



SOUTHWEST RESEARCH AND INFORMATION CENTER

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March 12, 2012

RE: Scoping comments on the Second Amended Notice of Intent to Modify the Scope of the Surplus Plutonium Disposition Supplemental Environmental Impact Statement and Conduct Additional Public Scoping. *77 Federal Register* 1920-1923, January 12, 2012.

Southwest Research and Information Center (SRIC) is a nonprofit organization established in 1971 to promote the health of people and communities, protect natural resources, ensure citizen participation, and secure environmental and social justice now and for future generations. SRIC has been actively involved with issues related to surplus plutonium management for more than two decades and to issues related to the Waste Isolation Pilot Plant (WIPP) for more than 35 years. Over the past several years, SRIC also has been involved with various activities related to Los Alamos National Lab (LANL). SRIC supports the goals of safely storing surplus plutonium, making weapons-grade plutonium unavailable for future weapons use, and safely disposing of plutonium waste. However, the existing the Department of Energy (DOE) National Nuclear Security Administration (NNSA) program is not achieving, and will not achieve, those goals.

The following comments are in addition to those made orally by Don Hancock at the August 26, 2010, Santa Fe scoping meeting and the written scoping comments submitted on September 17, 2010. Those comments also must be fully considered and addressed. Of course, the DOE NNSA should fully consider and address all comments received regarding both Notices of Intent (NOIs).

Much additional NEPA analysis is required before the draft EIS (DEIS) can be issued. SRIC's position, stated in the September 17, 2010 comments, that further National Environmental Policy Act (NEPA) analysis is required for the Surplus Plutonium Program is confirmed by the Second NOI. The *Storage and Disposition of Weapons-Usable Fissile Materials Programmatic EIS (Storage and Disposition PEIS)* did not analyze geologic disposal at WIPP. Indeed, that PEIS specifically excluded WIPP along with 26 other disposition options. PEIS at 2-13 and 2-15. Neither did the PEIS consider LANL as a pit disassembly or conversion location, although it did consider Hanford, Idaho National Lab, Pantex, or Savannah River Site (SRS) as alternative locations. The PEIS also did not analyze long-term storage for more than 50 years at SRS or reactor site(s), which now appears necessary. Thus, at least three important elements of the current program were not considered in the PEIS, leading to the unavoidable conclusion that the program has dramatically changed, and a new PEIS is required before the DEIS can proceed.

Furthermore, the PEIS Record of Decision (ROD) plutonium disposition program has failed. For the reactor disposition alternatives, the PEIS ROD stated:

“The time to attain production scale operation in existing LWRs and CANDU reactors could be about 8–12 years, depending on the need for and source of test assemblies that might be required. The time to complete the disposition mission is a function of the number of reactors committed to the mission, among other factors. For the variants considered, the time to complete varies from about 24 to 31 years.” 62 *Federal Register* 3022, January 21, 1997.

It is now more than 15 years since the PEIS ROD was issued, no successful lead assembly tests have occurred, and no production scale reactor operation has occurred at all, let alone in the designated time period. In fact, there are no production scale LWRs that have agreed to use the Mixed Oxide (MOX) fuel, and no such MOX fuel has been produced. Nor will the production of MOX fuel occur in the next few years, if ever. The completion of the disposition mission in reactors by 2028 is clearly not feasible. Thus, the reactor disposition mission has failed, and a new PEIS is needed to discuss the reasonable alternatives.

In the April 19, 2002 Amended ROD on Surplus Plutonium Disposition that changed previous decisions, DOE announced: “Cancellation of the immobilization portion of the disposition strategies announced in those RODs due to budgetary constraints.” 67 *Federal Register* 19432. No comprehensive analysis has been provided that adequately supported that decision. Since that Amended ROD, there has effectively been no immobilization disposition program. Thus, the disposition immobilization program of the PEIS ROD also has failed, and a new PEIS is needed to discuss the reasonable alternatives.

Under its regulations, “When required to support a DOE programmatic decision (40 CFR 1508.18(b)(3)), DOE shall prepare a programmatic EIS or EA (40 CFR 1502.4). DOE may also prepare a programmatic EIS or EA at any time to further the purposes of NEPA.” 10 CFR § 1021.330(a). DOE has provided no NEPA or legal basis that describes and analyzes why a new PEIS should not be completed. Once a new PEIS is completed, additional NEPA analyses also may be necessary for the specific surplus plutonium programs discussed in the NOIs.

The Preferred Alternative should be immobilization.

Like many other groups, SRIC has long supported immobilization of surplus plutonium and continues to believe that option should be implemented. Thus, in the new NEPA analysis, SRIC urges that the preferred alternative be some form(s) of immobilization for all of the surplus plutonium. The NEPA analysis must discuss how all of surplus pit plutonium could be immobilized and stored at SRS in addition to the detailed analysis of how the 6 metric tons of non-pit plutonium could be immobilized. The NEPA analysis must also discuss how the Mixed Oxide Fuel Fabrication Facility (MFFF) could be modified to be part of the immobilization program, as well as discussing how it could be modified for pit disassembly and conversion activities, if construction is completed and it is to operate.

Given the need for a new PEIS for surplus plutonium disposition and the need for an immobilization program, SRIC strongly objects to the statements in the Notice of Intent (NOIs)

that: (1) the “Supplemental EIS will not reconsider decisions already made to disposition surplus plutonium.” *75 Federal Register* 41851, July 19, 2010; and, (2) “The SPD Supplemental EIS will not reconsider decisions already made to disposition surplus plutonium, other than the decision to construct and operate the PDCF.” *77 Federal Register* 1922, January 12, 2012. At least one immobilization facility must be considered a reasonable alternative and examined in detail. In addition, how the surplus plutonium could be vitrified in the Defense Waste Processing Facility must be considered a reasonable alternative and examined in detail. Such an analysis must also compare other immobilization methods with using H-Canyon for costs, environmental impacts, and proliferation risks.

The MOX preferred alternative should be cancelled, or its status revised and updated.
Revisiting the MOX preferred alternative is required for policy, NEPA, and legal reasons. First, if “budgetary constraints” caused the cancellation of the immobilization program in 2002, the current more extreme budgetary constraints and the much greater costs of MOX should result in canceling the MFFF. Any NEPA analysis must fully discuss why the cancellation should not occur, if DOE is proceeding with that facility. Second, the second NOI discusses LANL activities solely as supporting the MFFF. A reasonable alternative is to not use LANL for the MOX programs (as has been the long-standing policy). If not using LANL would mean that MFFF would not operate or would have less feedstock than its proposed 34 metric-ton capacity, then not proceeding with the MFFF is a reasonable alternative. Third, no U.S. LWR (or other) reactor has agreed to use MOX fuel, so it is incumbent upon DOE to develop alternatives to address the fact that much or all of the proposed 34 metric tons of surplus plutonium designated for the MFFF would not be used. Fourth, the more than \$4 billion already spent on MFFF and PDCF does not mean that either or both facilities will operate as previously designed. Another reasonable alternative would be to modify the MFFF so that it could carry out the disassembly and/or conversion activities, instead of using LANL. Fifth, MOX used in commercial reactors is not “dispositioned.” After being in the reactor, the MOX fuel will be spent nuclear fuel and either has to be stored for decades at the reactor site or some other storage site, since there is no disposal facility being developed under the Nuclear Waste Policy Act (NWPA). The NEPA analysis must also include the environmental impacts of long-term storage of the irradiated MOX fuel at any reactor that uses such fuel and disposal alternatives, since there is currently no geologic disposal site being developed under the Nuclear Waste Policy Act (NWPA). Even if there were a geologic repository being developed under the NWPA, it is not likely to have the capacity for MOX reactor spent fuel because the current legal capacity of 70,000 metric tons could be fully used by existing commercial reactor spent nuclear fuel and defense high-level waste. The Nuclear Waste Technical Review Board also has pointed out that MOX fuel creates numerous storage and security problems that are greater than for low-enriched uranium fuel. The DOE analysis must fully discuss and respond to those issues identified in the Board’s December 30, 2011 letter to Peter Lyons of DOE.
(<http://www.nwtrb.gov/corr/bjg162.pdf>).

DOE NNSA should recognize that the surplus plutonium cannot be made into an “asset” by being converted to MOX. Rather, that plutonium should be considered and handled carefully as a waste, immobilized and stored at SRS. Spending billions of dollars more to try to make the surplus plutonium usable as MOX only serves to increase the costs of managing the

plutonium, while also risking proliferation. The new NEPA analysis should discuss the alternative that the MFFF will fail or that there will not be sufficient commercial reactors to use the MOX fuel. The new NEPA analysis must discuss the alternatives in such circumstances.

The new NEPA analysis should describe in detail the environmental impacts and revised costs of the MFFF, use of MOX fuel in reactors, storage and disposal of all wastes from MOX reactors so that there is current analysis of the environmental impacts and costs of both the MOX and immobilization alternatives, as well as any other alternatives that are being considered.

SRIC opposes MOX, which is a proliferation risk, creates many public health and safety dangers, has enormous economic costs, and there are no U.S. reactors capable and willing of using it. Regardless of policy preferences, a new PEIS fully discussing and analyzing surplus plutonium disposition options is required as a matter of law.

WIPP as an disposition disposal alternative must be fully analyzed and may not be possible.

SRIC has seen no technical analysis – and the NOIs do not provide such analysis nor reference one – that justifies WIPP as a reasonable alternative. The two previous EISs (*Storage and Disposition PEIS and Surplus Plutonium Disposition EIS (SPD EIS)*) have not considered WIPP as a disposal option for MOX or immobilization or non-pit plutonium. Thus, unless there is such a technical analysis, WIPP should be eliminated as a reasonable alternative. If there is such a technical analysis, it should be released to the public now (or when it is completed) and not delayed until the new NEPA analysis is issued.

If WIPP is considered in the new NEPA analysis, issues that must be discussed in detail include:

1. Would the plutonium fit into WIPP? WIPP is currently planned for more than 7 metric tons of plutonium. The new PEIS or DEIS must discuss how an additional 6 metric tons could be disposed at WIPP. Would WIPP's legal capacity of 6.2 million cubic feet of waste have to be increased? Given the amount of space in the WIPP underground that has been foregone because not all available capacity for contact-handled waste was used in panels 1, 3, 4, and 5, is there actual capacity for the additional waste using the existing panels? To accommodate the "WIPP-bound" waste in the existing (2011) WIPP Inventory and the additional surplus plutonium, would additional panels or other facility changes be required? What would be the waste form(s) for the SRS plutonium? Would existing requirements for waste characterization have to be changed? Would the waste comply with all provisions of the renewed WIPP Hazardous Waste Act permit, which was approved on November 30, 2010? How would such additional plutonium affect WIPP's operations? What would be the schedule for bringing the waste to WIPP? How much would it cost to process and ship the waste? What are the transportation impacts, including to populations along the transportation route? What have already been the transportation impacts of bringing the plutonium from Hanford, WA; Livermore, CA; and Los Alamos, NM to SRS? What are the cumulative impacts of additional transportation of the plutonium from SRS to WIPP? What new security procedures are required for surplus plutonium at WIPP and during transportation?

2. What are existing forms of the non-pit plutonium? There must be a comprehensive analysis of the existing plutonium and what processing or blending would be required to meet the existing

WIPP Waste Acceptance Criteria (WAC). The analysis must include a detailed discussion of “star dust” being used as part of the blending process for the non-pit plutonium. The attributes of “star dust” must be described in detail, including its impacts on WIPP WAC, since that substance is not mentioned in the WIPP permit or other documents. Whether any modification is required to the permit for such waste must be fully analyzed. The new NEPA analysis also must include the full range of environmental impacts, and costs and schedules of such processing, transportation, and disposal of non-pit plutonium at WIPP.

3. What changes in existing laws would be required? Those laws include the WIPP Land Withdrawal Act and repeated congressional appropriation act requirements prohibiting funds for disposal at WIPP “of plutonium in excess of 20 percent by weight for the aggregate of any material category on the date of enactment of this Act, or is generated after such date.”

4. What additional NEPA analysis is necessary to support a decision to bring additional plutonium waste to WIPP, in addition to the new PEIS discussed above? The need for a supplemental or new Waste Management PEIS and the need for a supplemental or new WIPP EIS must be examined in detail, since those existing documents do not provide analysis of the non-pit surplus plutonium coming to WIPP.

5. What are the impacts of the surplus plutonium on the WIPP performance assessment? What changes would be required in the Compliance Recertification Application that is to be submitted to EPA in 2014?

6. What will be the means of international inspections at WIPP? The PEIS ROD stated:

“In addition, all disposition facilities will be designed or modified, as needed, to accommodate international inspection requirements consistent with the President’s Nonproliferation and Export Control Policy.” 62 *Federal Register* 3028.

The NEPA must fully discuss the international inspection requirements and the specific changes that would be made in WIPP practices to accommodate international inspections.

In addition, the analysis must fully address the concerns raised by the *Global Fissile Materials Report 2011* (<http://fissilematerials.org/library/gfmr11.pdf>):

“U.S. and Russian disposition of plutonium in MOX is to be monitored by the IAEA but the several tons of plutonium in plutonium-contaminated waste that is being disposed of in the WIPP facility is not. This will create a large uncertainty for any future international attempt to verify U.S. plutonium production and disposition.” at 18.

7. How does the waste coming to WIPP meet the Spent Fuel Standard?

The PEIS ROD emphasized that all surplus plutonium would “meet the Spent Fuel Standard.” 62 *Federal Register* 3016. DOE’s analysis must discuss in detail how each container of waste proposed for WIPP meets that Standard as it has been used since 1994 and what changes, if any, would be made so that each container would be deemed to meet the Standard. Of course, in addition to waste proposed for WIPP, the DOE analysis must discuss how each alternative would meet the Spent Fuel Standard and what changes, if any, would be made so that the alternative is deemed to meet the Standard.

LANL should not be considered a reasonable alternative location.

As for LANL, DOE must fully discuss whether the new alternatives to replace the PDCF are necessary for the MFFF or for immobilization. The new NEPA analysis must fully discuss the specific amounts and forms of the plutonium that would be handled at LANL. The purpose(s) and capacity of each of the new alternative facility(ies) must be fully described as relates to immobilization. DOE must fully discuss the current missions of LANL and how assigning it a new mission – pit disassembly and conversion – would its other existing missions. The analysis must include a detailed discussion of whether that new mission is incompatible with the requirements for LANL cleanup. The analysis must discuss the amounts of new waste and details of the new waste streams that require new facilities from the surplus plutonium activities. The analysis must include a detailed discussion of environmental justice, including whether the nearby pueblos have affirmatively supported that new mission. If the pueblos have not given such support, as SRIC believes is the reality, the analysis must include the basis for considering such an alternative. Further, the analysis must fully discuss financial constraints and whether such a new mission and new wastes could further exacerbate the existing financial shortfalls that are preventing compliance with the Consent Order of 2005. The analysis must fully discuss how the new mission would receive adequate management attention without further diminishing management attention on cleanup. DOE must also fully analyze how the proposed new activities are consistent with the LANL Site-Wide EIS. DOE/EIS-0380. The analysis must discuss in detail the seismic risks at LANL, including at PF-4, and the impacts of the maximum possible earthquake on the facility, including potential releases to the environment and impacts on workers and public health. The analysis must fully discuss the potential for criticality accidents, as well as the storage requirements of surplus plutonium awaiting processing and plutonium that has been processed. The history of surplus plutonium shipments to and from LANL must be fully discussed as part of the basis for the impacts of transportation analysis. The history of worker doses from routine operations and from accidents must be fully discussed as part of the basis for the worker impact analysis.

The impacts of long-term storage of the surplus plutonium at SRS must be fully analyzed.

The *Technical Summary Report for Long-term Storage of Weapons-Usable Fissile Materials*, July 17, 1996, part of the Storage and Disposition PEIS documentation, discussed the “at least up to 50 years” storage system for plutonium and Highly Enriched Uranium (HEU). The new NEPA analysis should update that Report and re-analyze the storage impacts and costs at the K Area Complex at SRS, including the time period for which that area can “ensure the continued safe storage,” as your fact sheet states. The analysis must include the impacts of storing the plutonium in its current forms and in the various forms considered possible.

Public hearings on the DEIS or new PEIS must be held in both Albuquerque and Santa Fe.
SRIC appreciates that a scoping meeting was held in the Santa Fe/Albuquerque area on August 26, 2010 and a scoping meeting was held in Pojoaque on February 2, 2012. However, for a DEIS or a new PEIS there would be substantial public interest, so public hearings must be scheduled in Albuquerque and in the Santa Fe area if WIPP and/or LANL are being considered as alternative locations.

Thank you for your careful consideration of, and response to, these and all other scoping comments.

Yours truly,

A handwritten signature in black ink, appearing to read "Don Hancock".

Don Hancock