nuclear weapons. Commentors stated that President Obama's current policy is to work towards a world without nuclear weapons. Commentors believe that nuclear weapons play an important role as a deterrent and ensure our national security and freedoms. Commentors stated that the Comprehensive Test Ban Treaty (CTBT) must be ratified by Congress and must apply to the U.S. Commentors stated that Under Secretary of State Ellen Tauscher said that the NNSA will maintain the nuclear stockpile without adding to its capabilities, without testing and "without causing people to be concerned about what we are doing."

Response: *Section 1.5 of the SWEIS addresses national security considerations relevant to the SWEIS. Arms control treaties, including the New START Treaty, are discussed in Section 1.5.1. Potential changes in national security requirements, including a discussion of the 2010 NPR, are discussed in Section 1.5.2. In order to meet its national security requirements, NNSA makes reasonable predictions as to the necessary configuration and capacity of the nuclear security enterprise for the future (see comment-response 1.A).*

NNSA believes the Draft SWEIS analysis accounts for present relevant and reasonably foreseeable national security requirements and policies. All of the alternatives in the SWEIS provide a capability to perform all of the functions necessary to maintain a safe, secure, and reliable stockpile. NNSA has no basis to predict that nuclear weapons will not be a part of this Nation's national security policy over the time period covered in this SWEIS. The range of alternatives analyzed in this SWEIS covers the range that NNSA believes could reasonably evolve from any changes to national policy with regard to the size and number of nuclear weapons in the foreseeable future. With respect to the issues of first strike use, use of nuclear weapons against non-nuclear countries, actions that drive non-nuclear countries to seek nuclear weapons, and ratification of a CTBT, those issues are beyond the scope of the SWEIS. However, as stated in the 2010 NPR, the Administration believes that "Ratification of the CTBT is central to leading other nuclear weapons states toward a world of diminished reliance on nuclear weapons, reduced nuclear competition, and eventual nuclear disarmament." The 2010 NPR also declares "that the United States will not use or threaten to use nuclear weapons against

non-nuclear weapons states that are party to the NPT and in compliance with their nuclear nonproliferation obligations." NNSA acknowledges the statement of Undersecretary of State Ellen Tauscher and believes the SWEIS is consistent with this statement.

1.B.1 MOSCOW TREATY, TREATY OF 2010

A commentor stated that the Draft SWEIS contradicts itself with regard to current stockpile requirements. Section S.1.5.1 of the Draft SWEIS states that, "The Moscow Treaty…commits the U.S. and Russia to deep reductions (i.e. 1,675 operationally deployed strategic nuclear warheads by 2012)." The very next sentence in the Draft SWEIS states that, "As of May 2009, the U.S. had cut number of operationally deployed strategic nuclear warheads to 2,126, which meets the limits set by the Treaty for 2012."

Response: *NNSA agrees; the phrase "which meets the limits set by the Treaty for 2012" has been deleted from the second sentence.*

1.C TREATY ON NONPROLIFERATION; ZERO WEAPONS

Commentors stated that U.S. needs to abide by the NPT by dismantling nuclear weapons, keeping nuclear waste secure, and not building new weapons. Commentors believe that the U.S. must demonstrate to the rest of the world, and to its citizens, our commitment to reducing our stockpile of nuclear weapons to zero; leading the world in the right direction. Some commentors stated that it defies common sense to think that a program designed to extend the life of the U.S. nuclear stockpile for the indefinite future is in compliance with the NPT, in which the U.S. promised to pursue in good faith complete disarmament at an early date. The commentors questioned DOE's assertion in the 1996 SSM PEIS that the Stockpile Stewardship Program is fully consistent with U.S. obligations under the NPT.

Response: *Section 1.5 of the SWEIS addresses national security considerations. As discussed in that section, the United States has worked for many years to help establish an international security environment conducive to progress toward disarmament. The United States has also made significant progress toward achieving the nuclear disarmament goals set forth in the Preamble and Article VI to the NPT, and has a strong record of compliance with its Article VI obligations. The United States has taken dramatic steps toward the goal of nuclear disarmament, including working to resolve destabilizing global and regional tensions; reducing its nuclear forces and nuclear weapons stockpile, through both unilateral and bilateral initiatives; and working cooperatively with allies and partners further to reduce nuclear threats.*

However, even after the Cold War, international dangers remain, and nuclear deterrence will continue to be a cornerstone of U.S. national security policy for the foreseeable future. NNSA's responsibilities for ensuring the safety and reliability of the U.S. nuclear weapons stockpile will also continue. Under the NPT, the parties agreed not to transfer nuclear weapons or other devices, or control over them, and not to assist, encourage, or induce nonnuclear states to acquire nuclear weapons and have agreed to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective

international control (Article VI)." However, the treaty does not mandate disarmament or specific stockpile reductions by nuclear states, and it does not address actions of nuclear states in maintaining their stockpiles.

NNSA believes that the Stockpile Stewardship Program is fully consistent with U.S. obligations under the NPT. The purpose of the Stockpile Stewardship Program is to maintain the safety and reliability of the U.S. nuclear weapons stockpile. Stockpile stewardship contributes positively to U.S. arms control and nonproliferation policy goals by providing the United States with continued confidence in its weapons to allow further reductions in stockpile size and to meet its NPT Article VI obligations. Unilateral denuclearization is not a reasonable alternative for this SWEIS because it does not satisfy current national security policy.

1.D NEW WEAPONS

Commentors state that there should be no new nuclear weapons production or nuclear weapons facilities. Some commentors expressed their opposition to continued production of nuclear weapons in Oak Ridge. One commentor stated that anything that can be construed as a new generation of nuclear weapons sends a wrong message to the world. Commentor added that there is no justification for building new secondaries, as existing ones are supposed to be dismantled and there is no rationalization to create a larger facility to create larger numbers of secondaries. Commentor also said that new weapons designs will ultimately require new tests for deployment. Some commentors asserted that the U.S. has now disavowed new warhead production or design and significant modifications to the existing stockpile, in an effort to demonstrate the seriousness of the U.S. commitment to nonproliferation. As the U.S. commitment to nonproliferation grows, the need for the UPF80 evaporates. One commentor referred to the statements from Under Secretary of State Ellen Tauscher in January 2010, affirming that the U.S. will not pursue new warhead design or expanded military capabilities for the nuclear arsenal.

Response: *Decisions on the type and number of warheads that this nation requires for national security are made by the President and the Congress and not by NNSA, and are beyond the scope of this SWEIS. None of the alternatives expand warhead production capacity. Two of the alternatives (Alternative 4 and 5) would actually reduce Y-12 capacity. Regardless of capacity, NNSA is required to maintain nuclear weapons production capability, including the capability to design, develop, produce, and certify new warheads. Maintenance of the capability to certify weapon safety and reliability requires an inherent capability to design and develop new weapons. NNSA has not been directed to produce new-design nuclear weapons. Additionally, the 2010 NPR states that, "The United States will not develop new nuclear warheads."*

1.E PROLIFERATION AND NONPROLIFERATION

Commentors stated that the most critical mission need that we have in pursuit of nonproliferation goals is the safe, secure, and verifiable capacity for increased dismantlement and disposition of warheads. Commentors stated that building the UPF will trigger nuclear proliferation, and that the Unites States is hypocritical when it attempts to discourage other nations from pursuit of nuclear capability while expanding our own capacity. Commentors stated that the UPF decreases the United States' credibility in being able to convince Iran and North Korea and other

countries that they cannot have nuclear weapons. Commentors expressed concern about other countries launching arms race if more nuclear weapons are produced in America. Commentors stated that President Obama supports disarmament as his nuclear weapons policy and Alternative 5 will trigger nuclear proliferation. Commentors believe that the analysis of nonproliferation from the Stockpile and Stewardship PEIS cannot be relied on in 2010 because the geopolitical context for nuclear nonproliferation discussions has changed dramatically since 1996. Hence a 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 is imperative. Commentors added that if the NNSA believes it can move forward with a UPF, or a UPF80, or even an "expandable" UPF5 without undermining U.S. nonproliferation efforts in 2010, it has a responsibility to explain its rationale and subject it to external review. Some commentors stated that the arguments in favor of UPF have, almost without exception, been used for more than 20 years to justify weapons facilities in Oak Ridge, but changes in U.S. policy, concern over nuclear proliferation, and global realities have created an environment in which the power of arguments for new nuclear weapons production facilities has been eroded significantly.

Response: *Section 1.5.1 of the SWEIS addresses NPT compliance. The U.S. has worked with other nations to limit nuclear proliferation around the world. The current Administration is committed to limiting proliferation and continues to negotiate with other countries.*

NNSA believes that the United States nuclear weapons program, including modernization efforts (such as building a UPF) and life extension programs, has not had and will not have any impact on either horizontal (increasing the number of nuclear weapons states) or vertical (increasing the number of nuclear weapons in nuclear weapons states) proliferation. The United States nuclear weapons programs are not the only factors that might affect whether other nations might develop nuclear weapons of their own. Some nations that are not declared nuclear states have the ability to develop nuclear weapons. The credibility of the United States nuclear umbrella is an extremely significant restraint to proliferation. Continued United States engagement in security cooperation with allies including a military presence, modern and flexible military forces, and the extension of a smaller but safe, reliable and capable nuclear deterrent to allies are key elements in assuring them that they can count on the United States, and do not need to seek their own nuclear forces. The loss of confidence in the safety or reliability of the weapons in the United States stockpile could result in a corresponding loss of credibility of the United States nuclear deterrent and could provide an incentive to other nations to develop their own nuclear weapons programs.

Proliferation incentives for other countries, such as international competition or the desire to deter conventional armed forces, would remain unchanged regardless of whether NNSA implemented any of the alternatives analyzed in the SWEIS. NNSA and other agencies of the United States government participate in many government-to-government negotiations intended to reduce the risks of nuclear proliferation. NNSA believes that the previous analysis of the Stockpile Stewardship Program in the SSM PEIS regarding nonproliferation remains valid. See comment-response 1.E.1 for more detailed information related to a proliferation analysis.

1.E.1 SWEIS SHOULD INCLUDE PROLIFERATION ANALYSIS

Commentors stated that the Site-Wide EIS does not address proliferation concerns in detail inherent in the proposal to build a new weapons production facility, a shortcoming which must be rectified in the final SWEIS—or addressed in a Supplemental EIS on Nonproliferation Impacts. Commentors added that the Y-12 SWEIS refers instead to nonproliferation analysis prepared for the Stockpile Stewardship and Management PEIS in 1996, asserts the program is fully consistent with U.S. obligations under the Nonproliferation Treaty, and further asserts the analysis remains valid. Commentors stated that the SWEIS should include an analysis of the impact of the SWEIS on the prospects for the U.S. to move the world towards reduction and elimination of nuclear weapons. Commentors stated that past NEPA analysis have included proliferation concerns.

Response: *The SWEIS was prepared by NNSA in response to the requirements of NEPA and the DOE and CEQ regulations, and NNSA believes that the Draft SWEIS meets these regulations. Although some NEPA documents (such as the Commercial Light Water Reactor EIS [DOE/EIS-0288, March 1999]), have included a discussion of proliferation, such an analysis is not required in an EIS. NNSA believes that the previous analysis of the Stockpile Stewardship Program in the SSM PEIS regarding nonproliferation remains valid. However, NNSA may consider proliferation issues in any Record of Decision (ROD) process for the SWEIS. Any ROD issued will explain all factors that NNSA considered in making its decisions regarding the SWEIS.*

1.F INTERNATIONAL RELATIONS

Commentors stated that it would be globally dangerous for the United States to construct the proposed facility which would produce secondaries and other nuclear weapons components.

Response: *NNSA is responsible for ensuring the safety and reliability of the U.S. nuclear weapons stockpile. Section 1.3 of the SWEIS discusses the purpose and need for the UPF. As discussed in that section, a UPF would improve security and safeguards; improve efficiency of operations; improve worker protection; and reduce operating costs. NNSA does not agree that the UPF would be globally dangerous. See comment-response 1.E for a discussion of global considerations.*

2.0 NEPA PROCESS

2.A GENERAL NEPA PROCESS AND COMPLIANCE

Commentors think the SWEIS assessment is thorough and accurate. Commentors stated that they do not have any substantive comments at this time.

Response: *NNSA notes this comment.*

2.B LENGTH OF COMMENT PERIOD, NUMBER/LOCATION OF PUBLIC HEARINGS

Commentors stated that the timing of this hearing, 12 working days after the Federal Register Notice of Availability, embarrasses the Department of Energy's commitment to meaningful public participation. Commentors added that DOE reneged on its promise of a 30-day period to allow review of the document before the public hearing. One commentor complained that after delaying the release of the Draft SWEIS for several years, NNSA has now declined to hold the public comment period open an extra 60 days to allow for an informed engagement with the public. Commentors registered complaint that the hearings are being held in the middle of the week and had to lose three days of paid work to be able to attend. Commentors added that there were some people who wanted to come but couldn't because of the inconvenience. Commentors requested an extension of the comment period because it runs through several holidays giving inadequate time to allow effective commenting.

Response: *NNSA followed CEQ and DOE NEPA requirements for notice and conduct of public meetings. On October 30, 2009, NNSA and the Environmental Protection Agency (EPA) announced the availability of the Draft SWEIS and announced the schedule for the public hearings (74 FR 56189). In that announcement, NNSA established a public review process of 66 days, which was significantly longer than the 45-day requirement. NNSA also provided 18 days of notice before the first public hearing, which was 3 days more than the requirement. NNSA conducted two public hearings for the Draft Y-12 SWEIS. NNSA held the hearings on different days and different times of the day (November 17 beginning at 6 p.m. and November 18 at 11 a.m.) in an attempt to maximize the public's opportunity to attend. These hearings enabled a substantial number of interested parties to participate and offer oral and written comments. In addition to public hearings, NNSA provided many other ways for interested parties to submit comments, including e-mail, via the internet, facsimile, and regular mail. All comments were considered equally, regardless of the manner submitted.*

As for the length of the comment period, the comment period was originally announced to end on January 4, 2010, which was 66 days after the publication of the EPA's notice of availability on October 30, 2009. At the first public hearing (November 17, 2009), NNSA announced an extension of the comment period until January 29, 2010. NNSA also published a notice in the Federal Register of this extension (74 FR 68599). Consequently, the public review process lasted 90 days, which is twice as long as required. With respect to the Wetlands Assessment that was added after publication of the Draft SWEIS, NNSA has allowed an 18 day public comment period under 10 CFR Part 1022, thus providing the public with an opportunity to comment on this aspect of the proposed project. Comments received on the Wetlands Assessment are addressed in comment-responses 12.T through 12.T.29.

2.E PUBLIC HEARING PROCESS

Commentors stated that according to NNSA, "NEPA ensures that environmental information is available to public officials and citizens before decisions are made and actions are taken," (Y-12 Draft SWEIS, p. 1-22). This has not been the case during the preparation of the Y-12 SWEIS. No formal opportunity for questions was provided during the public hearing—NNSA provided

instead a stand-up poster session with select personnel, a setting decidedly non-conducive to in-depth discussion of public concerns. Commentors further complained that requests by the Oak Ridge Environmental Peace Alliance (OREPA) for an informal work session that would permit questions and answers in order to fill in gaps in the Draft SWEIS and enhance public understanding of operations and requirements were flatly denied. Commentors requested that the State of Tennessee hold a public hearing on an Aquatic Resource Alteration Permit application for the UPF Haul Road and stated that it would be in NNSA's interest to take advantage of such a hearing to explain the proposal and its implications to the public through this process.

Response: *NNSA conducted the public hearings in accordance with the requirements of NEPA and the DOE and CEQ regulations. As part of the public hearing process, DOE held an open house prior to the start of each formal public hearing. The purpose of the open house was to provide a forum for the public to engage NNSA representatives in dialogue or ask questions regarding the Y-12 SWEIS, operations at Y-12, and other relevant subjects that public members desired to discuss. NNSA provided a wide variety of subject matter experts at the open house, including the Y-12 SWEIS Document Manager, environmental, safety and health specialists from Y-12, and project managers for various Y-12 operations, including the proposed UPF. This process provided ample opportunity for members of the public to present questions, receive answers, fill in any informational gaps related to the Draft SWEIS, and enhance public understanding of Y-12 operations and potential environmental impacts. Requests that the State of Tennessee hold a public hearing on a permit application are beyond the scope of the SWEIS. See comment responses 12.T through12.T.29 for more information on the UPF Haul Road and associated permits.*

2.F NEPA COMPLIANCE

Commentors stated that DOE violated its own regulations to prepare a SWEIS every 5 years by delaying the SWEIS and by making it UPF-centered. Commentors stated that Y-12 SWEIS failed to consider all reasonable alternatives as required by law. Commentors stated that the SWEIS should provide a comprehensive analysis of the environmental situation at Y-12 so the public can understand the nature of potential impacts by all proposed activities at the site. One commentor argued that the second SWEIS started in 2005 was based on the desire to move forward with construction of the UPF, rather than a Supplement Analysis as required by NEPA regulations. Another commentor stated that the SWEIS is being asked to bear a burden that SWEIS's are not designed to bear, it fails to provide the comprehensive analysis a SWEIS should present— it analyzes two projects: UPF and the Complex Commend Center (CCC). There is insufficient depth and breadth in the analysis of activities and their impacts at Y-12. A commentor stated that the focus on the UPF to the exclusion of almost everything else at Y-12 has given short shrift both to the non-UPF activities and operations at Y-12 and to the more detailed considerations appropriate to a single-facility EIS. A commentor stated that NNSA was segmenting its NEPA analysis in order to minimize the overall impact of planned construction of facilities.

Response: *The SWEIS was prepared by NNSA in response to the requirements of NEPA and the DOE and CEQ regulations, and NNSA believes that the SWEIS meets those requirements. In preparing the SWEIS, NNSA used current and well-documented, well-known scientific models*

and data to analyze potential environmental impacts. The SWEIS provides a comprehensive analysis of the current environmental situation at Y-12, and of ongoing and reasonably foreseeable future operations, activities and facilities. The SWEIS includes an analysis of all proposed actions and reasonable alternatives which are ripe for analysis and decisionmaking. Consequently, NNSA disagrees that it has segmented its NEPA analysis.

The SWEIS includes an analysis of constructing and operating a UPF at Y-12 because NNSA decided to pursue such a facility in the ROD for the Complex Transformation SPEIS. Analyzing a project-specific action in a SWEIS, such as the construction and operation of a UPF or CCC, is appropriate. The process for preparing the SWEIS began on November 28, 2005, when NNSA published a Notice of Intent (NOI) in the Federal Register (70 FR 71270), announcing its intent to prepare this Y-12 SWEIS. The NOI was published less than 5 years after the March 13, 2002 ROD for the 2001 Y-12 SWEIS (67 FR 11296). According to the DOE NEPA regulations (10 CFR 1021.314) a Supplement Analysis is prepared to assist the agency in deciding whether to prepare the more rigorous and extensive analysis contained in an EIS. In this circumstance, NNSA had decided to prepare the more rigorous analysis. 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 security enterprise ("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.

2.G SPECIFIC EDITORIAL COMMENTS ON THE SWEIS

Commentors had the following editorial comments on the Draft SWEIS (responses are provided under each specific comment):

1. Figure 5.1.1-2 does not indicate any significant excess or new construction facilities. For example UPF is not labeled as a new construction and facilities that are planned to be replaced are still labeled as operating.

Response: *Figure 5.1.1-2 has been updated to better reflect the optimum functional diagram of Y-12 in 2018.*

2. Discussions of disposal of LLW and MLLW should include more potential options for disposing of this waste. Will the proposed UPF include increased down-blend capacity?

Response: *The SWEIS analyzes the disposal of LLW and MLLW in accordance with existing disposal methods. Those disposal methods are consistent with the programmatic decisions DOE has previously made for these waste types (see Table 4.13.1-1). NNSA is not proposing to change these disposal methods, nor has NNSA identified any new reasonable alternative disposal methods not already analyzed.*

3. Section 3.2.2.1.1: Define Argus.

Response: *Argus refers to the special purpose, automated information security system that was developed at Lawrence Livermore National Laboratory. This information has been added to the SWEIS Glossary (Chapter 11). Argus is not an acronym.*

4. Section 3.3.5: Is the area under construction contaminated with mercury? Will excavated soils require treatment?

Response: *There is no section 3.3.5 in the Draft SWEIS. As such, this comment could not be located. However, Section 3.2.2.1.1 states that,* "Detailed testing would be conducted to fully characterize site geology, hydrology, and soil compaction, as well as to sample for radioactive contamination, mercury, and other materials of concern before construction." *The presence of mercury would be determined at that time, and a treatment decision made.*

5. Page 4-84: Groundwater treatment facility, please clarify this sentence, "The Groundwater Treatment Facility treats wastewater from the Liquid Storage Facility at Y-12 seep water collected at East Chestnut Ridge waste piles to remove VOCs, non-VOCs, and iron and elsewhere." Please clarify the "and elsewhere."

Response: *The sentence has been rewritten as follows: The Groundwater Treatment Facility treats wastewater to remove VOCs, non-VOCs, iron and other contaminants.*

6. Section 5.3: Power requirements are presented as annual usage in Table 5.1.1-1 but are presented as monthly consumption for Alt 2 and as a percentage of the No Action alternative usage for all of the other alternatives. These numbers should be presented on a consistent basis.

Response: *Although there is no Table 5.1.1-1 in the Draft SWEIS, but NNSA believes the commentor is likely referring to Table 5.3.1-1. NNSA has made changes to Section 5.3 to present electric power requirements on a consistent basis.*

7. Section 5.7.2.2 Operation: This section states that the UPF operation would require 105 million gallons of water per year, about 5 percent of the 2 billion gallons required by Alt 1. It goes on to say that overall use would decrease from 2 billion gallons per year to 1.3 billion gallons per year. If overall use and operations for the No Action alternative are the same (2 billion gallons per year), how come the UPF alternative increases overall use by 1.2 billion gallons per year? If the UPF operation requires only 5 percent of the No Action Alternative water usage, will the discharges into East Fork Poplar Creek (EFPC) also be 5 percent of the current discharge? How will this affect the raw water addition from the Clinch and what will be the impacts of this on EFPC? The effects of reduced discharges also need to be evaluated for Alternatives 4 and 5.

Response: *Current water usage at Y-12 is approximately 2 billion gallons per year. Once operational, the UPF would reduce average annual water usage at Y-12 from 2 billion gallons per year to 1.3 billion gallons per year. The 1.2 billion gallons per year is not an increase due to the UPF Alternative. Rather, the 1.2 billion gallons per year identified by the commentor*

reflects the water use of non-UPF missions at Y-12. Section 5.7.2.2 has been revised to clarify that overall water use at Y-12 is expected to decrease to 1.3 billion gallons per year under the UPF Alternative. Consistent with reduced withdrawals, the discharges into EFPC would be expected to decrease for Alternatives 2, 4, and 5. The impacts of these reduced withdrawals and discharges have been identified and added to Sections 5.7.2.2 and 5.7.7.

8. Table 5.13-1: Why would the document show the 2007 baseline waste generation as the construction waste for Alternative 1? The next table shows the same numbers as operations waste. If there is no construction involved in implementation of the No Action Alternative, then the column entries should say "None" rather than presenting the operations generated waste as construction generated.

Response: *In Table 5.13-1, the values listed under the No Action Alternative were presented in order to provide a basis for evaluating the amounts of wastes that would be generated for the "action alternatives" during construction. However, commentor is technically correct that there would not be any construction wastes during construction for the No Action Alternative and Table 5.13-1 has been revised to reflect this.*

9. Page 5.16, Paragraph 4, line 2: The number of monitored workers for the Capability-sized UPF Alternative given here (about 3,680) does not agree with the number of monitored workers for that alternative given in Table 3.2.4-1 on page 3-24 (i.e., 1,825).

Response: *The number "3,680" is incorrect and has been changed to "1,825".*

10. Paragraph 5.16, Paragraph 6, line 2: As above for the Capability-sized UPF Alternative, the number of monitored workers for the No Net Production/Capability-sized UPF Alternative (about 3,300) does not agree with the number of monitored workers for that alternative given in Table 3.2.5-1 on page 3-25 (i.e., 1,600).

Response: *The number "3,300" is incorrect and has been changed to "1600".*

11. Page 5-57, Paragraphs 1, 3, and 4: For the UPF Alternative, Capability-sized UPF Alternative, and No Net Production/Capability-sized UPF Alternative, it is indicated that "Water usage for operations would be the same as the No Action Alternative." This does not seem to be true as annual water usage at Y-12 for the three alternatives is significantly less than for the No Action Alternative.

Response: *Section 5.7.7 has been revised to clarify the changes to water usage for Alternatives 2, 4, and 5.*

12. Page 5-79, Table 5.12.2.2-4 Current Fish Advisories: This table is not correct because the reservoirs do not match with the counties as listed. Please correct the information. All the information provided for Melton Hill Reservoir is actually data for Fort Loudon Reservoir, which was not included in this Table. Fort Loudon Reservoir should be included here and the data for Melton Hill Reservoir corrected.

Response: *Table 5.12.2.2-4 has been corrected accordingly.*

2.G.1 MORE DETAILED COMPLEX COMMAND CENTER (CCC) ANALYSIS

Commentors stated that the description of the new facility contains no evaluation or analysis of environmental impacts associated with the CCC despite its 7-acre footprint and siting preference to avoid *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) issues. More thorough environmental analysis should have included consideration of reasonable alternatives such as No Action, alternative locations (outside the security zone v. proximity for emergency response), impact on remediation activities, assessment of vulnerabilities, and complete accounting of costs over the lifetime of the facility. NNSA must show the benefits of the CCC justify the considerable expense of this elective project.

Response: *Section 3.2.2.2 has been modified to provide additional information regarding the CCC, including additional information regarding siting considerations for that facility. Chapter 5 of the SWEIS (sections 5.1–5.16) addresses the impacts of constructing and operating the CCC. Because the CCC would replace existing facilities that house equipment and personnel for the plant shift superintendent, fire department, and emergency operations center, the CCC would not significantly change existing operational impacts (i.e., water use, employment, waste generation, accidents, etc). Construction impacts for the CCC are addressed in Chapter 5. The No Action Alternative is defined in Section 3.2.1. As described in that section, a CCC would not be constructed under the No Action Alternative. With respect to costs, the SWEIS does not address costs. The ROD will discuss the various factors that NNSA considered in its decision-making process, which may include costs.*

2.G.2 INSUFFICIENT COST AND SOCIOECONOMIC ANALYSIS

Commentors stated that distinctions between the No Action Alternative and the Upgrade-in-Place Alternative are unclear. For example, the No Action Alternative includes upgrades and replacement activities already self-approved by NNSA. Commentors further complained that no costs are provided; statements about employment and economic impact are unsupported by real or estimated dollar amounts.

Response: *Section 3.2.1 describes the No Action Alternative, in which NNSA would continue to operate existing enriched uranium (EU) and nonnuclear processing facilities without any major upgrades or changes. However, this does not mean that no changes would occur. As Section 3.2.1 describes, as part of the No Action Alternative, other construction projects are also underway or planned for the future. Some are refurbishments or upgrades to plant systems, such as those for potable water, which have been analyzed in separate NEPA documentation. Section 1.7.2 of the SWEIS identifies and describes these projects in more detail. These projects would happen regardless of any other decisions to be made related to the SWEIS.*

The Upgrade in-Place Alternative is described in Section 3.2.3. As described in that section, the upgrade projects proposed would be internal modifications to the existing facilities and would improve worker health and safety, enable the conversion of legacy special nuclear materials to

long-term storage forms, and marginally extend the life of existing facilities. For continued operations in the existing facilities, major investments will be required for roof replacements; structural upgrades; heating, ventilating, and air conditioning (HVAC) replacements; and fire protection system replacement/upgrades.

The purpose and need for the Y-12 SWEIS is partly driven by a need to operate Y-12 in a cost-effective manner. The SWEIS presents the potential environmental impacts of the reasonable alternatives for the continued operation of Y-12. Costs are not included in the SWEIS but may be considered by NNSA in the ROD process.

2.G.3 INSUFFICIENT DISTINCTION BETWEEN DISMANTLEMENT AND PRODUCTION OPTIONS

One commentor stated that the Draft SWEIS does not distinguish between the equipment "needs" for dismantlement of nuclear weapon secondaries at Y-12 and the equipment needs for production. They are not the same in terms of policy and political impacts.

Response: *The purpose of the SWEIS is to present the potential environmental impacts of the reasonable alternatives for the continued operation of Y-12. NNSA has added a discussion of dismantlement requirements and the dismantlement process to the SWEIS (see Section 2.1.1.1). As that section explains, a facility that would be used specifically for dismantlements would contain essentially the same equipment and have the same inherent capabilities as a facility that would be used for both dismantlements and the assembly of weapons.*

2.G.4 DNFSB RECOMMENDATION 2004-2, ACTIVE CONFINEMENT SYSTEMS, AND DNFSB/TECH-34 IMPLEMENTATION

Commentor requested the following from NNSA:

- To state how DNFSB recommendation 2004-2, Active Confinement Systems, and DNFSB/TECH-34 are being implemented in the UPF.
- List the type of confinement for each Y-12 facility, including proposed facilities, and the plans for upgrading existing buildings to active systems.
- Describe the effects of having or not having these systems on releases.

Response: *The Secretary of Energy's acceptance of the DNFSB Recommendation 2004-2, which was issued on December 7, 2004, obligates DOE facilities to: "disallow reliance on passive confinement systems and require an active confinement ventilation system for all new and existing Hazard Category 2 defense nuclear facilities. With respect to the UPF project, NNSA submitted a response to DNFSB recommendation 2004-2 that indicated a plan for full compliance with that obligation.*

To satisfy Recommendation 2004-2 and TECH-34 expectations, the UPF project ventilation design strategy would apply a "safety-driven active" approach. The general philosophy for the ventilation strategy would provide higher negative pressures as one moved toward areas of greater contamination. The confinement ventilation systems would be filtered and would serve to

protect the in-facility worker, co-located worker, off-site public, and the environment during normal operation as well as certain accident scenarios.

2.I RESCOPING

Commentors requested that this Draft SWEIS be withdrawn and re-scoped given the newly declared long-term national security goal of eliminating nuclear weapons and a new Nuclear Posture Review scheduled to be released March 1, 2010. In addition, the Draft SWEIS should be re-scoped because NNSA has changed the alternatives, NNSA has expanded the range of legal alternatives from three in the 2005 Notice of Intent to five in the present Draft SWEIS.

Response: *As explained in Section 1.1, NNSA did not release the Draft Y-12 SWEIS until the Complex Transformation SPEIS process was completed. Once the ROD for that SPEIS was issued, NNSA considered whether to conduct additional scoping for the SWEIS. Because the Complex Transformation SPEIS ROD affirmed the continued operations at Y-12, as well as the need for a UPF, NNSA decided that the purpose and need of the SWEIS and the proposed action identified in the original NOI had not changed from that which was announced in the Y-12 SWEIS NOI (70 FR 71270). Consequently, NNSA decided that the comments from the original scoping period provided adequate information to: (1) determine the scope of the SWEIS; (2) determine the most important issues to be analyzed; and (3) identify and eliminate from detailed study the issues which are not significant. As a result, NNSA did not conduct additional scoping for the SWEIS.*

NNSA acknowledges that there have been the following minor changes in the SWEIS alternatives compared to what was announced in the NOI: (1) the "run to failure" alternative was eliminated because the Complex Transformation SPEIS ROD had already decided that Y-12 would retain the EU mission; and (2) the Capability-sized UPF Alternative and the No Net Productions Capability-sized UPF Alternative were added to be responsive to further potential reductions in the stockpile.

With regard to any changes in national security requirements, so long as the Nation relies on a nuclear deterrent, there will be a need to maintain the capability to keep nuclear weapons safe and reliable. NNSA has no basis to predict that nuclear weapons will not be a part of this Nation's national security policy over the time period covered in the Y-12 SWEIS. As the only site in the nuclear weapons enterprise that produces secondaries and cases, Y-12 is key to maintaining the safe and reliable stockpile. The SWEIS includes alternatives that could support any reasonably foreseeable stockpile size, which may require the capability to produce 10 secondaries and cases per year (Alternative 5), 80 secondaries and cases per year (Alternative 4), 125 secondaries and cases per year (Alternative 2), and 160 secondaries and cases per year (Alternatives 1 and 3). Because of this range of alternatives, NNSA thinks that any decision based on the SWEIS can be consistent with, and supportive of any reasonably foreseeable future nuclear weapon requirements, and there is no need to delay the SWEIS or conduct additional scoping. The Final SWEIS includes a new discussion of the New START Treaty in Section 1.5.1 and the 2010 NPR in Section 1.5.2.

3.0 PURPOSE AND NEED

3.A GENERAL QUESTION OF NEED; IMMORALITY OF NUCLEAR WEAPONS

Commentors stated there is no need for continued life-extension work or new weapons production. Commentors stated that there is no need for a new uranium bomb plant because the renewal of the START Treaty with Russia will reduce the nuclear warhead stockpile and it will continue to go down. Commentors stated that there is no moral justification, no moral rationale for the acquisition of more nuclear weaponry. Commentors believe that nuclear weapons are immoral, profoundly dangerous, illegal, expensive, and unnecessary. Commentors stated that nuclear weapons are instruments of death and massive destruction, and do not want nuclear bombs made in their backyard. Commentors stated that there is no need for new weapons production and that the United States should focus on dismantling them. Commentors recommend that plans to build a new bomb plant be abandoned. Commentors stated that there is no need for a new bomb plant, nor any need to refurbish old warheads or provide modifications to extend the life of current warheads. Commentors stated it is senseless and irresponsible to spend $3.5 billion on a facility which will not be needed by the time it is completed (2018). The facility will not be needed because the US stockpile of "life extended" warheads will exceed the maximum number allowed by the START Treaty. Commentors stated that building a Capability-Sized UPF when the demand for production capacity is expected to decline to near-zero in the next decade is unacceptably wasteful. Commentors added that there is no reasonable scenario under which a throughput capacity of 50–80 warheads/year would be required to maintain the current stockpile in its present safe, secure and reliable status. Commentors stated that the purpose and need has changed 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. Since the United States has now disavowed new warhead production and significant modifications to the existing stockpile in an effort to demonstrate the seriousness of the US commitment to nonproliferation, there is no need for the UPF80.

Response: *The requirements that NNSA uses to base or define its programmatic needs are established by the current PDDs, NWSP, policies, statutes, and the judgment of NNSA in consultation with the DoD and experts at NNSA's laboratories. The U.S. nuclear weapons stockpile is aging, with some warheads designed and constructed over 40 years ago. To maintain the safety and reliability of this legacy stockpile, NNSA will continue to perform LEPs. As stated in the 2010 NPR, LEPs will use only nuclear components based on previously tested designs, and will not support new military missions or provide for new military capabilities.*

With respect to new weapons, as stated in the 2010 NPR, the U.S. will not develop new nuclear warheads. See also comment response 1.A regarding arms control treaties.

The purpose and need for the proposed action and alternatives addressed in the Y-12 SWEIS is described in Section 1.5 of the SWEIS. The SWEIS examines a range of alternatives that could support a range of nuclear weapons stockpiles including several that represent a substantial reduction from those nuclear weapons contemplated by the Moscow Treaty. The purpose and need for a UPF (including a "UPF80") is addressed in comment-response 3.B. A discussion of

the morality of nuclear weapons and the efficacy of this nation's national security policies is beyond the scope of this SWEIS.

3.B NEED FOR MODERNIZATION AND UPF

Commentors stated that modernized facilities, with cost effective and safety focused processes, are needed for Y-12's role in manufacture and disassembly of nuclear warhead components. Commentors stated that a new UPF is needed for continued protection of the environment, citizens, our nation, and the world. Commentors also indicated that continued development of U.S. capabilities to process uranium and other materials is required to ensure enduring security of the U.S., as well as serve as a deterrent. Commentors stated that the UPF is essential to maintain weapons reliability, fuel nuclear Navy fleet, downblend enriched uranium to support nonproliferation goals, and to accomplish a 90 percent reduction in Y-12's footprint while realizing cost savings. Commentors stated that the current facilities are old, with obsolete technology, and designed to meet requirements that no longer exist. Commentors stated that modernization at Y-12 is imperative and the UPF must be completed, both in the interest of safeguarding security of people that work in and materials that are used in the facilities. Commentors stated that the new facility makes the most sense from an economic, environmental, and safety standpoint, and, from a national security standpoint, is critical to the welfare of the U.S.

Commentors also stated that there is no need to build an "oversized" and "wrongly-missioned" UPF under the "preferred alternative." Commentors stated that NNSA needs to answer why a multi-billion dollar UPF is necessary and why the existing 9212 complex cannot be sufficiently restored and upgraded, and why more floor space cannot be made available in the $700 million Highly Enriched Uranium Materials Facility (HEUMF) for secondary components production. Commentor is concerned that by the time the UPF is constructed in 2018, there will be no need left for the UPF proposed in the Preferred Alternative, or even one of the sizes proposed in the No Net Capability Alternative. Commentor further added that the existing facilities at Y-12 are already being upgraded to meet health, safety, security and environmental standards whether a new UPF is built or not. Commentors stated that the production of secondaries is not needed as there are thousands in storage. Commentors also referenced the JASON report regarding the Life Extension Program, which confirms that there is no need to manufacture additional secondaries. Commentors stated that "critical mission requirements are not the driver behind UPF." Commentors stated that other factors drive modernization, including the need for seismic upgrades, enhanced security, and projected environmental, safety, and health requirements, which are not detailed. Commentors stated that international inspections and verification will be of growing importance; incorporating such needs into the design of any new facilities is prudent and, in the long run, will prove to be cost-effective.

Response: *Section 1.3 of the SWEIS discusses the purpose and need for a UPF. As discussed in that section, a UPF is needed to:*

- *Improve the level of security and safeguards;*
- *Replace/upgrade end-of-life facilities and ensure a reliable EU processing capability to meet the mission of NNSA;*

- *Improve efficiency of operations and reduce operating costs by consolidating and modernizing equipment and operation;*
- *Reduce the size of the protected area by 90 percent and reduce the operational cost necessary to meet the security requirements;*
- *Improve worker protection with an emphasis on incorporating engineered controls; and*
- *Comply with modern building codes and environment, safety, and health (ES&H) standards.*

With respect to whether critical mission requirements are the driver behind UPF, ensuring a reliable EU processing capability to meet the mission of NNSA is one of the needs that a UPF would address. See comment response 1.A for a discussion of the JASON Report and comment response 3.C for the need for secondaries.

With respect to international inspections and verification related to the design of new facilities, the SWEIS presents the potential environmental impacts of constructing and operating any new facilities. Issues related to international inspections and verification are beyond the scope of the SWEIS.

3.C NEED FOR SECONDARIES

Commentors stated that NNSA assumes that every weapon refurbished during a Life Extension Program needs a newly rebuilt secondary. NNSA should specifically answer in the Y-12 SWEIS why rebuilt secondaries are necessary for refurbished US nuclear weapons. It is generally accepted that secondaries are far less complicated and sensitive than plutonium pits, and according to Jason's report plutonium pits last 85 years or more.

Response: *Components and systems requiring rework or replacement are made on a case by case basis based on NNSA's surveillance program. The Quality Evaluation and Surveillance Program is discussed in Section 2.1.1.5. Rebuilt secondaries are typically needed to address changes determined to be necessary by the design laboratories.*

4.0 NO ACTION ALTERNATIVE (ALTERNATIVE 1)

Commentors stated that Alternative 1 (and 5) does not provide long-term capability to execute our necessary mission.

Response: *NNSA notes this comment. Alternative 1 (the No Action Alternative) is discussed in Section 3.2.1. The No Action Alternative would not improve security, safeguards, worker safety, or improve efficiency of operations compared to the action alternatives. Alternative 5 (the No Net Production/Capability-Based Alternative) is discussed in Section 3.2.5.*

5.0 UPF ALTERNATIVE (ALTERNATIVE 2)

Commentors support Alternative 2, the UPF Alternative, including construction of a Complex Command Center. Commentor stated that all of the equipment and processes are needed, regardless of the throughput. Commentor stated that a reduction in size is not feasible as it

creates design problems associated with trying to fit needed processes in the current small footprint. Commentor also stated that design time could have been reduced with a larger building.

Response: *NNSA notes support for the UPF Alternative. As discussed in Section 1.4.6, the Y-12 SWEIS evaluates three alternative capacities for the UPF and NNSA believes that all three capacities are reasonable alternatives for meeting national security requirements. NNSA does not think design time would vary significantly among the capacity alternatives.*

6.0 UPGRADE IN-PLACE ALTERNATIVE (ALTERNATIVE 3)

Commentors stated that Alternative 3 will not solve the underlying issues with existing facilities.

Response: *NNSA notes this comment. Alternative 3 (the Upgrade in-Place Alternative) is discussed in Section 3.2.3. The Upgrade in-Place Alternative would upgrade the existing EU and nonnuclear processing facilities to contemporary environmental, safety, and security standards to the extent possible within the limitations of the existing structures and without prolonged interruptions of manufacturing operations.*

7.0 CAPABILITY-SIZED UPF ALTERNATIVE (ALTERNATIVE 4)

Commentors support Alternative 4, the Capability-sized UPF Alternative by stating that this option will lead to modernization of existing facilities, improved security posture for special nuclear materials, improved health and safety protection for workers, and better cost effectiveness. Commentor stated that this alternative will be the best option for America's defense and maintenance of its status in world politics and the most sensible stockpile reduction is supported by this option. Commentors support Alternative 4 based on the need to maintain capability, expertise and capacity to maintain a nuclear deterrent. Commentors stated that the problem with Alternative 4 is that there is no room for growth and performance of multiple missions, with work for others missions already having to wait.

Response: *NNSA notes support for the Capability-sized UPF Alternative. As discussed in Section 1.4.6, the Y-12 SWEIS evaluates three alternative capacities for the UPF and NNSA believes that all three capacities are reasonable alternatives for meeting national security requirements. NNSA thinks that Alternative 4 would be reasonably flexible to meet any required missions.*

7.A CAPACITY QUESTIONS

The warhead production capacity of the preferred alternative is 50/80 warheads per year, and no explanation is given for this apparently arbitrary capacity. Commentor questioned whether it is a coincidence that the production capacity of the preferred alternative matches the capacity of the Chemistry and Metallurgical Research Replacement–Nuclear Facility (CMRR-NF) at Los Alamos National Laboratory. Please explain the purpose and need for each of the alternative's capacities. Another commentor stated that the distinction between the UPF80 and UPF5 is not clear. The description suggests the two alternatives have identical floor space and equipment. If

there is a real capacity difference between UPF80 and UPF5 then it should be explained, because the proliferation implications are large. Commentor stated that the UPF80 expands U.S. warhead production capacity.

Response: *The "UPF80," which is the commentor's shorthand identification of Alternative 4, is described in Section 3.2.4. The "UPF5", which is the commentor's shorthand identification of Alternative 5, is described in Section 3.2.5. Tables 3.2.4-1 and 3.2.5-1 provide quantitative information regarding the operational differences between these two alternatives and the No Action Alternative. Additionally, Section 1.4.6 describes and distinguishes the UPF capacity alternatives, and Table 1.4.6-1 presents the operational differences among the UPF alternatives. As explained in Section 1.4.6, UPF80 and UPF5 would each be approximately 350,000 square feet in size. The production capacity of the preferred alternative has been changed from approximately 50-80 secondaries and cases per year to approximately 80 secondaries and cases per year. This change is consistent with NNSA planning requirements stated in Annex D of the FY 2011 Biennial Plan and Budget Assessment on the Modernization and Refurbishment of the Nuclear Security Complex (NNSA 2010). The capacity requirements of the CMRR-NF are beyond the scope of the Y-12 SWEIS.*

Proliferation implications of the alternatives are beyond the scope of the SWEIS, which presents the potential environmental impacts associated with the alternatives. The ROD will explain all factors that NNSA considered in making its decisions regarding the SWEIS, which may include proliferation concerns. NNSA disagrees that "the UPF80 expands US warhead production capacity." As stated in Section 1.4.1, "the No Action Alternative would be capable of supporting a baseline throughput of approximately 160 secondaries and cases per year." As such, the UPF80 would actually reduce capacity compared to the existing capacity.

7.B PREFERRED ALTERNATIVE AND PROLIFERATION

Commentor stated that 4 of the 5 alternatives that NNSA has determined as "reasonable" maintain capability of producing at least 80 warheads per year, consistent with planned construction of a plutonium pit facility at LANL with a 50/80 warhead per year capacity, which in combination is a provocative act. Commentors stated that the physical distinction between the UPF80 and the UPF5 is not clear in the SWEIS, and if there is a real capacity difference between the UPF80 and the UPF5, the SWEIS should clarify because the proliferation implications are large. The UPF5 is more supportive of U.S. nonproliferation goals. Another commentor stated that the 50/80 capacity has no relationship to stockpile surveillance, stockpile stewardship, stockpile maintenance or Life Extension requirements, but instead reflects a commitment by the United States to reconstitute production capacity for new nuclear warheads.

Response: *The rationale for Alternative 4, the Capability-sized UPF Alternative (which commentor identifies as the "UPF80"), is contained in Section 1.4.4 of the SWEIS. As stated in that section, "Although the size of the stockpile beyond 2012 is not known, the trend suggests a significantly smaller one. Consistent with this trend, NNSA developed an alternative, referred to as the "Capability-Based Alternative" in the Complex Transformation SPEIS, to analyze the potential environmental impacts associated with operations at Y-12 that would support stockpiles smaller than those currently planned. NNSA has assumed that such a stockpile would*

be approximately 1,000 operationally deployed strategic nuclear warheads. This assumption is consistent with the Complex Transformation SPEIS Capability-Based Alternative (NNSA 2008). In addition, analysis of this alternative enhanced NNSA's understanding of the infrastructure that might be appropriate if the U.S. continues to reduce stockpile levels."

Regarding the physical distinctions among the UPF alternatives, this issue is addressed in Section 1.4.6 of the SWEIS. As explained in that section, although the smaller, capability-sized UPFs could be physically smaller than the nominal-sized UPF, an assessment conducted by the UPF Project team at the request of the Nuclear Weapons Council Integrating Committee in early 2008 identified only 15 pieces of duplicate equipment that could be eliminated by reducing capacity requirements. In terms of square footage of the facility constructed, there would only be a reduction of approximately 38,000 square feet compared to the approximately 388,000 square feet proposed for the nominal-sized UPF described under Alternative 2. Consequently, the capability-sized UPFs described under Alternative 4 and Alternative 5 would not be significantly smaller than the UPF described under Alternative 2. From a square footage standpoint, any "capability"-sized UPF requires a "minimum" of 350,000 square feet to accommodate production equipment/glove boxes. As such, construction requirements for the three UPF capacity alternatives would not vary significantly among the alternatives.

NNSA disagrees that Alternative 4 reflects "a commitment to reconstitute in total production capacity for new nuclear warheads." In fact, the UPF80 would actually reduce capacity compared to the existing capacity. Additionally, the 2010 NPR states that, "The United States will not develop new nuclear warheads." See also comment response 7.A.

7.C SPACE REQUIREMENTS

Commentors stated that the SWEIS does not adequately provide information to support the square footage requirements asserted for the space in the preferred alternative. A much more detailed and thorough description of space requirements for each stated purpose of the project, 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.

Response: *The size and space utilization of the UPF is based on the NNSA direction to include all activities to support LEPs, uranium casting and processing, machining, dismantlement, disassembly, and assembly. A minimal amount of space is reserved for technology development and maturation. Each UPF alternative includes the capability to perform these activities, although at different capacities, as described in Sections 3.2.2, 3.2.4, and 3.2.5 of the SWEIS. A detailed space allocation is not a requirement of NEPA. The potential environmental impacts associated with the UPF alternatives are based on the best available design information. NEPA analysis is performed during the planning stage of a project with detail design to be performed at a later date.*

8.0 NO NET PRODUCTION/CAPABILITY-SIZED ALTERNATIVE (ALTERNATIVE 5)

Commentors stated that Alternative 5 does not provide long-term capability to execute our necessary mission. Commentors stated that Alternative 5 is preferable to Alternatives 1 through 4, but questions why existing, problematic secondaries wouldn't be taken offline and dismantled. Commentor is opposed to Alternative 5, No Net Production/Capability-sized UPF Alternative.

Response: *NNSA notes this comment. Alternative 5 (the No Net Production/Capability-sized UPF Alternative) is discussed in Section 3.2.5.*

8.A RATIONALE FOR SELECTING PREFERRED ALTERNATIVE

Commentor stated that an additional alternative of "5 warheads per year" represents the actual manufacturing capacity required to keep the arsenal safe and secure, and has been determined to be reasonable by NNSA. Commentor also stated that findings of the JASON committee indicate that a $3.5 billion investment in the UPF for new warhead capacity is not warranted. Another commentor stated that there is no distinguishing benefit of the "UPF80" over the "UPF5," but the distinctive difference is that the UPF80 reconstitutes full-scale nuclear warhead production capacity, undermines President's commitment to demonstrate global leadership in disarmament efforts and U.S. nonproliferation goals.

Response: *Section 3.6 of the SWEIS discusses the rationale for the preferred alternative. That section does not discuss why other alternatives were not identified as "preferred." However, NNSA agrees with the commentor that the benefits of Alternative 4 would also apply to other UPF alternatives (e.g., Alternatives 2 and 5). NNSA decided that Alternative 4 was preferred over Alternatives 2 and 5 because it represented the best capacity for meeting current and reasonably foreseeable national security requirements. NNSA disagrees that Alternative 4 is "unnecessarily provocative." Alternative 4 would actually reduce the capacity at Y-12 compared to the existing capacity. NNSA disagrees that the findings of the JASON committee indicate that a $3.5 billion investment in the UPF for new warhead capacity is not warranted. NNSA finds no such conclusion in that report. Moreover, the 2010 NPR specifically concludes that a UPF is a key investment required to sustain a safe, secure, and effective nuclear arsenal. The 2010 NPR conclusion is equally applicable to all the UPF capacity alternatives.*

9.0 OTHER ALTERNATIVES THAT SHOULD HAVE BEEN CONSIDERED

Commentors stated that any SWEIS about nuclear weapons (or nuclear power) must acknowledge that the technology is harmful to people and the environment, with no mitigation of the unsolvable environmental problems associated with the nuclear fuel cycle. Commentors also said that the SWEIS should recommend the alternative that utilizes no new nuclear material.

Response: *The purpose of the SWEIS is to analyze the potential environmental impacts of the reasonable alternatives for the continued operation of Y-12. Chapter 5 analyzes the potential impacts to human health and the environment. The "nuclear fuel cycle" typically refers to the*

civilian use of nuclear power, which is beyond the scope of the Y-12 SWEIS. With respect to "an alternative that utilizes no new nuclear material," none of the alternatives in the SWEIS would require the production of any new nuclear materials.

9.A CURATORSHIP ALTERNATIVE, "6TH ALTERNATIVE"

Commentors stated that there is a need for "passive curatorship" of the current arsenal which can be achieved through consolidation, downsizing, and upgrading-in-place the current facility. More specifically, commentors stated that a sixth alternative should be added to the SWEIS and considered by NNSA. "Alternative 6" would recognize a need for a Stockpile Stewardship mission that can be achieved through an upgrade in place to existing facilities. It would recognize the increasing demand for a verifiable safeguarded dismantlement capacity which must be addressed. And if there is a need, [NNSA] can construct a new dismantlement facility with designed-in safeguards and transparency to process the current backlog and accommodate increased retirement of warheads and the eventual dismantlement of the entire U.S. arsenal. The benefits of such an alternative include workforce retention and the reduction of the high-security area. One commentor stated that the dismantlement option is already embodied in UPF. Commentors prefer Alternative 6, which would upgrade existing facilities at a cost, according to commentors, of only $100 million and would not involve actual bomb making in Oak Ridge. Commentors added that they do not believe "life extended" warheads are needed for the stockpile. Alternative 6 provides a win/win for the local workforce and regional economy. Reduction of the high security footprint (associated with Alternative 6) should permit acceleration of demolition and cleanup projects at Y-12 which are currently hampered by security concerns. Further, according to commentors, an aggressive effort by local leaders to secure funding for cleanup could offset losses in the security sector and minimize the regional economic impact. Commentors stated that a curatorship approach would result in the following programmatic advantages compared to the existing Stockpile Stewardship Program:

1. Allow NNSA to de-emphasize nuclear weapons science and technology and cease its quest for more detailed simulations of exploding thermonuclear weapons.

2. Reduce weapons Research and Development (R & D).

3. Recurring annual assessments or certification of the safety and reliability of the stockpile should not be necessary.

4. Offer improved safety, improved security, improved environmental systems, reduce operating costs, and would strengthen nonproliferation efforts.

5. Reduce operating costs because there would be less R&D and nonproliferation would be strengthened because curatorship would more closely align with the NPT.

Commentors stated that consolidating operations and upgrading in-place would render facilities functional for at least another decade, during which the future of U.S. nuclear force needs would become clearer. Commentors stated that "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."

Response: *NNSA believes that many of the elements of a curatorship approach that involve the proposed actions at Y-12 are analyzed in the SWEIS. For example, the SWEIS currently includes an alternative (Alternative 3, Upgrade in-Place) that would accomplish all required dismantlements (and any required assembly) in existing facilities that would be upgraded. As such, the SWEIS already includes an alternative that recognizes "a need for a Stockpile Stewardship mission that can be achieved through an upgrade in-place to existing facilities." With respect to costs associated with the alternatives, see comment-response 10.C. While NNSA agrees that consolidating operations and upgrading in-place could render facilities functional for at least another decade, during which the future of U.S. nuclear force needs could become clearer, NNSA notes that the recently completed NPR specifically concludes that a UPF is a key investment required to sustain a safe, secure, and effective nuclear arsenal (see comment-response 1.A).*

The SWEIS also includes an alternative that would provide the minimum assembly/disassembly capacity which NNSA believes would meet national security requirements. Under this alternative (Alternative 5 – No Net Production/Capability-sized UPF Alternative), NNSA would maintain the capability to conduct surveillance and produce and dismantle secondaries and cases. NNSA would reduce the baseline capacity to approximately 10 secondaries and cases per year, which would support surveillance operations and a limited LEP workload; however, this alternative would not support adding new types or increased numbers of secondaries to the stockpile.

NNSA has added a discussion of the curatorship alternative proposed by commentors to Section 3.4 of the SWEIS. Although there are elements of the curatorship approach in the SWEIS alternatives, NNSA believes that the curatorship alternative would be unreasonable, as explained in Section 3.4.

NNSA has also added a discussion of dismantlement requirements and the dismantlement process to the SWEIS (see Section 2.1.1.1). As that section explains, a facility that would be used specifically for dismantlements would contain essentially the same equipment and have the same inherent capabilities as a facility that would be used for both dismantlements and assembly of weapons. In that sense, NNSA agrees that the dismantlement option is already embedded in all alternatives. With respect to the construction of a new facility for dismantlements only, please see comment response 9.B below.

The advantages/disadvantages of a broader curatorship approach across the entire nuclear security enterprise versus NNSA's Stockpile Stewardship Program are beyond the scope of the SWEIS. The commentor is directed to the Stockpile Stewardship PEIS (DOE/EIS-0236) and the Complex Transformation SPEIS (DOE/EIS-0236-S4), both of which addressed the curatorship approach.

9.B DISMANTLEMENT FACILITY ONLY

Commentors stated that Y-12 should be committed to dismantlement of nuclear weapons, because there is currently a 15-year backlog of retired weapons awaiting dismantlement, and more to come. Commentors proposed construction of a new, single purpose Dedicated Dismantlement Facility (DDF), equipped only with machines and equipment necessary for dismantlement. Production capacity for the purpose of stockpile surveillance and maintenance can be accomplished at a 5 warhead/year throughput capacity within an existing facility, possibly Building 9212. The high security footprint could be reduced by as much as 60 percent, the new dismantlement facility could be designed and built for the less than the UPF, and would provide the most efficient, effective technology for dismantlement and safe working conditions for the workforce for a 50–60 year lifespan. Commentors stated that the Y-12 facility should be dismantling nuclear weapons in negotiated verifiable steps with other nuclear weapons countries. The Dismantlement program in the SWEIS should be central to its analyses under all alternatives. 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.

Commentors stated that 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.

Response: *A "dismantlement-only" alternative was not analyzed because it would not meet NNSA's purpose and need for action and is not within the national security missions assigned to NNSA by the NNSA Act (50 United States Code [USC] 2401, et. seq.). That act also mandates that NNSA promote international nuclear safety and nonproliferation. NNSA vigorously pursues its nonproliferation mission; the scope of the Y-12 SWEIS is reflective of NNSA's mission to produce, maintain and enhance the safety, reliability, and performance of the United States nuclear weapons stockpile in order to meet national security requirements.*

The requirements that NNSA uses to base or define its programmatic needs are a combination of the current PDDs, NWSP, policies, and statutes, as well as the best judgment of NNSA in consultation with the DoD and experts from NNSA's national laboratories. Using this information, NNSA makes reasonable assumptions as to the configuration and capacity for the nuclear security enterprise.

NNSA has, however, included an analysis of a "No Net Production/Capability-Based Alternative" to the SWEIS (see Section 3.2.5 of the SWEIS). As described in that Section, under the No Net Production/Capability-Based Alternative, NNSA would maintain the capability to produce a limited number of components and to assemble/re-assemble weapons for the legacy stockpile. This alternative would also include the capability with sufficient capacity for

continued surveillance, limited life component (LLC) production, and weapon (and component) dismantlement.

Section 2.1.1.1 of the SWEIS discusses dismantlements at Y-12. Figure 2-3 depicts the dismantlement throughput at Y-12 over the past 8 years. Although the specific dismatlement numbers are classified, as shown in that figure, dismantlements have increased significantly over the past four years. NNSA continues to meet its national security requirements related to dismantlements. NNSA disagrees that dismantlement backlogs have created storage and safety issues.

9.C ALTERNATIVES UNDERMINE PRESIDENT'S POLICIES

Commentors stated that the SWEIS doesn't include any alternative that supports and that's consistent with the President's foreign policy but, indeed, would undermine it. Construction of a $3.5 billion warhead production facility when the U.S. is attempting to regain its stature as an international leader in nonproliferation efforts, assuage concerns of non-nuclear weapons states on the eve of the NPT Review, and dissuade Iran from further developing its nuclear capability is not reasonable or rational. As a nation the U.S. must take concrete steps towards disarmament in order for others to trust and follow. Commentors stated that further proliferation of nuclear warheads undermines the START treaty.

Response: *Nuclear weapons policy is decided by the President and the Congress. Neither NNSA nor DoD decides the role of nuclear weapons in national policy. NNSA is part of the executive branch of the government and the SWEIS is consistent with and supportive of the President's foreign policy. NNSA's role in the nuclear weapons program is to carry out its statutory mission, which includes maintaining weapons capability and ensuring the safety and reliability of the stockpile. DoD is responsible for deployment and, if necessary, use of nuclear weapons.*

9.D DISMANTLEMENT SHOULD HAVE BEEN DISCUSSED IN SWEIS

Commentors stated that the proposals for a UPF, whatever size, fail to address the growing need for dismantlement capacity, especially considering recent arms reduction agreements. There is no discussion of the overlap of dismantlement and production operations. There is no discussion of the backlog of secondaries awaiting dismantlement which already present a problem for Y-12. This critical mission need for the United States is absent in the SWEIS. The Y-12 SWEIS pays little attention to dismantlement operations, treating them as an adjunct to the production mission of the UPF. Commentors states that the UPF mission should be redirected to dismantlement of secondaries and downblending of weapons-grade highly enriched uranium (HEU) at Y-12. Reports from Y-12 indicate storage capacity issues for secondaries and cases continue to grow.

Response: *In response to these comments, NNSA has added a discussion of dismantlement requirements and the dismantlement process to the SWEIS (see Section 2.1.1.1). As that section explains, a facility that would be used specifically for dismantlements would contain essentially the same equipment and have the same inherent capabilities as a facility that would be used for both dismantlements and assembly of weapons. The Draft SWEIS states that disassembly is a*

mission for all alternatives (see Sections 1.4.1 through 1.4.5). See also comment-response 1.B for a discussion of the nuclear weapon requirements that NNSA and Y-12 must meet.

9.E HEU DOWNBLEND ALTERNATIVE

Commentor proposed an alternative which requires NNSA to design an aggressive plan for downblending approximately 300 metric tons of HEU stored at Y-12. Commentor stated that rather than being stored at the new HEUMF, the material could be declared excess and downblended. Commentor identified the benefits of this proposal as: eliminating the need for multi-billion dollar UPF; reduced cost of storing unneeded weapons-grade materials while creating revenue-generating LEU; reduced security risk associated with HEU storage. Commentor also stated that downblending HEU would free up enough space at HEUMF to accommodate the limited R&D and manufacturing functions planned for the UPF.

Response: *The HEU downblend program is an ongoing activity at Y-12 and NNSA does not have any proposals that would change the program. Consequently, down-blending HEU would continue under all alternatives, and the environmental impacts would be the same for all alternatives. A brief discussion of the HEU downblend program follows.*

HEU is stored at Y-12 in the HEUMF. The exact inventory of HEU at Y-12 is classified. NNSA is responsible for disposing of HEU that has been declared surplus to defense needs primarily by converting it into low enriched uranium (LEU). Once down-blended, the material can no longer be used for nuclear weapons. To the extent practical, NNSA seeks to recover the economic value of the material by using the resulting LEU as nuclear reactor fuel. As part of this program, NNSA has also secured HEU from Russia for down-blending. From 1995 through late 2009, 375 metric tons of HEU from Russian nuclear warheads have been recycled into LEU fuel for U.S. nuclear power plants. This program has eliminated the equivalent of 15,000 nuclear warheads. The Megatons to Megawatts government-to-government program goal of elimination 500 metric tons of warhead material is scheduled to be completed in 2013. Currently, ten percent of U.S. electricity is produced using this fuel. Further surplus declarations are beyond the scope of the SWEIS.

9.F USE OF HEUMF FOR EU OPERATIONS

Commentors stated that another reasonable alternative is the possibility of moving small-scale uranium processing activities, or a portion of thereof, into the existing HEUMF. The Draft SWEIS goes into great detail to describe the rationale for placing the UPF in close proximity to the HEUMF, thus it is reasonable to examine the impacts of downsizing, re-missioning to dismantlement (as opposed to production) and constructing it into the existing building.

Response: *The HEUMF, which has a facility footprint of 110,000 square feet, was designed specifically as a storage facility, including ventilation, fire suppression and safety systems that are adequate for storage but not for processing. The HEUMF will be at 60-70% of capacity by September 2011. Excess capacity that could be used for processing, if feasible, is not expected based on a number of plausible storage/stockpile scenarios. In contrast, the UPF would have a minimum facility footprint of approximately 350,000 square feet and is being specifically*

designed as a processing facility to meet NNSA mission requirements for naval reactors, life extension programs, dismantlement, surveillance, nonproliferation, foreign and domestic research reactor customers, etc. As a result, the HEUMF is not a reasonable alternative for the EU mission.

10.0 COST AND SCHEDULE

10.A COST EFFECTIVENESS OF EXISTING NUCLEAR SECURITY ENTRPRISE

Commentors stated that production activities compete for resources with dismantlement, disassembly, disposition, technology development, environmental restoration, and other programs.

Response: *The United States' policy on nuclear weapons and the budget necessary to support the stockpile is set by the President and the Congress. Modernization of Y-12 reflects NNSA's vision for the most effective means of fulfilling the missions assigned to it by the Congress and the President. Decisions on the prioritization of federal expenditures are beyond the scope of the SWEIS.*

10.B BETTER USE OF RESOURCES

Commentors stated that money could be better spent on other social and national purposes. Several commentors provided examples of better uses of money such as rebuilding and improving the nation's infrastructure, education, childcare, housing, healthcare, and feeding the homeless. Commentors believe that putting $3.5 billion into a nuclear weapons plant is outrageous in light of the Nation's deep deficits.

Response: *The budget necessary to support the stockpile is set by the President and the Congress. Decisions on the prioritization of federal expenditures are beyond the scope of the SWEIS.*

10.C COSTS OF ALTERNATIVES

Commentors stated that although the SWEIS makes claims of cost savings through efficiencies, workforce and footprint reduction, the legitimate cost estimates of the five alternatives are not presented in the SWEIS. Commentors believe that cost estimates are needed to allow a comparison of costs and benefits associated with each alternative. Commentors added that it is irresponsible to spend billions on a bomb plant which, by the time it is completed in 2018, should no longer be needed due to forecasted weapons reductions. A commentator stated that according to recent GAO Report "Actions Needed to Develop High-Quality Cost Estimates for Construction and Environmental Cleanup Projects," NNSA did not meet the standards for credibility and used improper estimations for the "foundation for the cost estimate" for the facility that was submitted to Congress. Commentor added that beyond the costs associated with the UPF, the SWEIS fails to analyze other site plans, including the costs of maintaining current facilities at Y-12 in a "ready-to-use" state as proposed in the "preferred alternative."

Commentors stated that a cost comparison should be made between consolidation in-place with upgrades versus new construction. Commentors stated that job reductions due to innovations in robotics and automated manufacturing processes should be considered.

Response: *The purpose and need for the Y-12 SWEIS is partly driven by a need to operate Y-12 in a cost-effective manner. As discussed in Section 1.3, a UPF would improve the efficiency of operations and reduce operating costs by consolidating and modernizing equipment and operations. The SWEIS presents the potential environmental impacts of the reasonable alternatives for the continued operation of Y-12. Costs are not required to be included in an EIS. However, costs may be considered by NNSA decisionmakers in the ROD process. With respect to job reductions due to innovations in robotics and automated manufacturing processes, the SWEIS includes an analysis of jobs associated with each of the alternatives in Section 5.10.*

10.D TAXPAYER MONEY

Commentors are opposed to the use of taxpayers' money and resources on nuclear weapons. Commentors stated that building a new nuclear facility will be a waste of taxpayers' money because it would become largely automated and several jobs would be lost.

Response: *The budget necessary to support the stockpile is set by the President and the Congress. Modernization of Y-12 reflects NNSA's vision for the most effective means of fulfilling the missions assigned to it by the Congress and the President. Decisions on the prioritization of federal expenditures are beyond the scope of the SWEIS.*

11.0 SECURITY ISSUES, SABOTAGE, AND TERRORISM

11.A SABOTAGE AND TERRORISM – GENERAL

Some commentors expressed concern over potential terrorist attacks at Oak Ridge. One commentator stated that co-location of HEUMF with UPF will enhance the security as there will be reduced shipments of HEU transported cross country. Another commentor stated that the reduction of an overall security footprint should result in higher security whether achieved through a new facility or a consolidation/upgrade-in-place scenario.

Response: *NNSA devotes considerable resources to understanding and preventing terrorism in the nuclear security enterprise. DOE Order 470.4 describes activities conducted under the Safeguards and Security Program aimed at preventing unauthorized access, theft, diversion or sabotage (including unauthorized detonation or destruction) of nuclear weapons, nuclear weapons components, and special nuclear materials. In accordance with the requirements set forth in this Order, NNSA conducts vulnerability assessments and risk analyses to evaluate the effectiveness of existing safeguards in reducing the likelihood of terrorist acts being successful and assisting in the development of new safeguards to further reduce these risks.*

Regarding a terrorist threat, security and potential acts of sabotage are integral considerations in the designs and operating procedures for NNSA sites, including Y-12. These designs and operating procedures protect against attacks by outsiders and sabotage by disgruntled

employees or other insiders. New facilities such as the HEUMF and UPF would provide a greater degree of security than existing facilities.

11.D CLASSIFIED APPENDIX

Commentors stated that in order for interested stakeholders to properly review the safety and security of the new UPF and the significant changes and reduction to the high-security area and overall security that the project proposes, the SWEIS must disclose enough information to the public to enable interested stakeholders to review the information instead of including all the information in a classified appendix that is not available to the public. Commentors believe that it is neither appropriate nor legally adequate to include a classified appendix without carefully analyzing what information can and should be disclosed in the body of the SWEIS. For example, an analysis of the risks to workers and nearby populations in the event of a terrorist attack can be accomplished without revealing specific security vulnerabilities.

Response: *As discussed in Section 5.14.4, NNSA has prepared a classified appendix to this SWEIS that evaluates the potential impacts of malevolent, terrorist, or intentional destructive acts. However, substantive details of terrorist attack scenarios, security countermeasures, and potential impacts are not released to the public because disclosure of this information could be exploited by terrorists to plan attacks. The decisionmaker will consider the results of the classified appendix in the ROD process.*

12.0 RESOURCES

12.B SITE INFRASTRUCTURE

Commentators stated that reducing the footprint and capacity of the Y-12 facility is required.

Response: *All of the action alternatives would, to various degrees, reduce the footprint of the site, consolidate operations, and reduce infrastructure requirements. The Upgrade in-Place Alternative would produce the smallest reduction, while the No Net Production/Capability-sized UPF Alternative would produce the largest reduction.*

12.C AIR QUALITY

Commentor suggested that DOE consider the use of diesel retrofit technologies, such as diesel oxidation catalysts, to reduce air quality impacts of diesel-powered equipment during the construction phase. The FEIS should clarify the expected timeline of construction. Commentor suggested common actions to reduce exposure to diesel exhaust. Such actions include low-sulfur diesel, retrofit engines, position of exhaust pipe, catalytic converters, ventilation, climate-controlled cabs, regular engine maintenance, respirators, turning off engine when not in use.

Response: *NNSA agrees that site-specific measures can be implemented to reduce the air quality impacts of diesel-powered equipment. As explained in Sections 5.6.1.8 and 5.6.1.9, NNSA has instituted many "green measures" that are expected to reduce air emissions. For diesel engines, NNSA has significantly increased the use of bio-diesel fuel, which, when compared to traditional*

diesel-powered vehicles, have overall reduced tail pipe emissions (carbon monoxide, ozone-forming compounds, nitrogen oxides, sulfates, and particulates). NNSA will consider further measures, such as those advocated by the commentor, to reduce the air quality impacts from diesel equipment. With respect to the expected timeline of construction, Chapter 3 of the SWEIS identifies the construction period for each of the alternatives.

12.D WATER RESOURCES

A commentor discussed the negative impacts Y-12 operations have had on the East Fork Poplar Creek. This commentor stated that 70 kilograms of uranium was released to the offsite environment through liquid effluent in 2007. In addition, the commentor stated that NNSA has appealed for relief from water permits, and that mercury releases at Station 17 exceeds Tennessee Water Quality Criteria 75 percent of the time. Commentors suggested that the effects on water quality be analyzed for all foreseeable D&D projects at Y-12 because D&D activities and new construction has the potential to add uranium and mercury contamination to already existing contamination. A commentator stated that NPDES discharges from the Y-12 facility require ongoing monitoring and that the Final EIS should include updated information regarding NPDES monitoring. Commentor stated that evaluation of potential water withdrawal impacts to the Clinch River during droughts should be evaluated in the FEIS. Commentators stated that groundwater contamination still exists in the region surrounding Y-12 Plant.

Response: *With regard to existing groundwater contamination, Section 4.7.1 describes the existing groundwater contamination at Y-12. As shown in Table 4.7.2-1, Y-12 released 70 kg of uranium in 2007. This release was less than releases in 2003, 2004, 2005, and 2006, and the resultant impacts from this release were well below derived concentration guidelines. The SWEIS includes an assessment of impacts from releases for all alternatives in Section 5.7.*

The SWEIS assesses the potential impacts of D&D in Section 5.16 using the best available information. Additionally, Chapter 6 includes the impacts of the IFDP in the cumulative impacts analysis to the extent that these impacts can be quantified.

The information in Section 4.7.2 related to NPDES monitoring is based on data contained in the Oak Ridge Reservation Annual Site Environmental Report for 2007. NNSA has added information to Section 5.7.1.2 regarding the withdrawal of water from the Clinch River, including information related to withdrawals during droughts.

12.E GEOLOGY AND SOILS

Commentors stated that the Draft SWEIS contains an inadequate assessment of seismic concerns surrounding current and future buildings. Other commentors expressed concern about potential earthquakes at Y-12.

Response: *Seismology is addressed in Sections 4.5.3 and 5.5. As discussed in those sections, Y-12 lies at the boundary between seismic Zones 1 and 2, indicating that minor to moderate damage could typically be expected from an earthquake. Y-12 is traversed by many inactive faults formed during the late Paleozoic Era. There is no evidence of capable faults (surface*

movement within the past 35,000 years or movement of a recurring nature within the past 500,000 years) in the immediate area of Y-12, as defined by the Nuclear Regulatory Commission's (NRC's) "Reactor Site Criteria" (10 Code of Federal Regulations [CFR] Part 100). The nearest capable faults are approximately 300 miles west of Y-12 in the New Madrid Fault zone. Based on the seismic history of the area, a moderate seismic risk exists at Y-12. However, this should not negatively impact the construction and operation of facilities at Y-12. All new facilities and building expansions would be designed to withstand the maximum expected earthquake-generated ground acceleration in accordance with DOE Order 420.1B, Facility Safety, and accompanying safety guidelines. The SWEIS considers potential impacts that could be caused by earthquakes (see Sections 5.14 and Section D.9). In general, the accidents analyzed in detail for the SWEIS bound any impacts that would be associated with earthquakes.

12.F BIOLOGY

EPA defers to the FWS regarding endangered species assessments, and encourages the DOE to continue coordination with the FWS as appropriate. Commentor stated that a study found that animals (deer) living near Y-12 tested radioactive and were unfit for consumption. Commentor also stated that animals contaminated on Y-12 spread their contamination beyond the perimeter of the facility, causing illness and death. Commentor stated that streams have also been poisoned by dumping of mercury, making fish unfit for human consumption.

Response: *NNSA notes the EPA comment and will continue to coordinate with the USFWS regarding endangered species. Regarding contamination that has affected animals and fish, Section 4.8.4 discusses the biological monitoring and abatement programs at ORR. More details regarding the biological monitoring and abatement programs at ORR are also found in the Annual Site Environmental Reports. With respect to deer, in the 2008 hunts, 483 deer were harvested on the ORR, and 7 (1.45%) were retained for exceeding the administrative release limits or beta-particle activity in bone. With respect to fish, although waterborne mercury concentrations in the upper reaches of East Fork Poplar Creek decreased substantially following the 2005 start-up of a treatment system on a mercury-contaminated spring, mercury concentrations in fish have not yet decreased in response. Fish communities were monitored in the spring and fall of 2008 at five sites along East Fork Poplar Creek and at a reference stream. Over the past two decades, overall species richness, density, and the number of pollution-sensitive fish species have increased at all sampling locations below Lake Reality. However, the East Fork Poplar Creek fish community continues to lag behind reference stream communities in most important metrics of fish diversity and community structure (DOE 2009b). Fish advisories are presented in Table 5.12.2.2-4. Water quality is addressed in Section 4.7.2 of the SWEIS. See comment-responses 12.T through 12.T.29 for comments and responses related to the Wetlands Assessment.*

12.G CULTURAL RESOURCES

Commentor stated that coordination with the SHPO should be ongoing, and documented as the project progresses. The DEIS states that the evaluation and cultural resource recovery would be guided by plans and protocols approved by the SHPO in consultation with Native American tribes. The FEIS should include updated information regarding these coordination activities. If

suspected cultural artifacts are encountered during the construction process, all construction activities should cease and the situation should be addressed in consultation with the SHPO.

Response: *Section 5.9 presents the potential impacts to cultural resources for the alternatives. That section has been updated with the latest information available. As that section explains, should suspected cultural artifacts be encountered during the construction process, all construction activities would cease and the situation would be resolved via consultation with the SHPO. Appendix C contains consultation letters pertaining to cultural resources.*

12.G.1 PRESERVE WORLD WAR II ERA BUILDINGS

Commentors stated that the EIS process should include thorough study of cultural resources, including a commitment to which public resources will be preserved in accordance with the National Historic Preservation Act. Commentors also stated that the SWEIS should discuss how Y-12 will offset the loss of the more than 200 buildings that have been demolished, and the many others scheduled for demolition, many of which are/were eligible for listing in the National Register of Historic Places. Commentors support the plan proposed by Oak Ridge Historian Bill Wilcox to save just three WWII-era buildings that are eligible for NRHP listing: Beta-3 and the calutrons (9204-3), 9731—the original pilot plant, and 9706-2—the original medical building and best example of Y-12's Corps of Engineers style buildings. Each building meets the requirements of the *National Historic Preservation Act* as historic properties and should be preserved for future generations.

Response: *Y-12 (in conjunction with the State Historic Preservation Office) has identified buildings that will no longer be required to support the Y-12 missions. However, two facilities of major historic significance are envisioned to be physically preserved as National Historic Landmarks (NHL), Buildings 9204-3 and 9731. Building 9731 is an NNSA facility, and 9204-3 is a DOE-NE building. At some point in the future, these two facilities would become accessible, under controlled conditions, to the public.*

Building 9706-2 currently houses the Y-12 Plant Shift Superintendent's Office as well as some emergency management functions. Current plans call for these functions to be moved to a proposed new facility, the Complex Command Center, in the 2012 time frame. Building 9706-2 is also currently being used for a hands-on radiological training course, which simulates terror attacks in a medical or research environment to instruct response forces. The NNSA's Global Threat Reduction Initiative (GTRI) established this unique course to train hospital and university response forces to mitigate radioactive source theft and to rehearse attacks. Building 9706-2 is slated for future demolition if there is no long term use identified beyond its current functions. NNSA will follow the NHPA regulations regarding this and all historic buildings.

12.H SOCIOECONOMICS

Commentors stated that continued operation of Y-12 is crucial for economic development of Tennessee. Commentors stated that UPF will provide additional jobs and continued economic growth for the region, as well as positioning Y-12 as a leader in technology. Commentors stated that the Oak Ridge DOE complex has a major economic impact on the economic development of

Tennessee and specifically on Roane County through its operations and its role as a major employer in the region. Commentors also stated that the construction of a new nuclear facility will have negative impacts on socioeconomics of the region. Commentors stated that 2,500 jobs would be lost since the new facility (UPF) would largely be automated. Commentors believe that a new UPF would have significant detrimental economic impact on Oak Ridge and the surrounding region. The new UPF would reduce the workforce compounding the regional negative economic impact (i.e., the jobs to be cut would be long-term, high salary jobs rather than lower paying short-term construction jobs). Another commentor stated that the future of Y-12 shows a sharp decline in jobs for weapons production activities. An increase in dismantlement operations should result in a steady or slight diminished workforce requirement.

Response: *Section 5.10 of the SWEIS presents the socioeconomic impacts of the alternatives. As discussed in that section, the operational workforce for the UPF would be expected to be smaller than the existing EU workforce due to efficiencies associated with the new facility. Any reductions are expected to be met through normal attrition/retirements. NNSA agrees ORR has a major economic impact on the economic development of Tennessee.*

12.J HEALTH AND SAFETY

Commentors expressed general concern over health and safety issues to the public from Y-12. Commentor stated that she was tired of the endless news stories about dangerous conditions at Y-12. Commentor stated that Y-12 has significant safety issues.

Response: *NNSA acknowledges concerns related to health and safety from Y-12 operations. Safety is paramount to NNSA and facilities are operated by NNSA in a safe and environmentally-conscious manner. Sections 5.12 and 5.14 of the SWEIS present the potential impacts to human health from normal operations and accidents, respectively. Radiological and non-radiological impacts were considered, and potential impacts to both workers and the public are analyzed and presented. As shown in those sections, all potential impacts from normal operations would be well below regulatory standards and would have no statistically significant impact on the health and safety of either workers or the public.*

Statistically, for all alternatives, radiological impacts would be expected to cause less than one LCF to the 50-mile population surrounding Y-12. Potential impacts from accidents were estimated using computer modeling for a variety of initiating events, including fires, explosions, and earthquakes. For all alternatives, the accident with the highest potential consequences to the offsite population is the aircraft crash into the EU facilities. Approximately 0.4 LCFs in the offsite population could result from such an accident in the absence of mitigation. A maximally exposed individual (MEI) would receive a maximum dose of 0.3 rem. Statistically, this MEI would have a 2×10^{-4} chance of developing a LCF, or about 1 in 5,000. This accident has a probability of occurring approximately once every 100,000 years. When probabilities are taken into account, the accident with the highest risk is the design-basis fire for HEU storage. For this accident, the maximum LCF risk to the MEI would be 4.4×10^{-7}, or about 1 in 2.3 million. For the population, the LCF risk would be 4×10^{-4}, or about 1 in 2,500.

The impacts associated with the potential release of the most hazardous chemicals used at Y-12 were modeled to determine whether any impacts could extend beyond the site boundaries. Based upon those modeling results, it was determined that no chemical impacts would cause adverse health impacts beyond the site boundary.

12.J.1 CANCER TO WORKERS

Commentors expressed concern over cancer to workers due to radiological operations. Commentor stated that the cancer statistics are misleading because a lot of workers leave the Oak Ridge area.

Response: *Section 5.12.1.2 of the SWEIS presents the impacts of the alternatives on worker health. As shown in Table 5.12.1.2-1, the total worker doses from the alternatives would vary from a low of 16.0 person-rem (Alternative 5) to a high of 49.0 person-rem (Alternatives 1 and 3). For all alternatives, the risk of cancer to workers would be small (less than approximately 0.03 latent cancer fatalities [LCF] to the worker population annually), or about 1 LCF every 33 years. With respect to cancer statistics related to past workers, Section D.8 of the SWEIS provides information on past and current epidemiological studies.*

12.J.2 HEALTH OF SURROUNDING OAK RIDGE AREA

Commentors expressed concern over impacts to health and safety from the Oak Ridge Reservation environment.

Response: *Sections 5.12.1.1 and 5.12.2.2 of the SWEIS present the impacts of the alternatives on public health. Statistically, for all alternatives, radiological impacts would be expected to cause less than 0.0009 LCFs to the 50-mile population surrounding Y-12 annually, or about 1 LCF every 1,100 years. With regard to potential impacts from hazardous chemical, hazard quotients would be expected to be below 0.05. Hazard quotient levels less than 1.0 are considered indicative of acceptable risk (i.e., below threshold values at which adverse health effects may occur).*

12.J.3 RELEASE OF MATERIALS

Commentors stated that the SWEIS treatment of potential releases to air and water is partial and deficient. It does not list materials/contaminants used at Y-12, does not provide information about scenarios in which materials might be released, 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 Y-12. Despite that some small fraction of these materials is classified, the SWEIS can provide detailed analysis of these materials and assessment of risks associated with release scenarios without disclosing their purpose. Another commentor stated that the Draft SWEIS should fully document past, present, and projected future releases of mercury to all media, and 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.

Response: *The SWEIS presents information related to potential releases of chemicals and radionuclides to air and water (see, for example, Table 4.6.2.2-2 [air emissions], Table 4.7.2-1 [uranium releases], Table 4.12.1-6 [toxic chemical releases]). The impacts of any chemical and radiological releases are analyzed in Chapter 5 of the SWEIS. Releases and impacts associated with both normal operations and potential accidents are presented in Sections 5.12.2 and 5.14.2. Potential impacts associated with mercury are presented in Section 5.12.2.1 and 5.12.2.2. See comment-response 12.P for a discussion of future cleanup plans.*

12.J.4 URANIUM DISCHARGE

Commentors stated that since uranium is a toxic heavy metal which carries risks from its chemical properties; these risks must be evaluated, along with an analysis that combines the biologic and radiologic risks. Use of curies as a unit of measure gives no hint to the amount of material released.

Response: *The SWEIS presents both the curie content and the mass of uranium released (see Table 4.7.2-1). As shown in that table, on average, there are approximately 0.0004 curies per kilogram of uranium (this varies depending upon the specific isotopic concentration of the uranium). NNSA agrees that uranium is both a radiological hazard and a toxic heavy metal hazard. Sections 5.12 and 5.14 present the potential impacts associated with hazardous materials, including uranium. See comment response 12.M.3 for a discussion of biological risk.*

12.L WASTE MANAGEMENT

Commentors expressed concern with the wastes that will be generated through nuclear weapons operations and stated that the waste streams must be fully characterized and quantified. Treatment, disposal, and/or storage options for those wastes must be evaluated, along with massive waste streams that will be generated during decontamination and decommissioning (D&D). The final SWEIS should either attempt a thorough characterization of waste streams or propose a timeline for preparing a supplemental EIS on Waste Streams from D&D. In addition, the Y-12 SWEIS should identify other cleanup operations which may have an impact on the environment that are likely to take place over the next 5-7 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 offsite facilities, and the transportation hazards attendant to offsite shipments, should be evaluated and compared to the benefits and hazards of onsite treatment, storage or disposal. EPA stated that the proposed action will require continuing management of radioactive and hazardous materials and waste. There are inherent environmental and worker safety concerns regarding storage, transportation and disposal of hazardous waste and radioactive wastes. Long-term onsite storage and disposition of wastes is a concern that will need to be addressed as the project progresses. Nuclear waste from nuclear power plants continues to grow without a viable disposal solution.

Response: *Section 5.13 of the SWEIS presents waste management impacts associated with the alternatives. Under all alternatives, Y-12 would continue to generate and manage wastes, including low-level radioactive waste (LLW), mixed LLW, hazardous waste, and sanitary/industrial (nonhazardous) waste. The waste management treatment and disposal*

capabilities at Y-12 would be adequate to handle all wastes generated by operations for all alternatives. The impacts to the environment and human health from continued operations at Y-12, which include waste management operations, are presented in Chapter 5 of the SWEIS. The potential impacts from D&D are presented in Section 5.16 of the SWEIS. Nuclear waste disposal from nuclear power plants is beyond the scope of the SWEIS.

12.M FACILITY ACCIDENTS

12.M.1 SEISMIC AND NATURAL PHENOMENA

Commentors stated that the Draft SWEIS does not provide adequate discussion of seismic concerns surrounding current and future buildings. An updated seismic hazard analysis must be done for the Y-12 site. Seismic and other structural integrity concerns about several buildings (especially 9204-2E) should be addressed in any future scenario. Commentors stated that the Draft SWIES 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 sustain damage "less frequently than in existing facilities." Commentor stated that this fact does not relieve the NNSA of its obligation to conduct a rigorous analysis of the effects of earthquakes, including but not limited to those that can be "reasonably" expected. Given the nature of work, the number of workers and the materials placed at risk at Y-12, all alternatives should be fully analyzed with regard to structural building performance in severe events that may exceed the "reasonably expected," including catastrophic failure of some or all structures. This analysis should also examine other complications that might arise in the event of a significant earthquake which could impact activities in Bear Creek Valley. Similar analysis addressing risks from tornadoes and flooding must also be conducted; the location of Y-12 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. 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." Commentor stated that the bounding accident for the UPF (an aircraft crash/attack) is not the bounding accident that should be used for the Y-12 SWEIS, including the UPF. Commentor stated that the bounding accident should be impacts from a severe earthquake or tornado event. Commentor states that the DOE and other published studies (i.e., Science Magazine) have identified seismic issues as a significant concern for the facilities at Y-12, and could be expected to predict a significant seismic event in the future. Commentor expressed concerns that Building 9204-2E is at risk of collapse in a seismic event or a 75 mph wind.

Response: *The potential for earthquakes is addressed in Sections 4.5.3 and 5.5. As discussed in those sections, Y-12 lies at the boundary between seismic Zones 1 and 2, indicating that minor to moderate damage could typically be expected from an earthquake. Y-12 is traversed by many inactive faults formed during the late Paleozoic Era. There is no evidence of capable faults (surface movement within the past 35,000 years or movement of a recurring nature within the*

past 500,000 years) in the immediate area of Y-12 as defined by the NRC "Reactor Site Criteria" (10 CFR 100). The nearest capable faults are approximately 300 miles west of Y-12 in the New Madrid Fault zone. Based on the seismic history of the area, a moderate seismic risk exists at Y-12. However, this should not negatively impact the construction and operation of facilities at Y-12. All new facilities and building expansions would be designed to withstand the maximum expected earthquake-generated ground acceleration in accordance with DOE Order 420.1B, Facility Safety, and accompanying safety guidelines. It is too early in the design process to analyze building seismic performance, but this would be performed in the detailed design and safety analysis processes.

The SWEIS considers potential impacts that could be caused by earthquakes and other natural phenomena such as wind, rain/snow, tornadoes and lightning (see Section D.9). Criticality is also considered. Table D.9.3-1 identifies the accidents that were considered for the major operations at Y-12. As shown in that table, the SWEIS considered potential impacts from earthquakes and other natural phenomena, including wind, flood, and lightning. The accidents analyzed in detail for the SWEIS bound any impacts that would be associated with earthquakes and other natural phenomena. This is due to the fact that the accidents analyzed in detail in the SWEIS would have higher radiological releases than accidents caused by natural phenomena.

With respect to potential accidents associated with existing/old facilities, as discussed in Section 5.14.1.1, the SWEIS accident analysis process began with a review of all Y-12 facilities, including Building 9204-2E, with emphasis on building hazard classification, radionuclide inventories, including type, quantity, and physical form, and storage and use conditions. For each of these facilities, the next step was to identify the most current documentation describing and quantifying the risks associated with its operation. Current safety documentation was obtained for all of these facilities. From these documents, the next step was to identify potential accident scenarios and source terms (release rates and frequencies) associated with those facilities.

12.M.2 ACCIDENTS INVOLVING CHEMICALS

Commentor stated that 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 Y-12 should be analyzed. 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. Commentor asked if hydrogen fluoride modeling was performed for offsite releases, as well as name of computer model, and raw input for these models. Commentor also stated that a more complete analysis of lithium risks, including forms in which it is used and the attendant environmental risks, and mitigation measures should be included in SWEIS, as weapons activities would use lithium. Commentor added that the Draft SWEIS also failed to include other hazardous materials used at

Y-12. Commentor stated that the SWEIS should include multiple contemporary excursion events due to catastrophic events.

Response: *As discussed in Section D.9.7, potential chemical hazards and accident risks were obtained from review of the Y-12 chemicals and accident scenarios reported in previous NEPA documents and safety analysis reports (see Section D.9.1.2 for a discussion of this process and the documents that were reviewed). That review included consideration of both hydrogen fluoride and lithium. A chemical's vapor pressure, acceptable concentration, and quantity available for release were factors used to rank a chemical's hazard. Determination of a chemical's hazardous ranking takes into account quantities available for release, protective concentration limits, and evaporation rate. Based on this review, NNSA determined that a chemical accident involving a release of nitric acid was a reasonable choice for modeling, as this chemical release posed the highest potential hazard. With respect to "multiple contemporary excursion events due to catastrophic events," the SWEIS includes an analysis of impacts from many catastrophic events, including major fires, explosions, aircraft crashes, and earthquakes. This analysis is consistent with all regulatory requirements.*

The SWEIS discusses toxic chemical releases in Section 4.12.1. As shown in Table 4.12.1-6, neither hydrogen fluoride nor lithium exceeded reporting thresholds for actual releases. Section 5.12.2.2 discusses potential impacts associated with hydrogen fluoride. As shown in Table 5.12.2.2-3, hazard quotients for hydrogen fluoride were well below 1, meaning that no adverse effects would be expected.

12.M.3 ACCIDENTS INVOLVING OTHER LIFE FORMS (PLANTS AND ANIMALS)

Commentor stated that impacts of the harm, potential or real, of releases of chemicals and materials are quantified in ways that evaluate risks to humans. Commentor stated that human beings are not the only forms of life with value. Endangered or protected species are not the only species impacted—though they lack legal protections, impacts on other species should be quantified and considered; a fundamental premise of NEPA is that, all things considered, options that limit harm to the environment are preferable to those which cause more harm and, in any event, decisions should be informed fully about the environmental consequences likely to flow from them.

Response: *The SWEIS analyzes the impacts of radiological and chemical releases on human health. This approach is based on the concept that protecting humans generally protects biota. Based on the analysis in the SWEIS, the potential impacts to human health would be very small. For example, during normal operations, the radiological dose to workers and the public would be more than ten times less than the average dose from background radiation. Accident impacts would also be small, such that less than 1 LCF would result to the surrounding population for all accidents analyzed. When probabilities are taken into account, the risk of an LCF to the surrounding population would be less than 1 in 10,000 years. With regard to potential impacts from hazardous chemicals, hazard quotients would be expected to be below 0.05. Hazard quotient levels less than 1.0 are considered indicative of acceptable risk to humans (i.e., below*

threshold values at which adverse health affects may occur). NNSA thinks that the SWEIS presents the decisionmaker with adequate information needed to make informed decisions.

The 2008 Oak Ridge Annual Site Environmental Report (ASER) contains information related to potential impacts to biota from radiological releases at Y-12. As stated in the 2008 ASER, DOE Order 5400.5 sets an absorbed dose rate limit of 1 rad/day to native aquatic organisms from exposure to radioactive material in liquid wastes discharged to natural waterways. To demonstrate compliance with this limit, the aquatic organism assessment was conducted using the RESRAD-Biota code (Version 1.21). At Y-12, doses to aquatic organisms were estimated from surface water concentrations at six different sampling locations. In 2008, the absorbed dose rates to aquatic organisms was found to be below the DOE aquatic dose limit of 1 rad/d at all six Y-12 locations (DOE 2009b).

Per DOE Order 5400.5, an absorbed dose rate of 0.1 rad/day is recommended as the limit for terrestrial animal exposure to radioactive material in soils. To demonstrate compliance with this limit, the terrestrial animal assessment was also conducted using the RESRAD-Biota code (Version 1.21). The screening conceptual model for terrestrial animals has the animal (e.g., deer mouse) surrounded by soil, and soil presents both an internal and external dose pathway. The screening conceptual model for terrestrial animals also includes the potential for exposure to contaminated water from soil pore water or by drinking from contaminated ponds or rivers. With the exception of samples collected on the White Oak Creek floodplain, samples taken at all soil sampling locations passed either the initial-level screening, or second-level screening (DOE 2009b).

12.N CUMULATIVE IMPACTS

Commentors stated that the SWEIS should 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. By improperly segmenting the HEUMF and UPF, and production operation zone upgrades (CMC) the required hard look at cumulative impacts of these facilities together is avoided. The cumulative impacts section of the SWEIS does not look at the connected impacts of the three facilities (HEUMF, UPF, CMC) in one NEPA review document. Commentors added that more information about the CMC will need to be developed and included for this analysis to meet NEPA's statutory requirements. Cumulative impacts and synergistic effects of potential releases must be analyzed, including all other known existing and possible future contaminants.

Response: *Chapter 6 of the SWEIS presents the potential cumulative environmental impacts associated with the SWEIS alternatives. That chapter considers ORNL and ETTP activities as appropriate, for all resources addressed. For example, the waste management analysis includes consideration of wastes from all activities at ORR. It should also be noted that Chapter 4 of the SWEIS includes consideration of activities at ORNL and ETTP in the environmental baseline at Oak Ridge. For example, the measured concentrations of air pollutants (see Table 4.6.2.2-1) are based on all emissions from ORR, not just those from Y-12. Likewise, the impacts to groundwater quality (see Section 4.7.1) are not limited to Y-12, but rather from all activities at ORR.*

Similarly, public doses from operations are presented for the entire ORR, not just Y-12 (see Tables 4.12.1-1 through 4.12.1-5).

NNSA disagrees that the SWEIS improperly segments the HEUMF, UPF, and CMC. The HEUMF, now operational, is an existing facility that is part of the No Action Alternative baseline that is part of all alternatives assessed. The UPF, which is a proposed action in the SWEIS, is evaluated in the SWEIS. The CMC, as described in Section 3.3, is not proposed and is not ripe for decisionmaking. If ever proposed, the CMC would consolidate some existing non-nuclear operations. Because the existing operations would continue, the SWEIS did not consider any significant changes that could result from a CMC.

12.O PAST CONTAMINATION AT Y-12

Commentors stated that the SWEIS does not mention the past 60 years of contamination and pollution that has occurred due to the processing of uranium and nuclear matter here; and therefore there's no mention on really how to keep that from occurring or continuing to occur. Commentors stated that the SWEIS fails to adequately analyze and prioritize cleanup of existing contamination. Contamination around the community of Scarboro is not addressed, along with groundwater to the west and east, and aquifers reportedly contaminated by radionuclides, metals, and hazardous chemicals such as TCE. Commentor stated that, at present, there is no other forum for comprehensive analysis of environmental management activities at Y-12. The SWEIS should at least identify cross-cutting issues and establish a minimal level of information that can be used to coordinate cleanup/waste management activities. Cleanup and dismantlement of secondaries are examples of two crucially important future missions for Y-12 that should receive more attention in the SWEIS.

Response: *Contamination and pollution that has occurred in the past are discussed in relation to the existing environmental conditions at the site as a result of past operations (see, for example, Section 4.7.1 which discusses potential groundwater contamination). The Y-12 SWEIS is a forward-looking document that analyzes the potential environmental impacts of reasonable alternatives for continued operations at Y-12. Nevertheless it accounts for the environmental baseline of Y-12 and the existing contamination of past activities. DOE has a large remediation program and is addressing past contamination issues with aggressive programs at each of its facilities. These programs are being conducted in accordance with Federal and state regulatory requirements and include implementation of administrative and engineered controls to minimize additional releases as well as surveillance monitoring of the environment and reporting of exposure assessments.*

12.P INTEGRATED FACILITIES DISPOSITION PROGRAM

Commentors stated that the Integrated Facilities Disposition Program (IFDP) needs to be more fully incorporated into the Final SWEIS and Record of Decision. Commentors support the IFDP effort as a critical component to the future success of Y-12 and states that it must be fully incorporated into the ROD. Commentor stated that when OREPA attempted to obtain from DOE or the State of Tennessee a list of all cleanup/waste management projects at Y-12 in the last five years, along with a simple indicator of the status of projects, OREPA was told that no such list

exists. This segmentation of cleanup projects has obvious disadvantages. Since no such vehicle exists otherwise, the SWEIS should be a site-wide environmental impact statement.

Response: *As discussed in Section 1.2 of the SWEIS, the IFDP is a strategic program for disposing of legacy materials and facilities at ORNL and Y-12 The IFDP includes both existing excess facilities (e.g., facilities not required for DOE's needs or the discharge of its responsibilities) and newly identified excess (or soon to be excess) facilities. Under the IFDP, the D&D of approximately 188 facilities at ORNL, 112 facilities at Y-12, and remediation of soil and groundwater contamination would occur over the next 30 to 40 years. The IFDP will be conducted as a remedial action under CERCLA. Cleanup and D&D activities conducted under CERCLA are reviewed through the CERCLA process, which incorporates NEPA values. The potential impacts of the IFDP are analyzed in the cumulative impacts section of the SWEIS (Chapter 6). NNSA believes that the SWEIS includes an analysis of all reasonable alternatives and all cleanup/waste management actions that are required to be included in a NEPA analysis.*

12.Q GLOBAL THREAT REDUCTION INITIATIVE (GTRI)

Commentors stated that Y-12's mission includes support for the GTRI. Commentors stated that Y-12's role is to support the retrieval, processing and disposition of special nuclear materials. The SWEIS addresses this mission and refers to documentation prepared for previous shipments of materials to Y-12. 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. 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.

Response: *The description of Y-12's GTRI mission has been revised in Section 2.1.2.2. The analysis of potential impacts associated with the GTRI is presented in Section 5.15 of the SWEIS. That analysis is based upon the best information that exists for this continued mission. Although the GTRI program has a list of possible future shipments, it is not possible to know with certainty: (1) the locations from where all future nuclear materials would come; (2) the exact quantities of future nuclear materials; and (3) the specific radionuclides of the future nuclear materials. Because of these uncertainties, the environmental analysis in Section 5.15 summarizes the information in recent relevant environmental analyses to provide an environmental baseline of continuing this mission. In the future, as part of the decisionmaking process related to the receipt and storage of any new nuclear materials, proposals would be compared against this baseline to determine whether additional NEPA documentation would be required. The impacts presented in Section 5.15 focus on nuclear materials, as these materials are considered to have the potential to cause the most significant impacts. In preparing Section 5.15, NNSA presented general conclusions associated with the potential impacts of the GTRI, which involves more than just special nuclear materials.*

12.R COMPLEMENTARY WORK / WORK FOR OTHERS PROGRAM

Commentor stated that the Work for Others Program has grown over the past 9 years. 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.

Response: *Section 2.2.1 describes the Complementary Work/Work for Others Program at Y-12. There are no proposals that would significantly change the Complementary Work/Work for Others Program. As such, these activities would continue under all alternatives in existing facilities and would contribute to the environmental impacts that are presented in Sections 5.1 through 5.16 of the SWEIS for the No Action Alternative.*

12.S CLIMATE CHANGE/JUST DO IT APPROACH

DOE should evaluate greenhouse gas (GHG)/climate change impacts under NEPA and should 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.

Response: *Section 5.6.1.8 presents a greenhouse gas analysis for the SWEIS. To estimate the greenhouse gases associated with each alternative, the analysis focuses on three areas: (1) steam plant operations; (2) electric power usage; and (3) vehicle operations. Because of the reduced level of operations and reduction in size of the operational footprint at Y-12, the Capability-sized UPF and No Net Production/Capability-sized UPF Alternatives would have significantly lower greenhouse gas emissions than the No Action, UPF, and Upgrade in-Place Alternatives. However, even the highest levels of greenhouse gas emissions (No Action and Upgrade in-Place Alternatives) would be relatively small (much less than 1 percent) compared to the state-wide emissions in Tennessee.*

12.T WETLANDS/SURVEYS/UPF HAUL ROAD

Commentor expressed concern that the Y-12 Draft SWEIS makes no mention of wetlands disturbance in its analysis of environmental impacts resulting from construction and operation of the UPF, even though NNSA has applied for a permit for construction of a Haul Road for the UPF that could disturb wetlands. Commentor also stated that NNSA stated in the Draft SWEIS that proposed construction sites would be surveyed for the presence of special status species before construction begins, and mitigation actions would be developed. Commentor is concerned that the permit application calls into question DOE's commitment to proceed in ways both cognizant of and protective of environmental resources. Commentor stated that DOE needs to prepare a Supplemental Draft SWEIS because the Haul Road and wetland impacts were not presented in the Draft SWEIS

Response: *The Draft SWEIS was published using the best available information for the proposed UPF, which is in a preliminary design stage. When the Draft SWEIS was published, NNSA had not yet identified the need for a Haul Road extension (including a Site Access and Perimeter Modification Road), nor proposed locations for these roads, if needed. As such, the Draft SWEIS did not include any assessment of potential impacts to wetlands from such roads. In*

February 2010, the proposed location for the Haul Road extension (including the Site Access and Perimeter Modification Road) was identified, and as a result, has been included in the Final SWEIS (see Figure 3.2.2-3 of the Final SWEIS). As discussed in Section 5.1.2 of the Final SWEIS, the Haul Road would accommodate the number and size of construction vehicles needed on site, as well as safely provide transportation away from occupied roadways. The designed alignment for the Haul Road follows the power line corridor and thus avoids forest habitat found to the north and south of the power line corridor.

As discussed in Section 5.8.2 of the Final SWEIS, the Haul Road extension and Site Access and Perimeter Modification Road would necessarily cross some headwater areas of small unnamed tributaries to Bear Creek, some of which contain wetlands. It is anticipated that the Haul Road extension and the Site Access and Perimeter Modification Road would result in the loss of 1.0 acre of wetlands, and place two small stream segments (approximately 300 feet [total] of unnamed tributaries to Bear Creek) within culverts. A total of approximately three acres of wetland would be created as part of proposed action. The mitigation wetlands would include expansion of some existing wetlands "upstream" and adjacent to the new Haul Road, as well as creating additional wetlands in the Bear Creek watershed.

*As mitigation for the loss of stream segments, a section of Bear Creek would be restored and relocated to a more natural channel course. The restoration of Bear Creek would focus on the stream section near the confluence of the unnamed tributaries and Bear Creek. The restoration of this previously disturbed portion of Bear Creek would re-establish natural stream conditions and diversity of fish species, particularly the Tennessee Dace (*Phoxinus tennesseensis*), which the State of Tennessee classifies as "in need of management." Wetland and stream mitigations would be conducted in accordance with the requirements set forth by the U.S. Army Corps of Engineers and the TDEC.*

No site preparation or preliminary construction work would take place on the proposed UPF until a ROD is issued. Additionally, as stated in Section 5.8.6 of the SWEIS, NNSA would survey any proposed construction sites for the presence of special status species before construction begins, and would develop any required mitigation measures.

In accordance with 40 CFR 1502.9(c)(1), NNSA determined that the Haul Road extension and the Site Access and Perimeter Modification Road do not represent substantial changes in the proposed action that are relevant to environmental concerns, nor do they represent significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Consequently, NNSA determined that a Supplemental Draft Y-12 SWEIS was not required.

12.T.1 Appendix G

Commentor stated that nowhere in the notice or document does it specify what the parent document is for Appendix G. This makes it difficult for stakeholders to put it in the appropriate context and examine the actions that make the Haul Road necessary and whether it was proposed in the larger document.

Response: *The parent document is the Y-12 SWEIS. The information presented in the Wetlands Assessment has been included in the SWEIS as Appendix G.*

12.T.2 Appendix G

Commentor stated that two permits for this action were applied for prior to this Wetlands Assessment being released. The applications should have been done after public input was received and the decision finalized. By applying for the permits first, Y-12 gives the appearance that it will proceed with the proposed action with no regard for public opinion.

Response: *The need for the permits and wetland mitigation was not identified until after the Draft SWEIS was released for public comment in October 2009. The process of obtaining permits helps to identify and resolve issues and/or concerns that State or Federal agencies may have. The permitting processes included public comment periods, and NNSA is including the Haul Road extension and Wetlands Assessment in the Final SWEIS. An approved Aquatic Resource Alteration Permit was received from TDEC on June 10, 2010 (TDEC 2010). A final Section 404 Permit from the U.S. Army Corps of Engineers was received on September 2, 2010 (USACE 2010). These permits have followed all regulatory requirements for process and technical content.*

The Haul Road extension and impacts to wetlands were not discussed in the Draft SWEIS because the potential need for the Haul Road extension (with wetland impacts) had not been identified prior to the Draft SWEIS release. NNSA has never intended to proceed with the proposed action without public comment and compliance with applicable permitting processes. The public was given a 30 day comment period for each of the permitting processes conducted by TDEC and USACE. NNSA has provided an 18 day public comment period under 10 CFR Part 1022. Full, detailed project plans and design drawings were also available through the USACE and TDEC in addition to the abridged summaries provided in their respective public notices.

12.T.3 Appendix G

Commentor stated that there is confusion regarding the proposed Haul Road extension. "Haul Road" is the commonly understood name of the road that is used to transport waste from East Tennessee Technology Park to the CERCLA Waste Facility. The confusion could be alleviated by including a map of the area that shows the relationship between the UPF site, the various resource sites, the affected wetlands, Bear Creek Road and the CERCLA Waste Facility and its Haul Road. The use of annotated photographs is insufficient to show the geographic relationships, and the labels of locations on the photos are too tiny to be readable.

Response: *Improved maps are provided in Appendix G to show the extension of the Haul Road as suggested. The proposed Haul Road extension is a continuation of the road between the East Tennessee Technology Park and the CERCLA Waste Facility and would further connect to the proposed UPF Site. The new map has additional labeling for clarification with larger font. NNSA has also included an additional aerial photograph of the project area for orientation.*

12.T.4 Appendix G

According to commentor, Section 2.1 states, "Although the primary use for the Haul Road extension would be for construction activities related to UPF, it could also be used to support other Y-12 activities (e.g., future EM cleanup activities at Y-12)." If it does not connect to the CERCLA Haul Road, then how would support of future cleanup activities be justified? Unless there are well established future needs, it would be preferable to plan for the decommissioning of the Haul Road extension and restoration of affected wetlands after the UPF is finished.

Response: *The Haul Road extension would connect to the existing Haul Road (also known as the "CERCLA Haul Road") and would be available to support future site cleanup and D&D activities.*

12.T.5 Appendix G

Commentor stated that the document seems to imply that soil will be taken from borrow areas for fill and excess soils placed at spoils sites, all accessed by the Haul Road. Appropriate planning for UPF site preparation can minimize the amount of soils transported; soils cut from the site should be used for fill where needed. This will also help control construction costs.

Response: *NNSA agrees that appropriate planning can minimize the amount of soils transported. Soils would not be taken from borrow areas for use at the UPF. Due to the scale of the UPF facility, soil removal has been estimated to exceed fill requirements. The soil removed from the UPF site preparation and excavation would be used sequentially to fill/construct the Haul Road, followed by fill and dewatering at the Wet Soils area and fill/restoration at the West Borrow area. This would minimize soil transportation and control construction costs.*

12.T.6 Appendix G

Commentor stated that the document should give the cost comparison between widening Bear Creek Road and extension of the Haul Road. Additionally, transportation always involves risks, and one must assume that tractor trailers and other large vehicles use Y-12 roadways on a regular basis, with automobile drivers exercising appropriate caution. It is unclear why large dump trucks are expected to pose a special risk.

Response: *Use of the existing Bear Creek Road was not considered a reasonable alternative for the Haul Road extension for several reasons. In order to safely handle heavy earthmoving truck traffic, Bear Creek Road would need to be widened, which would result in additional impacts to aquatic resources and wetlands in the form of bridge and/or culvert widening or improvement at three Bear Creek crossings. However, widening of Bear Creek Road would not remove the inherent risk of allowing over-sized construction equipment to routinely use the same roadway as passenger vehicles.*

The biggest drawback with the use of Bear Creek Road would be the unacceptable compromise to Y-12 worker and public safety. Construction equipment is expected to include high capacity earthmoving equipment, not authorized or intended for use over public roadways. The transport

of hundreds of thousands of cubic yards of material would require thousands of truckloads that would operate continuously for many months. The interface between plant and construction traffic would increase the likelihood of an accident. Any such accident between a commuter vehicle and a fully-loaded earthmoving truck would likely have severe consequences for the commuter vehicle and its occupants. In summary, this alternative was rejected due to basic operational limitations in addition to critical site safety and security concerns unique to Y-12.

Traffic and Transportation impacts associated with the alternatives are addressed in Section 5.4 of the SWEIS. That section has been updated to reflect transportation impacts of using the Haul Road extension.

12.T.7 Appendix G

Commentor stated that, in general, it is undesirable to fragment habitats, whether they are wetlands or not. NNSA should reconsider whether existing roadways can be used to support construction of the UPF. The impacts to Bear Creek from widening of Bear Creek Road are likely minimal compared to the habitat and wetland damage and fragmentation from constructing 1.2 miles of Haul Road, which at 40 feet in width equals habitat destruction totaling nearly 6 acres.

Response: *NNSA recognizes and agrees that habitat fragmentation is not desirable; however, the existing roadways cannot be used safely by the required construction vehicles to support construction of the UPF. The impact and cost to widen Bear Creek Road to accommodate Caterpillar 740 type trucks would not be minimal. It would require closing Bear Creek road to passenger and normal site use and the widening of Bear Creek Road would have comparable impacts to wetlands, Bear Creek stream crossings, and other habitats. The proposed Haul Road has been routed along an existing powerline corridor to minimize impacts to native, undisturbed areas. The one acre wetland fill has been permitted by TDEC, to be offset by the creation of three acres of new wetlands in the Bear Creek watershed.*

12.T.8 Appendix G

Commentor stated that the Local Oversight Committee's (LOC) Citizens' Advisory Panel (CAP) was not able to review, modify, and approve its comments on Appendix G because the release of the document and its comment deadline fell between the monthly meetings. Commentor added that "none of the reasons you listed for not extending the deadline are compelling; you seem to imply that because you have done the minimum required, you do not need to accommodate a stakeholder group's request. This is a far cry from the excellent working relationship that the LOC and CAP (as well as other community stakeholders) have cultivated with Oak Ridge Office's Environmental Management Program, which has shown courtesy and flexibility in accommodating meeting schedules, and which we had hoped would be duplicated with Y-12. Moreover, citing other documents that have been in the public domain is irrelevant; the comment period is for the Y-12 Wetlands Assessment only. In addition, most Public Notices for NEPA documents available for comment include a statement that comments received after the deadline will be incorporated to the extent possible; it would have been appropriate for you to state this.

We hope that deadlines associated with future Y-12 documents will give sufficient time for stakeholder groups to read, evaluate, and prepare comments."

Response: *NNSA recognizes the value of stakeholder involvement and has provided reasonable opportunity for public input while still enabling NNSA to meet its assigned missions. The public has been given two 30-day comment periods by TDEC and USACE for their permits and NNSA has allowed an 18-day public comment period under 10 CFR Part 1022, thus providing the public with three opportunities to comment on the project. In addition, the project would not proceed until the Y-12 SWEIS ROD has been approved. The ROD would not be approved until at least 30 days after the EPA notice of availability for the Final SWEIS has been published in the* Federal Register.

12.T.9 Appendix G

Commentor stated that DOE must meet its obligations under NEPA by either: (1) reissuing a new Draft SWEIS with detailed plans on the environmental impacts associated with the UPF, including the excavation and relocation of massive amounts of soil, the construction of the Haul Road, the disruption of wetlands areas, and any other additional environmental impacts expected as a result of construction; or (2) issuing the Final Y-12 SWEIS based on the Draft SWEIS and prepare a separate, comprehensive EIS specific to the UPF, which includes plans for excavation, characterization and disposal of soil, the construction of the Haul Road, the disruption of wetlands areas, and any other additional environmental impacts expected as a result of construction.

Response: *NNSA has determined that the information in the Wetlands Assessment does not reflect a significant impact or substantial change to the SWEIS and this NEPA process. The Final Y-12 SWEIS has been revised to include these potential impacts related to the UPF project. The Final Y-12 SWEIS analyzes all reasonably foreseeable potential environmental impacts associated with the construction and operation of the UPF.*

12.T.10 Appendix G

Commentor stated that the wetlands proposal addresses only one small piece of the larger excavation/soil characterization/transport/disposal picture. The wetlands proposal lacks sufficient information on the excavation/soil characterization/transport/disposal plans to permit meaningful comment on those pieces of the UPF construction plans, and is an inappropriate vehicle for addressing issues tangential to the actual impact on wetlands of the Haul Road construction. OREPA recognizes the DOE/NNSA has an obligation to present the public with details on this major action that was not covered in the Draft Y12 SWEIS and to accept comment on those plans, either as part of a reissued Draft Y12 SWEIS or a separate EIS on the UPF.

Response: *The Wetlands Assessment is included in the Final SWEIS as Appendix G and addresses the impacts to wetlands. The SWEIS addresses the larger UPF project impacts (see Section 3.3.2.1.1, which describes the UPF construction, and Sections 5.1 through 5.14, which address the impacts of UPF construction and operation, including the impacts associated with the Haul Road extension and excavation/fill activities). NNSA agrees that the Wetlands*

Assessment is only one small piece of the impacts associated with the UPF construction. The Final SWEIS includes a complete assessment of the UPF construction and operation, including additional changes from the Haul Road extension. NNSA notes that Sections 5.1.2, 5.4.1.2, 5.6.1.2, and 5.8.2 have been revised to consider the impacts associated with the Haul Road extension activities. NNSA disagrees that the construction of the Haul Road extension would result in a significant impact or substantial change to the SWEIS and this NEPA process.

12.T.11 Appendix G

Commentor stated that because the wetlands proposal is apparently intended as an amendment to the Y-12 SWEIS (labeled Appendix G), it is appropriate and necessary that the federal government provide the proposal and an opportunity to comment to all those who submitted comments on the Draft Y-12 SWEIS.

Response: *The Wetlands Assessment was released for public comment by NNSA through the DOE Information Center Web Site and NNSA allowed an 18 day public comment period. Public comments were accepted through July 9, 2010. The Wetlands Assessment is included in the Final SWEIS and the public notice and review process used for the document is consistent with 10 CFR Part 1022. As the impact to wetlands is strictly local, 10 CFR Part 1022 only requires notification to local stakeholders.*

12.T.12 Appendix G

Commentor stated that the Wetlands Assessment is difficult to understand; the descriptions of the Haul Road and the terrain through which it will pass and the wetlands it will impact are difficult if not impossible to understand from the narrative and poor quality photos included, some of which have illegible labels of sites referred to. Putting together a coherent picture of the proposed road, the route, the physical geography, and the proposed changes is impossible from the written description. OREPA believes the public deserves to understand this proposed action and the potential impacts as well as a thorough discussion of alternatives, and we believe this can only happen in a public hearing/public workshop session. We are requesting the DOE/NNSA hold a public hearing to enable the public to clearly understand the nature of this proposal, to ask questions for clarification, and to submit appropriate comments.

OREPA requested a public hearing from the state of Tennessee after reviewing the application submitted to the state which was woefully inadequate (impact on aquatic resources "not assessed"). Though the state has not formally responded to our request, we learned via the newspaper that our request was denied because the comment period had ended (we had learned about the proposal less than one week before the end of the comment period).

OREPA then reviewed the more detailed proposal submitted to the Army Corps of Engineers—this application more closely resembles the DOE/NNSA Wetlands Proposal; it provides much more information than the state permit but, as noted above, also suffers from shortcomings that make it difficult to understand the exact scope and impact of the proposed action. We requested a public hearing from the Army Corps; we were joined in our request by the Tennessee Clean

Water Network and the Foundation for Global Sustainability; we have yet to receive a response from the Army Corps.

Response: *NNSA understands and is committed to the stewardship and protection of its environmental resources. NNSA also encourages any interested public to access and review the complete USACE and TDEC permit application submission packages which are available through the DOE Information Center Website. All wetland permit submittals are technically similar in form and content and have been found to be complete by the TDEC and USACE. They are also similar in form and function to the 10 CFR Part 1022 requirements.*

The proposed Haul Road extension minimizes wetland and undisturbed habitat impacts. A higher quality map is provided in Appendix G. Formal public meetings or hearings through the NEPA process are not required for this Wetlands Assessment. An approved Aquatic Resource Alteration Permit was received from TDEC on June 10, 2010 (TDEC 2010). A final Section 404 Permit from the U.S. Army Corps of Engineers was received on September 2, 2010 (USACE 2010).

12.T.13 Appendix G

Commentor stated that the Wetlands Assessment mentions a concrete batch plant and the excavation of soils in preparation for construction of the UPF. Neither of these issues appeared in the Draft Y12 SWEIS, and the Wetlands Assessment is not an appropriate vehicle for details comments (nor does the proposal provide detailed information). Consideration of the environmental impacts of excavation/soil characterization/transport and disposal as well as the construction of a concrete batch plant must be incorporated in a NEPA process which allows for informed public comment.

Response: *The SWEIS includes an analysis of the impacts of the UPF construction, including soil disturbance, transportation, and disposal. The concrete batch plant, which would be temporary, is a standard piece of construction equipment utilized with very large projects to eliminate traffic on city and county roads and to reduce costs. The construction requirements for the UPF (Table 3.2.2.1-1) include the concrete batch plant and the impacts associated with the batch plant are included in the analysis of impacts in Chapter 5 of the SWEIS. The batch plant would have no impacts on wetlands or aquatic resources. Soil disturbance and disposal is addressed in Section 5.1.2 and 5.5.2. Transportation of soil is addressed in Section 5.4.1.2.*

12.T.14 Appendix G

Commentor stated that the Haul Road proposal indicates the design of the road was modified to minimize wetlands impact, including increasing slope. It would seem this design would also increase pollution from large diesel trucks laboring up a steep hill. The wetlands proposal does not address pollution impacts from extensive and long-term heavy equipment traffic through the wetlands. No mention is made of tailpipe emissions or oil or other fluid leaks which would impact wetlands.

Response: *Short-term air quality impacts of UPF construction are addressed in Section 5.6.1.2. That section has been revised to include consideration of truck traffic associated with UPF construction utilizing the Haul Road extension. The Haul Road extension would be designed according to the acceptable standards of roadway construction. The extension would reduce the transportation distance traveled; thereby reducing the opportunity for vehicle emissions and fluid leaks that would be present on a longer route. The Haul Road extension alignment is intended to avoid wetlands where possible, meeting construction, safety and operational standards. Any petroleum or hazardous material releases would be managed in accordance with regulatory guidelines.*

12.T.15 Appendix G

Commentor stated that the Wetlands Assessment says there will be a discharge of materials into wetlands or "other waterbody." The assessment should be specific about any impacted water bodies.

Response: *The term "other waterbody" has been deleted from the Wetlands Assessment. The Wetlands Assessment now identifies this waterbody as "tributaries of Bear Creek."*

12.T.16 Appendix G

The Wetlands Assessment describes a "buffer zone" to be constructed "when possible." The assessment should make clear who decides what is "possible" as opposed to what is "feasible" and should make clear the factors being considered during the decision-making process.

Response: *Buffer zones are to be identified, established and maintained in areas adjacent to existing wetlands or streams as indicated in the state permit. The purpose of a buffer zone is to maintain erosion control and minimize sediment transport. The size of the buffer zone may be affected by operational requirements, topography, or geological repose; furthermore buffer zones would be routinely inspected and modified as necessary during permit implementation to ensure effectiveness.*

12.T.17 Appendix G

The Wetlands Assessment says that work done within existing wetlands will be done with manual labor to minimize impacts (p.4). This strains credulity—will tons of soil be removed, fill dirt distributed, packed, and paved over using only manual labor? If not, the assessment should include a detailed description of what parts will be manual labor and what will be done with machines and equipment.

Response: *Fill work performed to construct the Haul Road extension would not be done manually. The proposed maximum area of "in stream" or "in wetland" work is approximately 3 acres and will credibly be performed on the scale of minimally invasive, manual labor. The construction requirements for the UPF (Table 3.2.2.1-1) include the Haul Road extension.*

12.T.18 Appendix G

The Wetlands Assessment references dry soil "storage." What does this mean? Is storage temporary or permanent?

Response: *The term "storage" was used to describe locating compatible soils permanently, or until another use is identified, at which time it will be removed from the "storage" area and re-used as needed.*

12.T.19 Appendix G

The Wetlands Assessment describes the consideration of Bear Creek Road as an alternative, but the final statement of rejection does not match up with the considerations listed above.

Response: *Bear Creek Road was considered as an alternative, but eliminated from detailed consideration because the load, number and size of construction vehicles simply cannot be accommodated by Bear Creek road in its current condition. The amount of traffic for both soil relocation and concrete placement would place significant structural loads on the road way and increase traffic significantly. These would be oversized vehicles, not legal or intended for public road use, and would pose a special risk to site traffic on Bear Creek Road. Widening of the existing Bear Creek Road was not considered as a reasonable alternative because: (1) this would have disrupted routine traffic flow of plant personnel; (2) the expected cost would have been equal to or greater than construction of the Haul Road; and (3) relocation of existing utilities would have disturbed existing wetlands, creeks and streambeds. While conventional tractor trailers and other large vehicles use Y-12 roads on a regular basis, the scale of the UPF excavation and earth moving would require Caterpillar 740 type (or similar)"articulated dump trucks."*

12.T.20 Appendix G

The Wetlands Assessment includes a detailed description of the activities undertaken to characterize the wetlands soils, but does not contain, in narrative, summary or table form, the results of those characterization activities.

Response: *The wetland delineation and soil characterization information is contained in detail in the referenced Wetland and Sensitive Species Survey Report for Y-12: Proposed Uranium Processing Facility, November 2009, which is a reference for the assessment. This is also listed in the state Aquatic Resource Alteration Permit application.*

12.T.21 Appendix G

The Wetlands Assessment identifies two species of concern in the areas to be disrupted; roosting habitat for the Indiana bat, and habitat for the Tennessee dace. The proposal says nothing else about them—no description of efforts to address habitat issues or to mitigate impacts for these listed species.

Response: *Habitat and mitigation issues for the Indiana bat and Tennessee dace are described in the draft and final SWEIS (Section 5.8.2, Threatened and Endangered Species). As stated in the Wetlands Assessment, the Tennessee dace was not encountered within the impacted reaches during a February 2010 survey. The assessment acknowledges that trees provide potential roosting habitat for the federally endangered Indiana bat and that Indiana bats utilize such trees for maternity roosts from approximately mid-May through mid-September. While the ORR is within the known range of the Indiana bat, none have been observed at Y-12. More details regarding the Indiana bat and Tennessee dace are contained in the Wetland and Sensitive Species Survey Report for Y-12: Proposed Uranium Processing Facility, November 2009.*

12.T.22 Appendix G

The Wetlands Assessment describes some areas as "primarily man-made.". It is important to note that "primarily man-made" does not equate to "therefore unimportant, inconsequential, or unnecessary." The document notes in other places that human made habitats have existed long enough to have been incorporated by wildlife as important habitat.

Response: *It is agreed that primarily man-made habitats can be important as wildlife habitats. Any implication to the contrary is entirely unintentional.*

12.T.23 Appendix G

The Wetlands Assessment references soil sample analysis and says "no contaminated soil is anticipated." Given the history of environmental surprises on the Oak Ridge Reservation, this statement is meaningless. What's more, it is unnecessarily meaningless. We don't have to guess what the samples might show—we can wait and see what the results are. The Wetlands Assessment provides insufficient information about the sampling process to allow the public to have confidence that the sampling is adequate.

Response: *Characterization of soils excavated and managed for the UPF is proceeding as described in Section 4.0 of the Wetlands Assessment and utilizes MARSSIM (Multi-Agency Radiation Survey and Site Investigation Manual) processes. In planning for the Haul Road and wetland development, no contaminated soil is anticipated. Walk-over radiological surveys have been done and sampling for site characterization is being done according to MARSSIM and EPA requirements. Historical land use is known in the region which lends credulity to the expectation of no contamination. Furthermore, no contamination or other "environmental surprises' have been encountered to date on the project. As discussed in Section 5.5.2 of the SWEIS, soil contamination from project activities would be minimized by complying with waste management procedures DOE Order 435.1, Radioactive Waste Management, and DOE Order 450.1A, Environmental Protection Programs. The potential exists for contaminated soils and possibly other media to be encountered during excavation and other site activities. Prior to commencing ground disturbance, NNSA would survey potentially affected areas to determine the extent and nature of any contaminated media and required remediation in accordance with the procedures established under the site's environmental restoration program and in accordance with appropriate requirements and agreements.*

12.T.24 Appendix G

The Wetlands Assessment says affected streams were checked for the presence of the Tennessee dace in February 2010, which is the dead of winter. The streams must be checked again in summer (most preferable would be an accounting of the presence of dace in each season), and data must be incorporated into the wetlands proposal and made available to the public.

Response: *Stream tributaries on the Oak Ridge Reservation that serve as Tennessee dace habitat are routinely surveyed for Tennessee dace as part of the Reservation's Biological Monitoring and Assessment Program and results are provided to the State of Tennessee. This will continue and additional surveys will be conducted immediately before any in-stream work to identify, capture and relocate impacted aquatic life. The most recent surveys were conducted in February and June, 2010.*

12.T.25 Appendix G

In describing mitigation efforts, the Wetlands Assessment notes that some mitigation efforts are expected to maximize the likelihood of successful mitigation of wetlands, but that others (60%) will not conform to the "important priority in defining appropriate wetlands mitigation" and are less likely to succeed. (You can lead a dace to water, but you can't make it thrive.) This concern should be addresses in detail in the wetlands proposal.

Response: *Final success of the wetland mitigation would be monitored for a minimum of five years by the respective agencies to assure this success, consistent with the requirements of the Aquatic Resources Alteration Permit. The intent of the text in the Wetlands Assessment was to describe issues associated with wetland mitigation, justify mitigation ratios chosen for this project, and obtain a Section 404 Permit from the USACE. The expansion of existing wetlands is expected to result in more rapid development and functional quality than de novo creation of new wetlands.*

12.T.26 Appendix G

The Wetlands Assessment identified 0.51 acres of disturbed wetlands to "comprise valuable wetland and water quality functions for the streams of the Bear Creek watershed." The proposal should describe those functions in detail and also describe how the mitigation measures will sufficiently replace these valuable functions.

Response: *Wetland functions and associated habitat values are discussed in detail in association with specific wetland locations in Appendix G and references.*

12.T.27 Appendix G

The Wetlands Assessment says that portions of Bear Creek "could" be modified, and in the next sentence, that 70 feet of downstream channel "would" be modified. It is not clear what decision-process would determine if the initial "could" be transformed to a "would."

Response: *The proposed stream modifications would be implemented per the approved state permit following the NEPA ROD and project initiation.*

12.T.28 Appendix G

The Wetlands Assessment should include a description of "electrofishing."

Response: *Electrofishing is the use of electricity to stun fish prior to capture. This description has been added to the Wetlands Assessment.*

12.T.29 Appendix G

The Wetlands Assessment makes reference, in its conclusion, to "site access and perimeter modification is also unavoidable in the western footprint of the UPF complex." The antecedent for this reference is not clear, nor is the implication of the statement.

Response: *The statement was intended to describe areas to the northwest of UPF which would be impacted. The maps provided in Appendix G are labeled to more clearly show this area to aid in the readers' understanding.*

13.0 GENERAL SUPPORTING COMMENTS

Commentors expressed support for the Capability-sized UPF Alternative, a UPF, continued operations at Y-12, modernization of Y-12; and/or the Complex Command Center and the HEUMF. The following summarizes the comments received:

- UPF improves safety of personnel and nuclear materials; UPF improves security and a major reduction in the cost of providing that material; UPF improves efficiency and reduces costs; UPF maintains the capability to dismantle components for long-term storage and to provide that material for nonproliferation uses in research reactors, civilian reactors, naval nuclear reactors; UPF maintains the capability to provide or remanufacture weapons components.
- The UPF will be an anchor in the modernization initiative currently underway at Y-12. It is the most effective plan to carry out the on-going and crucial national security missions performed at the Y-12 complex, as well as cleanup of WWII and Cold War legacies.
- The modernization of Y-12 will enable operations to continue in a cleaner, safer, and more secure way to fulfill its historically and nationally vital mission of maintaining peace through strength.
- With the projected savings that are documented for the Y-12 with the UPF, that this particular facility and those cost savings, will pay for itself two or three times over during the 50-year life cycle of the facility.
- The continued operation of Y-12 is critical to the national security of the United States.
- Alternative 5, No Net Production/Capability-sized UPF Alternative is the best option, as it will help in reducing the footprint of Y-12 facility.

- Y-12 is an ideal location for the UPF because of its geographical proximity to ORNL and subsequent easy technical collaboration; availability of experienced technical staff; technology already exists there; and it is vital to the economic health of the area.
- New UPF will allow consolidation of many diverse uranium processing and manufacturing operations.

Response: *NNSA notes these comments.*

14.0 GENERAL OPPOSITION COMMENTS

Commentors are opposed to the construction of any facility in Oak Ridge or anywhere else that could now or, through modifications, in the future produce new nuclear weapons. Reasons given for this opposition include the possibility of a nuclear arms race, concerns about cost, necessity, irresponsibility. Commentors are also opposed to production, proliferation, and use of nuclear weapons, construction of the UPF, the mission of Y-12, any nuclear project, nuclear armament by the U.S. Other commentors stated opposition to all five of the proposed alternatives, as they do not reflect the Administration's vision and plan for nuclear weapons and are not in line with the spirit of the Nuclear Nonproliferation Treaty. Another commentor opposed all options other than Alternative 2 (UPF Alternatives) as they do not provide for the protection and needs of special nuclear materials.

Response: *NNSA notes these comments.*

15.0 OUT OF SCOPE COMMENTS

A commentor submitted four multi-page publications written by other authors as his comment. These documents included "Breaking Faith With Nuclear Weapons" by Faithful Security; a petition from Nuclear Information and Resource Service; a fact sheet from the Union of Concerned Scientists, "New Nuclear Weapons: RRW;" and "Muslim-Christian Study and Action on the Nuclear Weapons Danger," prepared by The Muslim-Christian Initiative on the Nuclear Weapons Danger. Another commentor believes it would be a great benefit to build a similar down-sized facility at the Paducah Gaseous Diffusion Plant after completion of the Oak Ridge facility. A commentor stated that the SWEIS scope should be broadened to prohibit any new sub-critical tests under the guise of the Stockpile Stewardship program, include tracking of off-site contaminants and monitoring of upstream wells, and consider the lives of workers in terms of re-employment instead of maintaining nuclear weapons as a jobs program.

Response: *These issues are beyond the scope of the SWEIS. Additionally, sub-critical tests are not conducted at Y-12.*

15.A EVALUATE USE OF NUCLEAR WEAPONS

Commentors stated that the consequences of using nuclear weapons must be assessed.

Response: *Only the President can authorize the use of nuclear weapons. Accordingly, the use of nuclear weapons is not within the scope of this SWEIS.*

16.0 OTHER

16.A ROD SUGGESTIONS

Commentors stated that since the stockpile can be maintained in a safe, secure and reliable state by Alternative 5, or by a consolidated, down-sized 5 warhead/year production center in an upgraded existing facility, other factors may be determinative as NNSA makes its decision. Commentors stated that in today's economic climate, cost must be a consideration. The safety of workers and the public is also an important consideration. Reliability of the facilities is a further consideration. Ultimately, the changing mission of Y-12 should determine the direction the Y-12 SWEIS sets out for the future. Commentors stated that the ROD should consider the costs for all alternatives.

Response: *The commentor's suggestions regarding the factors that NNSA should consider in the decisionmaking process are noted. NNSA agrees that meeting national security requirements, costs, safety of workers and the public, and reliability are all relevant factors that may be considered. The ROD will explain all factors that NNSA considered in making any decision regarding the SWEIS.*

16.B URANIUM MINING

Commentor stated that the increase in uranium exploration and mining caused by the preferred alternative are an indirect cumulative impact of the facility that must be fully analyzed in the SWEIS.

Response: *None of the alternatives would require any increase in uranium exploration and mining. As such, there would be no impacts from these activities.*