DEPARTMENT OF ENERGY

Storage and Disposition of Weapons-Usable Fissile Materials

AGENCY: Department of Energy.

ACTION: Notice of an amended Record of Decision.

SUMMARY: The U.S. Department of Energy (DOE) prepared a final programmatic environmental impact statement, Storage and Disposition of Weapons-Usable Fissile Materials (Storage and Disposition PEIS) (DOE/EIS-0229, December 1996) in accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality NEPA implementing regulations, and DOE implementing procedures. The Storage and Disposition PEIS, among other things, assesses the potential environmental impacts of alternatives and locations for storing weapons-usable fissile materials (plutonium and highly enriched uranium).

On January 14, 1997, DOE issued a Record of Decision (Storage and Disposition ROD), 62 FR 3014, (January 21, 1997), selecting weapons-usable fissile materials storage and surplus plutonium disposition strategies. For plutonium storage, DOE decided to consolidate part of its weapons-usable plutonium storage by upgrading and expanding existing and planned facilities at the Pantex Plant (Pantex) near Amarillo, Texas and the Savannah River Site (SRS) near Aiken, South Carolina. For plutonium currently stored at the Hanford Site (Hanford) near Richland, Washington, and other DOE sites, DOE decided that surplus weapons-usable plutonium would remain at these sites until disposition (or move to lag storage at a disposition facility). The weapons-usable plutonium stored at the Rocky Flats Environmental Technology Site (RFETS), near Golden, Colorado, would be moved to Pantex and the SRS. However, the plutonium destined for the SRS, i.e., non-pit, weapons-usable surplus plutonium, would be moved only if: (1) the plutonium had been stabilized under corrective actions in response to the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94–1 and packaged to meet the DOE Storage Standard 3013–96, Criteria for Safe Storage of Plutonium Metals and Oxides, (2) the construction and expansion of the Actinide Packaging and Storage Facility (APSF) at the SRS had been completed, and (3) the SRS had been selected in the upcoming Record of Decision for the Surplus Plutonium Disposition Environmental Impact Statement as the immobilization disposition site for surplus weapons-usable plutonium.

In order to support the early closure of the RFETS and the early deactivation of plutonium storage facilities at the Hanford site, DOE is modifying, contingent upon the satisfaction of certain conditions, some of the decisions made in its Storage and Disposition ROD associated with surplus plutonium storage pending disposition. Namely, DOE will take steps that allow: (1) the accelerated shipment of all non-pit surplus weapons-usable plutonium from the RFETS (about 7 metric tons) to the SRS beginning in about 2000, in advance of completion of the APSF in 2001, and (2) the relocation of all Hanford surplus weapons-usable plutonium (about 4.6 metric tons) to the SRS, between about 2002 and 2005, pending disposition. However, consistent with the Storage and Disposition ROD, DOE will only implement the movement of RFETS and Hanford non-pit, surplus weapons-usable plutonium inventories to the SRS if the SRS is selected as the immobilization disposition site. DOE is preparing the Surplus Plutonium Disposition Environmental Impact Statement (SPD EIS), draft issued July 1998, as part of the decision making process for determining an immobilization site.

To accommodate the storage of Hanford surplus weapons-usable plutonium, DOE will expand the APSF as planned in the Storage and Disposition ROD. In addition, to accommodate the early receipt and storage of the RFETS surplus plutonium, the Department will prepare additional suitable storage space in Building 105–K (i.e., K–Reactor) in the K–Area at the SRS. Portions of Building 105–K will be modified to provide safe and secure plutonium storage. Safeguards and security features will be upgraded, criticality monitoring devices will be installed, structural features will be inspected and repaired, roof vents will be added, and doors will be modified. Several areas in the facility will be decontaminated and excess equipment will be removed to provide additional floor space.

Modifications will also include dismantling and removing unused process equipment in four building areas: Stack Area, Crane Maintenance Area, Crane Wash Area, and Process Room.

Security systems in the four building areas will be reactivated and upgraded to support using them for plutonium storage. Existing systems including the K–Area security perimeter, security control system, building water/power ventilation support systems will be used. Building modifications will provide for truck loading and unloading, material conformation, shipping accountability measurements, and storage. The Department will also declassify (process the metal to produce unclassified “buttons”) some of the RFETS plutonium materials using SRS’s FB-Line (in the F–Area) and after declassification, package this material in the APSF to meet the DOE Storage Standard 3013–96, Criteria for Safe Storage of Plutonium Metals and Oxides.

All plutonium materials shipped to SRS will be stable and, except for classified metal and/or parts, will be packaged to meet the requirements of the DOE Standard 3013–96, Criteria for Safe Storage of Plutonium Metals and Oxides, before shipment. All shipments of plutonium to SRS will be by Safe Secure Transport (SST) in accordance with applicable DOE, U.S. Department of Transportation and U.S. Nuclear Regulatory Commission requirements and regulations. Some of the RFETS plutonium materials shipped and shipped will be less than 50% plutonium by weight; as a result, there will be approximately 3% more total weight of material and a corresponding increase in the number of shipments than considered in the Storage and Disposition PEIS, although the total amount of plutonium in the material will remain about the same.

Under the previous ROD, a maximum of 10 metric tons of weapons-usable plutonium, including plutonium from RFETS and existing onsite plutonium, would be...
stored at SRS in the APSF, pending disposition, provided that SRS is selected as the immobilization site following completion of the Surplus Plutonium Disposition EIS. Transfer of plutonium from RFETS to SRS would begin when the APSF is completed in 2001.

With this amended ROD, a total of approximately 11.6 metric tons of surplus weapons-usable plutonium from Hanford and RFETS (in addition to existing onsite SRS surplus plutonium, for a total of approximately 14 metric tons of surplus plutonium) could be stored at SRS in the APSF and Building 105-K, pending disposition, provided that SRS is selected as the immobilization site. Transfer of plutonium from RFETS to SRS would begin when the modifications to Building 105-K are completed, i.e., in about 2000; shipments of plutonium from Hanford to SRS would begin in about 2002.

This amended ROD only alters DOE's previous decision (Storage and Disposition ROD) for the storage of non-pit, surplus weapons-usable plutonium currently located at the RFETS and Hanford sites. No changes are being made to other storage decisions or any decisions associated with surplus fissile material dispositions.

In accordance with 10 CFR 1021.314, DOE has prepared a Supplement Analysis to determine if these changes require a supplement to the Storage and Disposition PEIS under the Council on Environmental Quality Regulations at 40 CFR 1502.9(c). The Supplement Analysis shows that the new proposed action does not result in a substantial change to environmental concerns evaluated in the Storage and Disposition PEIS. Also, the Supplement Analysis shows that the proposed action does not present significant new circumstances or information relevant to the environmental concerns evaluated in the Storage and Disposition PEIS. Therefore, based on the Supplement Analysis, DOE has determined that a supplement to the Storage and Disposition PEIS is not required, and DOE has decided not to prepare such a supplement.

FURTHER INFORMATION CONTACT: For further information on the long-term storage or the disposition of weapons-usable fissile materials, or to receive a copy of the final Storage and Disposition PEIS, the Storage and Disposition EIS ROD or the Supplement Analysis, contact: G. Bert Stevenson, NEPA Compliance Officer, Office of Fissile Materials Disposition (MD-4), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, D.C. 20585, (202) 586-5368.

For further information on the DOE NEPA process, contact: Carol M. Borgstrom, Director, Office of NEPA Policy and Assistance (EH-42), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, D.C. 20585, (202) 586-4600, or leave a message at (800) 472-2756.

SUPPLEMENTARY INFORMATION:

I. Background

A. Current Storage Program and Original Decision for Surplus Weapons-Usable Plutonium

DOE is currently phasing out the storage of all weapons-usable plutonium at RFETS. The phaseout involves shipping all RFETS pits to Pantex, and shipping all RFETS surplus non-pit, weapons-usable plutonium to the SRS (subject to certain conditions) starting in about 2001. As decided in the January 1997 Storage and Disposition PEIS ROD, the stabilized non-pit, surplus weapons-usable plutonium would not be moved unless and until: expansion of the APSF at the SRS had been completed; the RFETS material had been stabilized and packaged to meet the Criteria for Safe Storage of Plutonium Metals and Oxides for long-term storage under corrective actions in response to the Defense Nuclear Facilities Safety Board Recommendation 94-1; and DOE had decided to immobilize plutonium at the SRS. The Department also decided to continue the current storage of surplus plutonium at Hanford, the Idaho National Engineering and Environmental Laboratory (INEEL), and Los Alamos National Laboratory (LANL) pending disposition (or movement to lag storage); and to pursue a strategy for plutonium disposition that would immobilize surplus weapons-usable plutonium in glass or ceramic forms and would allow the burning of some of the surplus weapons-usable plutonium in nuclear reactors.

B. Need to Change Storage Program

Recently, DOE has estimated that accelerating the closure of RFETS from 2010 to 2006 could save as much as $1.3 billion. Integral to achieving an accelerated closure of the site would be removal of the non-pit, surplus weapons-usable plutonium to SRS two years earlier than the current plan. Removal of the surplus plutonium at RFETS is only one of several steps to realize the savings. Other steps are proposed or ongoing pursuant to separate NEPA review. DOE also expects that the transfer of non-pit, surplus weapons-usable plutonium from Hanford to Savannah River could save as much as $150 million in upgrade and operating costs for plutonium storage facilities at the Hanford Site. As with the RFETS plutonium, the transfer would not be accomplished unless DOE decided to locate the plutonium immobilization facility at the Savannah River Site. The implementation cost for the proposed action is estimated to be approximately $93 million.

Closing RFETS by 2006 would, among other things, require the removal of non-pit, surplus weapons-usable plutonium metal and oxide from RFETS by 2002. In order to remove all the non-pit, surplus weapons-usable plutonium from RFETS by 2002, DOE would have to begin transferring the material to the SRS by January 2000, prior to completing the construction of the APSF.

DOE has also reevaluated plutonium storage operations at Hanford and determined that transferring all (about 4.6 metric tons) non-pit, surplus weapons-usable plutonium from that site for storage could save DOE millions of dollars. DOE has determined that transfer all (about 4.6 metric tons) to SRS by January 2000, prior to completing the construction of the APSF. The plutonium would not be moved to SRS unless the Department decides to disposition (immobilize) the non-pit,
surplus weapons-useable plutonium at SRS, after completion of the final Surplus Plutonium Disposition Environmental Impact Statement. In addition, the plutonium would not be shipped until it were stabilized and packaged to meet DOE Standard 3013-96, Criteria for Safe Storage of Plutonium Metals and Oxides in response to Defense Nuclear Facilities Safety Board Recommendation 94–1. This proposed action is consistent with DOE’s objective, as explained in the ROD for the Storage and Disposition PEIS, to reduce over time the number of locations where plutonium is stored in the DOE complex.

Starting in about January 2000, all non-pit, surplus weapons-useable plutonium (except for classified plutonium) would be shipped to Building 105-K. At Building 105-K, the shipping containers would be unloaded using a battery powered fork-lift truck. Material control and accountability measurements would be made at Building 105-K. The shipping containers would then be loaded onto metal pallets and transferred to a storage location in the building. DOE would not open any of the shipping containers in Building 105-K. While in storage, the containers would be inspected on a regular basis to assure external container integrity.

Portions of Building 105-K will be modified to facilitate plutonium storage. Safeguards and security features will be upgraded, criticality monitoring devices will be installed, structural features will be inspected and repaired, and roof vents will be added and doors will be modified. Several areas in the facility will be decontaminated and excess equipment will be removed to provide additional floor space. Modifications will include dismantling and removing unused process equipment in four building areas: Stack Area, Crane Maintenance Area, Crane Wash Area, and Process Room. These areas total approximately 30,000 square feet, are within the security areas that existed for reactor operations, and are adjacent to a currently active highly enriched uranium storage area. Security systems in the four building areas will be reactivated and upgraded to support using them for plutonium storage. Existing systems including the K-Area security perimeter, security control system and building water/power ventilation support systems will be used. Building modifications will provide for truck loading and unloading, material conformation, shipping accountability measurements, and storage.

Some of the RFETS plutonium is in a classified form, which would restrict the International Atomic Energy Agency (IAEA) from access to the material. DOE intends to make the APSF vault, and potentially Building 105-K, available for IAEA inspection. As a result, the RFETS plutonium needs to be declassified. To accomplish this objective, DOE would transfer the classified RFETS plutonium to F-Area for processing (declassifying) in the FB-Line facility at SRS. In the FB-Line facility, the plutonium would be melted using existing facilities and equipment that are part of the plutonium metal production process for which the FB-Line facility was designed. The declassification work would not be done on a continuous basis, but rather whenever processing capabilities were available. The RFETS plutonium would be fashioned into metal “buttons” that are the traditional FB-Line product. After the “buttons” are fabricated, the material would be transferred to the APSF and packaged to meet the requirements of DOE’s plutonium storage standard. Then, the material would be placed in type B shipping containers and transported to Building 105-K for storage.

Alternatively, the material could remain in the APSF vault, if space is available to allow for operational flexibility. Some of the RFETS plutonium materials would be less than 50% plutonium by weight and would involve approximately 3% more total weight of material and a corresponding increase in the number of shipments than considered in the S&D PEIS.

Beginning in about 2002, SRS would begin to receive from Hanford stabilized plutonium packaged to meet DOE’s long-term standard for placement in the APSF. Once APSF is operating, DOE could transfer a portion of the RFETS material from Building 105-K to the APSF in order to provide for operational flexibility. The plutonium from RFETS and Hanford would remain in storage at the APSF and Building 105-K pending disposition along with existing SRS surplus plutonium.

The plutonium would be transferred in type B shipping containers by truck using methods and routes described in the Storage and Disposition PEIS (i.e., the Department of Energy’s Safe Secure Transport System).

If DOE decides to pursue the No Action alternative for the disposition of surplus plutonium in the SPD EIS Record of Decision, the SRS, RFETS, and Hanford materials would remain in storage at their current sites in accordance with the No Action alternative. If the DOE decides to immobilize surplus plutonium at Hanford, the SRS and RFETS materials would be shipped to Hanford in accordance with the decisions reached in the SPD EIS Record of Decision.

II. NEPA Process for Amending ROD
A. Supplement Analysis
Pursuant to DOE regulations in 10 CFR 1021.314, DOE has prepared a Supplement Analysis, Supplement Analysis for Storing Plutonium in the Actinide Packaging and Storage Facility and Building 105-K at the Savannah River Site (July 1998), to help determine whether a supplement to the Storage and Disposition PEIS is required under the Council on Environmental Quality Regulations, 40 CFR 1502.9(c). The Supplement Analysis compares the potential impacts of the new proposed action to the impacts discussed for the plutonium storage alternatives in the Storage and Disposition PEIS. The Supplement Analysis shows that the new proposed action does not make a substantial change to environmental concerns evaluated in the Storage and Disposition PEIS. Furthermore, the Supplement Analysis shows that there are no new significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact.

B. Comparison of Potential Impacts
The facilities involved (i.e., Building 105-K and the APSF) are or will be located in existing industrial areas at the SRS.

• Land Resources, Site Infrastructure, Geology and Soils, Biology Resources and Cultural and Paleontological Resources. There are no aquatic habitats or wetlands in these areas nor are there any threatened or endangered species. None of the affected facilities have been nominated for inclusion in the National Register of Historic Places, and there are no plans for such nominations.

Based on evaluations in the Storage and Disposition PEIS and information
incorporated in the Supplement Analysis from the Final Environmental Impact Statements on the Interim Management of Nuclear Materials (DOE/EIS—0220, October, 1995)(IMNMS EIS) there would be little or no impact to land resources, site infrastructure, geology and soils, biology resources and cultural and Paleontological resources by the construction, operation and expansion of the APSF. This is equally true for Building 105-K since all storage operations would occur within the existing Building 105-K structure.

- It is expected that declassification of the RFETS material would require 100 Mw hrs/yr of electricity. This work would not require modification to the FB-Line’s electrical system and is well within the capacity of the facility and the site.

- Packaging and Transportation. The transportation routes to the SRS would be the same as those assumed in the Storage and Disposition PEIS (i.e., overland truck routes on interstate highways and state roads).

Transportation operations would not change. DOE estimates that the total inter-site transportation impact associated with transferring plutonium from the RFETS and Hanford to the SRS would be 0.07 potential latent cancer fatalities, which would be approximately the same as for the Preferred Alternative in the Storage and Disposition PEIS. DOE estimates that the intra-site transportation activities could add an additional 0.01 latent cancer fatalities to the worker population.

- Air Quality and Noise. Storage. Accomplishing the proposed action, including the modifications to Building 105-K, would add no significant air quality and noise impacts above the existing site baseline. Therefore, air quality and noise impacts from the plutonium storage aspects of the proposed action would be essentially the same as the air quality and noise impacts from the Preferred Alternative of the Storage and Disposition PEIS (i.e., the Upgrade With RFETS Non-Pit Material alternative).

- Declassification/Repackaging: DOE estimates there would be a small increase in non-radiological air emissions for declassification operations (i.e., metal conversion operations in FB-Line) above the non-radiological air emissions estimated for the No Action and the Upgrade alternatives in the Storage and Disposition PEIS. Non-radiological air emissions would be well within State and Federal regulatory limits. Repackaging activities are not expected to involve the use of chemicals, beyond a very small amount of decontamination liquid.

- Water Resources. Storage: The maximum impact to water resources, above existing site baseline usage and discharges, expected from plutonium storage aspects of DOE’s proposed action would be about the same as presented in the Upgrade With RFETS and LANL Material alternative of the Storage and Disposition PEIS, i.e., there would be a 0.01% increase in water use and a 0.1% increase in waste water discharges. The water impacts from the proposed action would have a negligible effect on site water or waste treatment capacity.

- The impacts of radiological liquid discharges from Building 105-K are included as part of the No Action alternative in the Storage and Disposition PEIS. DOE expects there would be no significant increase above the No Action alternative discharge levels since, during normal operations, water is not in contact with plutonium storage containers.

- Water Resources. Repackaging: The impacts of radiological liquid discharges from Building 105-K are included as part of the No Action alternative in the Storage and Disposition PEIS. DOE estimates declassification operations would cause a small and insignificant increase in water usage beyond the water requirement estimated for other site operations. Repackaging activities in the APSF are expected to have essentially no impact to water resources beyond the site base line operations presented in the No Action alternative of the Storage and Disposition PEIS. Repackaging operations would not significantly increase the use of water resources beyond that required to operate the industrial systems associated with the APSF, e.g., chillers for air conditioning, sanitary sewer, potable water, etc., because additional water is not used in repackaging operations.

- Socioeconomics. Storage: The socioeconomic impact of operating Building 105-K for plutonium storage would be essentially the same as the impact described for the Preferred Alternative of the Storage and Disposition PEIS. The socioeconomic impact of modifying Building 105-K and operating both APSF and Building 105-K would be well within the impacts described for the Consolidation alternative of the Storage and Disposition PEIS.

- The socioeconomic impacts at RFETS and Hanford of moving surplus plutonium to SRS were analyzed in the Storage and Disposition PEIS. The analysis concluded that this action would phase out plutonium storage at RFETS and Hanford. Approximately 200 direct job losses at Hanford, in addition to the 2000 at RFETS, would result. Compared to the total employment in those areas, the loss of these jobs and the impacts to the regional economies would not be significant. The proposed action would not change the magnitude of these impacts at RFETS, but cause them to occur sooner.

- Public and Occupational Health and Safety (normal operations). Storage: Public and Non-Involved Workers: Plutonium storage operations in Building 105-K would not result in any additional air or water radiological impacts (beyond those currently associated with other operations in Building 105-K) because no shipping containers or storage containers would be opened in Building 105-K. Since air and water emissions create impacts that affect the non-involved workers and the public, there would be no significant additional radiological impact to the public or non-involved workers from normal operations in Building 105-K. Therefore, the impact from the proposed action to the public and non-involved workers would be essentially the same as the impact from the Preferred Alternative in the Storage and Disposition PEIS.

- Involved Workers: DOE estimated that the potential health impact from 50 years of APSF storage to individual involved workers for the Preferred Alternative in the Storage and Disposition PEIS was a latent cancer fatality risk of 5x10^-3 and that 1.5x10^-1 latent cancer fatalities could occur in the involved worker population. DOE estimates that the potential health impacts from 10 years of operating Building 105-K to store plutonium could result in a risk of latent cancer

1 The impact is the sum of the impact of transportation of RFETS non-pit plutonium under the Preferred Alternative in the Storage and Disposition PEIS and the incremental impact for shipping the Hanford plutonium.

2 In inter-site transportation analyses, non-radiological accidents would be the greatest contributor to fatalities. In the case of intra-site transportation, impacts would be due primarily to radiation doses received from normal transportation operations. Effects from intra-site accidents, if any, would likely be negligible. Historically, certified containers maintain their integrity in accident situations.

3 Table 4.2.6.4-1 of the Storage and Disposition PEIS.

4 Table 4.2.6.4-1 of the Storage and Disposition PEIS.
fatalities for the average Building 105-K involved worker of 1.5x10⁻¹¹ and 2.6x10⁻¹² latent cancer fatalities in the Building 105-K involved worker population. Since the Storage and Disposition PEIS bases health impacts on 50 years of storage, for comparison purposes, the impacts from 50 years of plutonium storage in the APSF are added to the impacts from 10 years of plutonium storage in Building 105-K. Using this approach, the health impacts from storing plutonium in the APSF and in Building 105-K would be 0.18 latent cancer fatalities in the involved worker population of both facilities.

Health impacts to involved workers for the plutonium storage aspects of the proposed action in this Supplement Analysis (0.18 latent cancer fatalities) would be essentially the same as the health impact estimated in the Preferred Alternative of the Storage and Disposition PEIS (0.15 latent cancer fatalities).

Declassification/Repackaging Radiological Impacts. Public, Non-Involved Workers, Involved Workers: For declassification operations the potential health effect from the postulated radiation dose to the maximally exposed member of the public at the Site boundary would be 1.7x10^-6 latent cancer fatalities. The potential health effect from the postulated radiation dose to the population surrounding the SRS and to workers would be 0.068 latent cancer fatalities and 0.078 latent cancer fatalities, respectively, above those predicted in the Preferred Alternative in the Storage and Disposition PEIS.

For repackaging operations (i.e., repackaging all plutonium from the RFETS in the APSF for 2 years) the potential health effects from the postulated radiation dose to the maximally exposed member of the public at the site boundary would be 7.5x10^-12 latent cancer fatalities. The potential health effect from the postulated radiation dose to the population surrounding the SRS and to workers would be 1.5x10^-7 latent cancer fatalities and 2.5x10^-2 latent cancer fatalities, respectively, above those predicted in the Preferred Alternative in the Storage and Disposition PEIS. The impacts from repackaging, only the RFETS plutonium that would be declassified in the FB-Line would be less.

Building 105-K Modification. Public, Non-Involved Workers, Involved Workers: No impacts to non-involved workers or the public would be expected from the decontamination, modification, and construction work because this work is not expected to generate significant air or water emissions. Work activities are confined to the interior of Building 105-K and airborne radioactivity levels are routinely monitored during work. Liquid sources would not be released from the building during normal decontamination, removal, or construction work. The potential health impact to workers, in the form of the risk of latent cancer fatality, would be 4x10^-4 for 18 months of decontamination and construction work and the number of latent cancer fatalities that could be expected in the worker population was estimated to be 2x10^-5. The risks associated with the modification of Building 105-K are approximately ten percent of the risks estimated for storage of the plutonium in the Preferred Alternative of the Storage and Disposition PEIS.

Summary
Public: In the Storage and Disposition PEIS, DOE estimated the potential health impact to the population surrounding the SRS from existing site operations and for the Upgrade Alternative over 50 years was 1.1 latent cancer fatalities. Accomplishing the new proposed action would slightly increase that potential health impact to about 1.2 latent cancer fatalities. Emissions would remain within the limits of the National Emission Standards for Hazardous Air Pollutants permits for the APSF and Building 105-K.

Workers: In the Storage and Disposition PEIS, DOE estimated that the potential health impact to the total site workforce from existing site operations over 50 years would be 5.3 latent cancer fatalities. Accomplishing the proposed action would increase the potential health impact to the site workforce by 0.3 to 5.6 latent cancer fatalities. This new estimate in total site workforce health impact is slightly greater than the health impact of 5.3 latent cancer fatalities estimated for the Preferred Alternative in the Storage and Disposition PEIS and is slightly lower than the health impact of 5.7 latent cancer fatalities that DOE estimated for the Consolidation alternative in the Storage and Disposition PEIS.

Storage Chemical Impacts. There would be no significant impact to the public or workers from hazardous chemicals due to plutonium storage operations in Building 105-K. There are no industrial systems or other operations involved in the plutonium storage operations that would add to existing Building 105-K chemical impacts.

• Waste Management. Modifications to Building 105-K: DOE estimates that decontamination and removal activities which would make Building 105-K available for storage operations would generate 750 cubic meters of low level waste, which is less than 1% of the low-level waste DOE expects to be generated by SRS activities as described in the No Action alternative of the Storage and Disposition PEIS. DOE does not expect to generate any significant quantities of other wastes in order to modify Building 105-K. No high-level radioactive waste would be generated.

Storage: DOE estimated that storing plutonium in the APSF, as described in the Preferred Alternative of the Storage and Disposition PEIS, would not generate any of the following radioactive wastes: high-level, transuranic, mixed transuranic, low-level, mixed low-level or hazardous (other than minor quantities). DOE estimates that storing plutonium in Building 105-K would not significantly change the estimate for the Preferred Alternative in the Storage and Disposition PEIS.

•Accidents. Storage: For the Building 105-K design basis accidents, DOE estimated that the maximum impact to the population surrounding the SRS could be 0.34 latent cancer fatalities in the unlikely event that plutonium were released to the 105-K Building as a result of corrosion of a storage container. This risk is greater than the risk estimated for storage of plutonium in the Preferred Alternative and other alternatives of the S&D PEIS; however, the risk would be comparable to the same type of accident for the storage of plutonium at SRS in existing storage vaults as analyzed in the Continuing Storage Alternative for the Storage of Plutonium and Uranium in the IMNM EIS. (The IMNM accident analysis showed 0.31 latent cancer fatalities for the population surrounding SRS.) DOE will implement administrative controls (including scheduled surveillances) to limit actions or conditions that might lead to a release of radioactive materials under accident conditions. The risk to the maximally exposed, member of the public and non-involved worker would also be greater than the risk for storage.
of plutonium estimated in the Preferred Alternative and other alternatives of the Storage and Disposition PEIS but would be low (less than $3 \times 10^{-3}$ latent cancer fatalities). For the postulated beyond design basis accidents, DOE estimated that the maximum impact to the population could be $2.7 \times 10^{-4}$ latent cancer fatalities in the event of a vault fire. This risk is greater than the risk estimated for storage of plutonium in the Preferred Alternative of the Storage and Disposition PEIS, but low. The risks to the maximally exposed public and the non-involved worker would also be greater than the risks for the storage of plutonium estimated in the Preferred Alternative of the Storage and Disposition PEIS but would be extremely small (less than $2 \times 10^{-8}$ latent cancer fatalities). DOE estimated that the involved worker may be subject to injury and, in some cases, fatality as a result of potential beyond design basis accidents.

Declassification/Repackaging: DOE estimates that for declassification operation in the FB-Line, the risk to the public would be $1.2 \times 10^{-3}$ latent cancer fatalities, $2.6 \times 10^{-4}$ latent cancer fatalities to the maximally exposed off-site individual and $4.5 \times 10^{-3}$ latent cancer fatalities/yr to the non-involved worker. These risks are slightly greater than the risks for storage of plutonium estimated in the Upgrade Alternative of the Storage and Disposition PEIS, but are low. For repackaging operations in the APSF, the risks are low and similar to the impacts presented for storage of plutonium in the Preferred Alternative of the Storage and Disposition PEIS (less than $2 \times 10^{-4}$ latent cancer fatalities).

- Environmental Justice. For environmental justice impacts to occur, there must be significant and adverse human health or environmental impacts that disproportionately affect minority populations and/or low-income populations. The Supplement Analysis shows that accomplishing the proposed action would be within regulatory limits and the impacts would be very low during routine operations.

The same Supplement Analyses also shows that accidents would not result in a significant risk of adverse human health or environmental impacts to the population who reside within 80 kilometers of the SRS. Therefore, such accidents would not have disproportionately high or adverse risk of impacts on minority or low-income populations.

Based on the analysis in this supplement analysis, no disproportionate, high or adverse impact would be expected on minority or low-income populations.

C. Environmentally Preferable Alternative

The environmental analyses in Chapter 4 of the Storage and Disposition PEIS indicate that the environmentally preferable alternative (the alternative with the lowest environmental impacts over the 50 years considered in the PEIS) for storage of weapons-useable fissile materials would be the Storage and Disposition PEIS Preferred Alternative, which consists of No Action at Hanford, Idaho National Engineering and Environmental Laboratory, Los Alamos National Laboratory, Argonne National Laboratory, and Nevada Test Site (NTS) (no fissile materials are or would be stored at the NTS) pending disposition, subsequent to phaseout of storage at RFETS, and upgrades at the Oak Ridge Reservation, SRS, and Pantex. The proposed action as modified by this amended decision is still the environmentally preferred alternative.

III. Non-Environmental Considerations

A. Economic Analysis

DOE has estimated that accelerating the closure of RFETS from 2010 to 2006 in accordance with the DOE Closure 2006 Rocky Flats Closure Project Management Plan could save as much as $3.1 billion. Closing RFETS by 2006 would require the removal of non-pit, surplus weapons-useable plutonium metal and oxide from RFETS by 2002. The early removal of the RFETS non-pit, surplus weapons-useable plutonium supports the early deactivation, decontamination, and decommissioning of the RFETS plutonium storage and packaging facilities.

DOE also expects that the transfer of non-pit, surplus weapons-useable plutonium from Hanford to the SRS, could save as much as $150 million in upgrade and operating costs for plutonium storage facilities at the Hanford Site. As with the RFETS plutonium, the transfer would not be accomplished unless DOE decided to locate the plutonium immobilization disposition facility at the SRS.

The implementation cost for the proposed action is estimated to be approximately $93 million.

B. Nonproliferation

From a nonproliferation standpoint, the highest standards for safeguards and security will be employed during transportation and storage. There is no change in this regard from the original PEIS ROD.

IV. Amended Decision

Consistent with the Preferred Alternative in the Storage and Disposition PEIS, and the Supplement Analysis, Storing Plutonium in the Actinide Packaging and Storage Facility and Building 105-K at the Savannah River Site (July 1998), the Department has decided to reduce, over time, the number of locations where the various forms of plutonium are stored, through a combination of storage alternatives in conjunction with a combination of disposition alternatives.

The Department has decided to modify those aspects of the Storage and Disposition ROD (62 FR 3014) concerning the storage of weapons-useable plutonium at RFETS and Hanford, pending disposition. Other aspects of the Storage and Disposition ROD remain unaltered. DOE has decided to:

- Modify an existing building (105-K) at SRS to allow the receipt and storage of RFETS non-pit, surplus weapons-useable plutonium.

If the Department decides to select SRS as the immobilization site in the SPD EIS ROD, then the Department will:

- Ship all RFETS non-pit, surplus weapons-useable plutonium (about 7 MT) to SRS beginning in about 2000 through about 2002;
- Store RFETS non-classified plutonium metal and/or parts in shipping containers in Building 105-K at SRS beginning in about 2000;
- For RFETS classified surplus metal and/or parts, declassify the material in the FB-Line facility and repack the material in the APSF (after construction of the APSF in about 2001). In the FB-Line, the plutonium will be melted using existing facilities and equipment that are part of the plutonium metal production process for which FB-Line was designed;
- Store the declassified material in Building 105-K in shipping containers or the APSF vault if space is available;
- Ship all Hanford non-pit, surplus weapons-useable plutonium (approximately 4.6 metric tons) from about 2002 through 2005 and store this material in the APSF;
- Before shipment, all plutonium transported from RFETS (except for the classified metal and/or parts) and Hanford will be stabilized and packaged in accordance with DOE Standard-3013-96, Criteria for Safe Storage of Plutonium Metals and Oxides for long-term storage. All shipments of plutonium, including the classified metal and parts, will be by SST in

Hanford plutonium fuel that is stable would not need to be stabilized.
accordance with applicable DOE, U.S. Department of Transportation and U.S. Nuclear Regulatory Commission requirements and regulations. Plutonium will be packaged in certified Type B accident resistant packages for transport; and

- The RFETS and Hanford Material stored at SRS may be moved between Building 105-K and the APSF to allow for operational flexibility.

Some of the surplus plutonium at RFETS and Hanford, approximately 1 metric ton at each site, is currently under International Atomic Energy Agency (IAEA) safeguards as a component of the United States nonproliferation policy to remove weapons-usable fissile materials from use for defense purposes. DOE has designed the APSF for IAEA safeguards and intends that plutonium stored in the APSF will be available for IAEA safeguards. Surplus plutonium under IAEA safeguards at RFETS and Hanford that may be shipped to the SRS, will remain available for IAEA safeguards in the APSF. Since plutonium that may be stored in Building 105-K will remain in shipping containers and not be accessible for full IAEA safeguards controls (e.g., physical sampling, destructive analyses), DOE is considering, with the IAEA, the application of IAEA verification controls to ensure the plutonium stored in Building 105-K is not diverted for defense purposes. In addition, DOE intends, as indicated in the Storage and Disposition ROD, that DOE’s program for surplus plutonium disposition will include IAEA verification as appropriate.

If the DOE decides to pursue the No Action alternative for the disposition of surplus plutonium, the SRS, RFETS, and Hanford materials would remain in storage at their current sites in accordance with the No Action alternative in the Storage and Disposition PEIS ROD. If the DOE decides to immobilize surplus plutonium at Hanford, the SRS and RFETS materials would be shipped to Hanford in accordance with the decisions reached in the SPD EIS ROD.

V. Conclusion

Under the previous ROD, a maximum of 10 metric tons of surplus plutonium, including plutonium from RFETS and existing onsite plutonium, would be stored at SRS in the APSF, pending disposition, provided that SRS is selected as the immobilization site following completion of the SPD EIS. Transfer of plutonium from RFETS to SRS would begin when the APSF is completed in 2001.

With this amended ROD, a total of approximately 11.6 metric tons of surplus plutonium from both Hanford and RFETS (in addition to existing onsite SRS surplus plutonium, for a total of approximately 14 metric tons of surplus plutonium) would be stored at SRS in the APSF and Building 105-K, pending disposition, provided SRS is selected as the immobilization site. Transfer of plutonium from RFETS to SRS would begin when the modifications to Building 105-K are completed, i.e., in about 2000; shipments of plutonium from Hanford to SRS would begin in about 2002. DOE has decided to implement a revised program to provide for safe and secure storage of weapons-usable fissile materials. DOE will prepare to advance the consolidation of the storage of weapons-usable plutonium by modifying existing facilities at the SRS in South Carolina, and phasing out surplus plutonium storage at RFETS in Colorado and Hanford in Washington. Consistent with the Storage and Disposition PEIS ROD, this Amended ROD supports the Department’s objectives to phase out the storage of all weapons-usable plutonium at the RFETS and Hanford as soon as possible and to reduce the number of sites where surplus weapons-usable plutonium is stored.


Laura S. H. Holgate, Director, Office of Fissile Materials Disposition.
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DEPARTMENT OF ENERGY

Environmental Management Site-
Specific Advisory Board, Pantex Plant, Amarillo, Texas

AGENCY: Department of Energy.

ACTION: Notice of open meeting.

SUMMARY: Pursuant to the provisions of the Federal Advisory Committee Act (Pub. L. No. 92–463, 86 Stat. 770) notice is hereby given of the following Advisory Committee meeting:

Environmental Management Site-
Specific Advisory Board (EM SSAB), Pantex Plant, Amarillo, Texas.

DATE AND TIME: Tuesday, August 25, 1998: 1:30 p.m.–5:30 p.m.

ADDRESS: Amarillo Association of Realtors, Amarillo, Texas.

FOR FURTHER INFORMATION CONTACT: Jerry S. Johnson, Assistant Area Manager, Department of Energy, Amarillo Area Office, P.O. Box 30030, Amarillo, TX 79120 (806) 477–3125.

SUPPLEMENTARY INFORMATION: Purpose of the Committee: The Board provides input to the Department of Energy on Environmental Management strategic decisions that impact future use, risk management, economic development, and budget prioritization activities.

Tentative Agenda

1:30 p.m. Welcome—Agenda Review—Approval of Minutes
1:45 p.m. Co-Chair Comments
2:00 p.m. Immobilization
3:00 p.m. Break
3:15 p.m. Updates—Occurrence Reports—DOE
3:45 p.m. Ex-Officio Reports
4:00 p.m. Low-Level Waste Seminar Update
5:00 p.m. Task Force/Subcommittee Minutes
5:30 p.m. Closing Remarks/Adjourn

Public Participation: The meeting is open to the public, and public comment will be invited throughout the meeting. Written statements may be filed with the Committee either before or after the meeting. Written comments will be accepted at the address above for 15 days after the date of the meeting. Individuals who wish to make oral statements pertaining to agenda items should contact Jerry Johnson’s office at the address or telephone number listed above. Requests must be received 5 days prior to the meeting and reasonable provision will be made to include the presentation in the agenda. The Designated Federal Official is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business. Each individual wishing to make public comment will be provided a maximum of 5 minutes to present their comments at any time throughout the meeting.

Minutes: The minutes of this meeting will be available for public review and copying at the Pantex Public Reading Rooms located at the Amarillo College Lynn Library and Learning Center, 2201 South Washington, Amarillo, TX (806) 371–5400. Hours of operation are from 7:45 am to 10:00 pm, Monday through Thursday; 7:45 am to 5:00 pm on Friday; 8:30 am to 12:00 noon on Saturday; and 2:00 pm to 6:00 pm on Sunday, except for Federal holidays. Additionally, there is a Public Reading Room located at the Carson County Public Library, 401 Main Street.