DEPARTMENT OF DEFENSE

Office of the Secretary

Defense Intelligence Agency, Science and Technology Advisory Board Closed Panel Meeting

AGENCY: Department of Defense, Defense Intelligence Agency.

ACTION: Notice.

SUMMARY: Pursuant to the provisions of Subsection (d) of Section 10 of Public Law 92–463, as amended by Section 5 of Public Law 94–409, notice is hereby given that a closed meeting of the DIA Science and Technology Advisory board has been scheduled as follows:

DATES: 12 August 1999 (9 am to 4 pm).

ADDRESSES: The Defense Intelligence Agency, Bolling AFB, Washington, DC 20340–5100.

FOR FURTHER INFORMATION CONTACT: Maj. Donald R. Culp, Jr., USAF, Executive Secretary, DIA Science and Technology Advisory Board, Washington, DC 20340–1328 (202) 231–4930.

SUPPLEMENTARY INFORMATION: The entire meeting is devoted to the discussion of classified information as defined in Section 552b(c)(1), Title 5 of the U.S. Code, and therefore will be closed to the public. The Board will receive briefings on and discussion several current critical intelligence issues and advise the Director, DIA, on related scientific and technical matters.

Dated: August 4, 1999.

Patricia L. Toppings,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 99–20480 Filed 8–9–99; 8:45 am]

BILLING CODE 5001–10–M

DEPARTMENT OF DEFENSE

Office of the Secretary

Defense Intelligence Agency, Science and Technology Advisory Board Closed Panel Meeting

AGENCY: Department of Defense, Defense Intelligence Agency.

ACTION: Notice.

SUMMARY: Pursuant to the provisions of Subsection (d) of Section 10 of Public Law 92–463, as amended by Section 5 of Public Law 94–409, notice is hereby given that a closed meeting of the DIA Science and Technology Advisory Board has been scheduled as follows.

DATES: 17 August 1999 (8 am to 4 pm).

ADDRESSES: The Defense Intelligence Agency, 200 MacDill BLVD, Washington, DC, 20340.

FOR FURTHER INFORMATION CONTACT: Maj Donald R. Culp, Jr., USAF, Executive Secretary, DIA Science and Technology Advisory Board, Washington, DC 20340–1328 (202) 231–4930.

SUPPLEMENTARY INFORMATION: The entire meeting is devoted to the discussion of classified information as defined in Section 552b(c)(1), Title 5 of the U.S. Code, and therefore will be closed to the public. The Board will receive briefings on and discuss several current critical intelligence issues and advise the Director, DIA, on related scientific and technical matters.

August 4, 1999.

Patricia L. Toppings,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 99–20481 Filed 8–9–99; 8:45 am]

BILLING CODE 5001–10–M

DEPARTMENT OF DEFENSE

Office of the Secretary of Defense

Department of Defense Wage Committee; Notice of Closed Meetings

Pursuant to the provisions of section 10 of Public Law 92–463, the Federal Advisory Committee Act, notice is hereby given that closed meetings of the Department of Defense Wage Committee will be held on September 7, 1999, September 14, 1999, September 21, 1999, and September 28, 1999, at 10:00 a.m. in Room A105, The Nash Building, 1400 Key Boulevard, Rossyln, Virginia.

Under the provisions of section 10(d) of Public Law 92–463, the Department of Defense has determined that the meetings meet the criteria to close meetings to the public because the matters to be considered are related to internal rules and practices of the Department of Defense and the detailed wage data to be considered were obtained from officials of private establishments with a guarantee that the data will be held in confidence.

However, members of the public who may wish to do so are invited to submit material in writing to the chairman concerning matters believed to be deserving of the Committee's attention.

Additional information concerning the meetings may be obtained by writing to the Chairman, Department of Defense Wage Committee, 4000 Defense Pentagon, Washington, DC 20301–4000.

Dated: August 4, 1999.

Patricia L. Toppings,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 99–20483 Filed 8–9–99; 8:45 am]

BILLING CODE 5001–10–M

DEPARTMENT OF ENERGY

Record of Decision for Long-Term Management and Use of Depleted Uranium Hexafluoride

AGENCY: Department of Energy.

ACTION: Record of Decision.

SUMMARY: The Department of Energy (''DOE'' or ''the Department'') issued the Final Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride (Final PEIS) on April 23, 1999. DOE has considered the environmental impacts, benefits, costs, and institutional and programmatic needs associated with the management and use of its approximately 700,000 metric tons of depleted uranium hexafluoride (DUF_6). DOE has decided to promptly convert the depleted UF_6 inventory to depleted uranium oxide, depleted uranium metal, or a combination of both. The depleted uranium oxide will be used as much as possible and the remaining depleted uranium oxide will be stored for potential future uses or disposal, as necessary. At this time, the Department does not believe that long-term storage as depleted uranium metal and disposal as depleted uranium metal are reasonable alternatives; however, the Department remains open to exploring these options further. Pursuant to this Record of Decision (ROD), any proposal to proceed with the siting, construction, and operation of a facility or facilities will involve additional review under the National Environmental Policy Act (NEPA). DOE anticipates that approximately 4,700 cylinders containing depleted UF_6 that are located at the East Tennessee Technology Park (formerly known as the K–25 Site), in Oak Ridge, Tennessee, would be shipped to a conversion facility. Uses for the converted product potentially include Government applications and applications that may be developed by the private sector.

ADDRESSES: The Final PEIS and ROD are available on the Office of Environment, Safety and Health NEPA home page at *http://www.eh.doe.gov/nepa* or on the Office of Nuclear Energy, Science and Technology (NE) home page at *http://www.ne.doe.gov*. You may request copies of the Final PEIS and this ROD by calling the toll-free number 1–800–517–3191, by faxing requests to (301) 903–4905, by making requests via the depleted UF_6 home page at *http://web.ead.anl.gov/uranium/finalpeis.cfm*, via electronic mail to scott.harlow@hq.doe.gov., or by mailing them to: Scott E. Harlow, NE, U.S. Department of Energy, 19901 German-

town Road, Germantown, Maryland 20874.

FOR FURTHER INFORMATION CONTACT: For information on the alternative strategies for the long-term management and use of depleted UF_6, contact Scott Harlow at the address listed above. For general information on the DOE NEPA process, please contact: Carol Borgstrom, Director, Office of NEPA Policy and Assistance (EH–42), U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington, D.C. 20585, (202) 586–4600 or 1–800–472–2756.

SUPPLEMENTARY INFORMATION:

I. Background

Depleted UF_6 results from the process of making uranium suitable for use as fuel for nuclear power plants or for military applications. The use of uranium in these applications requires increasing the proportion of the uranium-235 isotope found in natural uranium through an isotopic separation process called uranium enrichment. Gaseous diffusion is the enrichment process currently used in the United States. The depleted UF_6 that is produced as a result of enrichment typically contains 0.2 percent to 0.4 percent uranium-235 and is stored as a solid in large metal cylinders at the gaseous diffusion facilities.

Large-scale uranium enrichment in the United States began as part of atomic bomb development during World War II. Uranium enrichment activities were subsequently continued under the U.S. Atomic Energy Commission and its successor agencies including DOE. The K–25 Plant (now called the East Tennessee Technology Park) at Oak Ridge, Tennessee, was the first of the three gaseous diffusion plants constructed to produce enriched uranium. The U.S. program to enrich uranium was conducted first to support U.S. national security activities and later (by the late 1960s) to provide enriched uranium-235 for fuel for commercial nuclear power plants in the United States and abroad. The K–25 plant ceased operation in 1985, but uranium enrichment continues at both the Paducah Site in Kentucky and the Portsmouth Site in Ohio. These two plants are now operated by USEC Inc. (formerly known as the United States Enrichment Corporation), created by law in 1993 to privatize the uranium enrichment program. Depleted UF_6 is stored as a solid at all three sites in steel cylinders. Each cylinder holds approximately 9 to 12 metric tons of material. The cylinders usually are stacked two layers high in outdoor areas called ''yards.''

DOE maintains an active cylinder management program to improve storage conditions in the cylinder yards, to monitor cylinder integrity by conducting routine inspections for breaches (leaks), and to perform cylinder maintenance and repairs as needed. The results of these management activities ensure that cylinders are stored with minimum risks to workers, members of the general public, and the environment at the sites. Because storage began in the early 1950s and the cylinders are stored outdoors, many of the cylinders now show evidence of external corrosion. Eight cylinders out of the 46,422 that were filled by DOE or its predecessor agencies have developed leaks. Because the depleted UF_6 is a solid at outdoor ambient temperatures and pressures, it is not readily released from a cylinder following a breach.

DOE has an integrated program plan that has been in place since December 1994 to ensure the safe management of these cylinders. Under this program plan, if alternative uses for the depleted uranium were not found to be feasible by approximately the year 2010, DOE would take steps to convert the depleted UF_6 to triuranium octaoxide (U_3O_8) beginning in the year 2020. U_3O_8 would be more chemically stable than the depleted UF_6 and would be safely stored pending a determination that all or a portion of the depleted uranium was no longer needed. At that point, the U_3O_8 would be disposed of as low-level waste (LLW). This program plan was based on reserving depleted UF_6 for future defense needs and for other potential productive and economically viable purposes including possible reenrichment in an atomic vapor laser isotope separation plant, conversion to depleted uranium metal for fabricating antitank weapons, and use as fuel in advanced liquid metal nuclear reactors. Since the time when that program plan was put into place, several developments have occurred prompting the need for its revision. These developments include the passage and implementation of the Energy Policy Act of 1992 that assigned responsibility for uranium enrichment to the United States Enrichment Corporation. Also, the demand for antitank weapons has diminished, and the advanced liquid metal nuclear reactor program has been canceled. In addition, stakeholders near the current cylinder storage sites have expressed concern about the environmental, safety, health, and regulatory issues associated with the continued storage of the depleted UF_6 inventory. The selection of a new management strategy constituted a major Federal action and required preparation of a PEIS.

The Final Plan for the Conversion of Depleted Uranium Hexafluoride (herein referred to as the ''Plan'') submitted to Congress in July 1999 was prepared in accordance with Public Law 105–204, which required the Department to prepare and submit a plan to construct conversion facilities at both the Paducah and Portsmouth gaseous diffusion plants. The Plan was also consistent with the preferred alternative of the Final PEIS, to begin conversion of the depleted UF_6 inventory to depleted uranium oxide, depleted uranium metal, or a combination of both. The Department currently expects that conversion to depleted uranium metal would be performed only if uses become available. At this time, the Department does not believe that long-term storage as depleted uranium metal and disposal as depleted uranium metal are reasonable alternatives; however, the Department remains open to exploring these options further. DOE plans to use the resources and expertise of the private sector to convert the depleted UF_6 inventory. The Department has proceeded to implement its procurement strategy to award one or more contracts for the design, construction, operation, and decontamination and decommissioning of conversion facilities and support functions. The draft request for proposals for this procurement, scheduled to be issued in the summer of 1999, will be based on responses received from the Department's request for expressions of interest issued March 4, 1999, input from Congress and stakeholders, the draft Plan, and the Final PEIS.

Work on the PEIS began in 1994 with a request for recommendations for management strategies for depleted UF_6 published in the **Federal Register** designed to solicit ideas from industry and the general public for the management and use of depleted UF_6. The responses were evaluated and those that appeared reasonable provided the basis for the alternatives that were subsequently assessed in the PEIS. The technologies that were suggested were described in The Technology Assessment Report for the Long-Term Management of Depleted Uranium Hexafluoride (UCRL–AR–120372) and The Engineering Analysis Report for the Long-Term Management of Depleted Uranium Hexafluoride (UCRL–AR–124080). The costs associated with the alternatives analyzed in the PEIS are provided in the Cost Analysis Report for the Long-Term Management of Depleted

Uranium Hexafluoride (UCRL–AR–127650). Public scoping meetings for the PEIS were held in Portsmouth, Ohio; Paducah, Kentucky; and Oak Ridge, Tennessee. The Draft PEIS was issued in December 1997. Public hearings on the Draft PEIS were held in Portsmouth, Ohio; Paducah, Kentucky; Oak Ridge, Tennessee; and Washington, D.C. Based on the comments received, a revised version of the document was produced that included a revision of the preferred alternative. The Final PEIS was mailed to interested parties and was made available to the public using the World Wide Web on April 16, 1999.

II. Purpose and Need for the Agency Action

The purpose of the PEIS was to reexamine DOE's long-term management strategy for depleted UF_6 and alternatives to that strategy. DOE needs to take this action to respond to economic, environmental, and legal developments. The PEIS examined the environmental consequences of alternative strategies for long-term storage, use, and disposal of the entire inventory as well as the no-action alternative.

III. Alternatives Analyzed in Detail

DOE evaluated the following alternative strategies for the long-term management and use of depleted UF_6.

No Action. Under this alternative, depleted UF_6 cylinder storage was assumed to continue at the three current storage sites indefinitely. Potential environmental impacts were estimated through the year 2039. The activities assumed to occur at the sites under the no-action alternative include a comprehensive cylinder monitoring and maintenance program with routine cylinder inspections, ultrasonic thickness testing of cylinders, radiological surveys, cylinder painting to prevent corrosion, cylinder yard surveillance and maintenance, construction of four new or improved cylinder yards at Paducah and one at K–25, and relocation of some cylinders at Paducah and K–25 to the new or improved yards. Cylinders were assumed to be painted every ten years, which is consistent with current plans.

Long-Term Storage as Depleted UF_6. This alternative includes long-term storage at a single location and could involve storage of cylinders in newly constructed yards, buildings, or an underground mine. The location of such a long-term storage facility could be at a site other than a current storage site. Continued storage of depleted UF_6 cylinders at the three current storage sites, with existing cylinder management of the entire inventory, would occur through 2008, and the inventory would decrease through 2034 as cylinders are being consolidated at a long-term storage facility. Cylinders would be prepared for shipment at the three current storage sites with transportation of cylinders to a long-term storage facility by truck or rail. The long-term storage facility would include yards, buildings, or an underground mine. Transportation and disposal of any waste created from the activities listed above would occur under this alternative.

Long-Term Storage as Uranium Oxide. Under this alternative, the depleted UF_6 would be converted from depleted UF_6 to depleted uranium oxide prior to placement in long-term storage. Storage in a retrievable form in a facility designed for indefinite, low-maintenance operation would preserve access to the depleted uranium. Storage in the form of an oxide would be advantageous in view of long-term stability and the material preferred for use or disposal at a later date. Conversion of the depleted UF_6 to depleted uranium oxide was assumed to take place in a newly constructed stand-alone plant dedicated to the conversion process. Two forms of uranium oxide, U_3O_8 and uranium dioxide (UO_2), were considered. Both oxide forms have low solubility in water and are relatively stable over a wide range of environmental conditions. Two representative conversion technologies were assessed for conversion to U_3O_8 and three for conversion to UO_2. In addition to producing depleted uranium oxide, conversion would result in the production of considerable quantities of hydrogen fluoride (HF) as a byproduct. HF could be converted to anhydrous hydrogen fluoride (AHF), a commercially valuable chemical. AHF is toxic to humans if exposed at high enough concentrations. HF is typically stored and transported as a liquid, and inventories produced from the conversion process potentially could be sold for use. Alternatively, HF could be neutralized by the addition of lime to form a solid fluoride salt, CaF_2, which is much less toxic than HF. CaF_2 potentially could be sold for commercial use or could be disposed of either in a landfill or LLW disposal facility depending on the uranium concentration and the applicable regulations at the time of disposal. Following conversion, the depleted uranium oxide was assumed to be stored in drums in buildings, below ground vaults, or an underground mine. The storage facilities would be designed to protect the stored material from natural forces/degradation by environmental forces. Once placed in storage, the drums would require only routine monitoring and maintenance activities.

Use as Uranium Oxide. Under this alternative, depleted UF_6 would first be converted to depleted uranium oxide (UO_2 or U_3O_8). For assessment purposes, conversion to depleted UO_2 was assumed. There is a variety of current and potential uses for depleted uranium oxide including use as radiation shielding, use in dense materials applications other than shielding, use in light water reactor fuel cycles, and use in advanced reactor fuel cycles. Radiation shielding was selected as the representative use option for detailed analysis in the PEIS. A conversion facility would be required to convert UF_6 to depleted uranium oxide. The conversion facility would also produce either AHF or CaF_2 as a byproduct. These materials would be used or disposed as discussed above.

Use as Uranium Metal. In this alternative, depleted UF_6 would first be converted to depleted uranium metal. Similar to use as depleted uranium oxide, the depleted uranium metal was assumed to be used as the primary shielding material in casks designed to contain spent nuclear fuel or high-level waste. The depleted uranium metal would be enclosed between the stainless steel shells making up the body of the casks. A conversion facility would be required to convert depleted UF_6 to depleted uranium metal. The conversion facility would also produce either AHF or CaF_2 as a byproduct. These materials would be used or disposed as discussed above. In addition, some metal conversion technologies would also produce large quantities of magnesium fluoride as a byproduct. The magnesium fluoride would be disposed of either in a sanitary landfill or LLW disposal facility depending upon the uranium concentration and applicable disposal regulations at the time. The manufacture of depleted uranium metal casks was assumed to take place at a stand-alone industrial plant dedicated to the cask manufacturing process. The plant would be capable of receiving depleted uranium metal from a conversion facility, manufacturing casks, and storing the casks until shipment by rail to a user such as a nuclear power plant or DOE facility.

Disposal. Under the disposal alternative, depleted UF_6 would be chemically converted to a more stable depleted uranium oxide form and disposed of below ground as LLW.

Compared with long-term storage, disposal is considered to be permanent with no intent to retrieve the material for future use. Prior to disposal, conversion of depleted UF_6 was assumed to take place at a newly constructed stand-alone plant dedicated to the conversion process. This activity would be identical to that described under the long-term storage as oxide alternative. Potential impacts were evaluated for both UO_2 and U_3O_8. The conversion facility would convert depleted UF_6 to depleted uranium oxide and would produce either AHF or CaF_2 as a byproduct. These materials would be used or disposed as discussed above. Several disposal options were considered including disposal in shallow earthen structures, below ground vaults, and an underground mine. In addition, two physical waste forms were considered, ungrouted waste and grouted waste.

Grouted waste refers to the solid material obtained by mixing the depleted uranium oxide with cement and repackaging it in drums. Grouting is intended to increase structural strength and stability of the waste and to reduce the solubility of the waste in water. However, because cement would be added to the depleted uranium oxide, grouting would increase the total volume requiring disposal. Grouting of waste was assumed to occur at the disposal facility.

DOE's Preferred Alternative. DOE's preferred alternative for the long-term management and use of depleted UF_6 is to begin conversion of the depleted UF_6 inventory, as soon as possible, to depleted uranium oxide, depleted uranium metal, or a combination of both. The conversion products, such as fluorine, would be used as much as possible, and the remaining products would be stored for future uses or disposal. The Department currently expects that conversion to depleted uranium metal would be performed only if uses become available. At this time, the Department does not believe that long-term storage as depleted uranium metal and disposal as depleted uranium metal are reasonable alternatives; however, the Department remains open to exploring these options further. DOE's preferred alternative in the Draft PEIS was to begin to convert the depleted UF_6 inventory to uranium oxide or depleted uranium metal only as uses for the material became available. Several reviewers expressed a desire for DOE to start conversion as soon as possible. After consideration of the comments, DOE revised the preferred alternative in the Final PEIS to call for the prompt conversion of the material to depleted uranium oxide, depleted uranium metal, or a combination of both and long-term storage of that portion of the depleted uranium oxide that cannot be put to immediate use. Any proposal to proceed with the location, construction, and operation of a facility or facilities will involve additional review under NEPA and will be subject to availability of funding. DOE expects that in the future, uses would be found for some portion of the converted material. The value of depleted uranium and HF or CaF_2 for use is based on their unique qualities, the size of the inventory, and the history of uses already implemented. DOE plans to continue its support for the development of Government applications for depleted uranium products and to continue the safe management of its depleted uranium inventory as long as such inventory remains in storage prior to total conversion.

IV. Alternatives Dismissed From Detailed Consideration

Storage and Disposal as Depleted Uranium Metal. Conversion of depleted UF_6 to depleted uranium metal for long-term storage and conversion to depleted uranium metal for disposal were not analyzed in depth as reasonable alternatives in the Final PEIS. These alternatives were rejected because of higher conversion cost for some processes used to convert UF_6 to metal, the lower chemical stability of uranium metal as opposed to uranium oxide thus requiring different considerations for handling and storage, and uncertainty over the suitability of depleted uranium metal as a final disposal form. At this time, the Department does not believe that long-term storage as depleted uranium metal and disposal as depleted uranium metal are reasonable alternatives; however, the Department remains open to exploring these options further.

Storage and Disposal as Depleted Uranium Tetrafluoride (UF_4). Long-term storage as depleted UF_4 and disposal as depleted UF_4 were also not analyzed in depth as reasonable alternatives in the Final PEIS. Although more stable than UF_6, UF_4 has no identified direct use, offers no obvious advantage in required storage space, and is less stable than oxide forms. Further, as a disposal form, UF_4 is soluble in water.

V. Summary of Environmental Impacts

The PEIS analyses indicated that the areas of potential adverse environmental impacts include human health and safety impacts, impacts to ground water, air quality, and waste management under certain conditions. In addition, the Final PEIS identified net positive socioeconomic impacts in terms of employment and income for all alternatives. The most important potential impacts in these areas are summarized in the following paragraphs (detailed discussions are provided in the Final PEIS). For all alternatives, potential impacts in other areas, including ecological resources, resource requirements, land use, cultural resources, and environmental justice, it was determined to be low to negligible or entirely dependent on the actual sites where the alternatives would be implemented that are, as yet, unidentified.

Human Health and Safety. Potential impacts to the health and safety of workers and members of the public are possible during construction activities, during normal facility operations, in the long-term if ground water contamination occurs, from facility accidents, and from transportation. During normal facility operations, under all alternatives, impacts to human health and safety would be limited to involved workers (persons directly involved in the handling of radioactive or hazardous materials). Involved workers could be exposed to low-level radiation emitted by depleted uranium during the normal course of their work activities. The overall radiation exposure of workers was estimated to result in one cancer fatality under the no-action alternative, from one to two cancer fatalities under the long-term storage as UF_6 and the two use alternatives, and up to three cancer fatalities under the disposal and preferred alternatives. For all alternatives, except the disposal as oxide alternative, these exposures were estimated to be within applicable public health standards and regulations.

For the disposal as oxide alternative, if the disposal facility were located in a ''wet'' environment (typical of the Eastern United States), the estimated dose from the use of groundwater at 1,000 years after the assumed failure of the facility would be about 100 mrem/year, which would exceed the regulatory dose limit of 25 mrem/year specified in 10 CFR Part 61 and DOE Order 5820.2A for the disposal of LLW. In a ''dry'' environment typical of the Western United States, the analysis indicated that disposal would not exceed regulatory limits for over 1,000 years in the future even if the facility leaked.

Under all alternatives, workers (including involved and noninvolved) could be injured or killed from on-the-job accidents unrelated to radiation or

chemical exposure. Using statistics from similar activities, under the no-action alternative, it was estimated that zero fatalities and about 180 injuries might occur over the period from 1999 through 2039. Under all other alternatives, it was estimated that from one to five fatalities and from 310 to 4,100 injuries might occur over the same period.

Accidents are possible that could release radiation or chemicals to the environment potentially causing adverse health effects among workers and members of the public under all alternatives. Accidents involving cylinders are possible under all alternatives and could have severe consequences (depending on the amount of DUF_6 released) that would be primarily limited to on-site workers even under the worst conditions. During a severe cylinder accident, it was estimated that up to three fatalities from HF exposure would occur among noninvolved workers, with the additional possibility of fatalities among those directly involved in the accident. However, because the probability of such accidents occurring is low, they would not be expected to occur during the operational periods considered in the Final PEIS.

Low probability accidents involving chemicals at a conversion facility were estimated to have potential consequences that are much greater than accidents involving cylinders. Such accidents would be possible under the long-term storage as oxide, use as oxide, use as metal, disposal, and preferred alternatives because they would require conversion of UF_6 to another chemical form with rupture of tanks containing AHF or ammonia estimated to have the largest potential consequences. Such accidents are expected to occur with a frequency of less than once in one million per year of operation. If such a severe event were to occur, it was estimated that up to 30 fatalities among the public and four fatalities among noninvolved workers would be possible. Although the consequences of cylinder and chemical accidents could be severe, these types of accidents are expected to be extremely rare. The maximum calculated risk for these accidents would be zero fatalities and irreversible adverse health effects expected for noninvolved workers and the public combined and one adverse effect (mild and temporary effects such as temporary decrease in kidney function or respiratory irritation) expected for the general public.

Transportation activities could also potentially result in adverse health and safety impacts. Although specific sites for some of the management activities (conversion, for example) have not been identified, the Final PEIS analyzed the potential impacts associated with shipping UF_6 cylinders to alternative locations using representative shipment lengths and routes. The primary impacts from transportation are related to accidents. The total number of traffic fatalities was estimated on the basis of national traffic statistics for shipments by both truck and rail modes for all alternatives. If shipments were predominantly by truck, it was estimated that zero fatalities would be expected for the no-action alternative, approximately two fatalities for the long-term storage as depleted UF_6 alternative, and up to four fatalities for each of the other alternatives. Shipment by rail would result in similar, but slightly smaller, impacts. Severe transportation accidents could also cause a release of radioactive material or chemicals from a shipment that could have adverse health effects. All alternatives, other than no action and long-term storage as UF_6, could involve the transportation of relatively large quantities of chemicals such as ammonia and AHF because conversion would be required. Severe accidents involving these materials could result in releases that caused fatalities with HF posing the largest potential hazard. For example, if a severe accident involving a railcar containing HF occurred in an urban area under unfavorable weather conditions, it was estimated that up to 30,000 people would experience irreversible adverse effects (such as lung damage) and 300 fatalities could occur. However, because of the low probability of such accidents, the maximum calculated risk for these accidents would be zero fatalities. If HF were to be neutralized to CaF_2 at the conversion facility, the risks associated with its transportation would be eliminated.

Ground Water Quality. For operations under all alternatives, uranium concentrations in ground water at the three current storage sites would remain below guidelines throughout the project duration if cylinder maintenance and painting activities are performed as expected. Ground water impacts are possible under the disposal alternative if the disposal facility were located in a ''wet'' environment. In a dry environmental setting, ground water impacts for the severe situation would be unlikely for at least 1,000 years.

Air Quality. Under all alternatives, impacts to air quality from construction and facility operations would be within existing regulatory standards and guidelines. Under the no-action alternative, however, if cylinder maintenance and painting do not reduce cylinder corrosion rates, it is possible that cylinder breaches could result in HF air concentrations greater than the regulatory standard level at the K–25 storage site around the year 2020; HF concentrations at the Paducah and Portsmouth Sites were estimated to remain within applicable standards or guidelines.

Waste Management. Under all alternatives requiring conversion, there is the potential that significant amounts of fluorine-containing wastes could be generated. If the HF produced from conversion were not used, CaF_2 generated from the neutralization of HF might have to be disposed of as low-level radioactive waste.

Socioeconomics. Positive socioeconomic impacts would occur under all alternatives. The no-action alternative would create about 140 direct jobs and generate about $6.1 million in direct income per operational year. The storage as UF_6 alternative would create about 610 to 1,200 direct jobs and generate about $35 to $65 million in direct income per year. The other alternatives (long-term storage as oxide, use as oxide, use as metal, disposal, and preferred alternatives) would have more beneficial socioeconomic impacts, creating about 970 to 1,600, 1,250 to 1,600, 1,260 to 1,600, 900 to 2,100, and 1,600 to 1,840 direct jobs per year, respectively, and generating about $55 to $85 million, $79 to $93 million, $79 to $93 million, $55 to $120 million, and $89 to $110 million in direct income per year, respectively. Continued cylinder storage under all alternatives would result in negligible impacts on regional growth and housing.

Cumulative Impacts. The continued cylinder storage and cylinder preparation components of the depleted UF_6 management alternatives would result in environmental impacts that would be expected to be relatively minor. The estimated cumulative doses to members of the general public at all three sites would be below levels expected to result in a single cancer fatality over the life of the project, and the annual dose to the off-site maximally exposed individual would be considerably below the Environmental Protection Agency (EPA) maximum standard of 10 mrem/year from the air pathway. The cumulative collective dose to workers at the three sites would result in one to three additional cancer fatalities over the duration of the program. Cumulative demands for water, wastewater treatment, and power would be well within existing capacities at all three sites. Relatively small amounts of additional land would be

needed for depleted UF_6 management at the three current storage sites. The cumulative impacts of conversion, long-term storage, and disposal activities could not be determined because specific sites and technologies have not been designated for these options. Further analyses of cumulative impacts would be performed as required by NEPA regulations for any technology or siting proposals that would involve these facilities.

VI. Environmentally Preferred Alternative

Overall, the potential for adverse environmental impacts tends to be the smallest for the no-action and long-term storage alternatives primarily because they do not require construction and operation of conversion facilities or significant transportation operations. Although the potential impacts tend to be small for all alternatives, differences do exist among the alternatives. The presence of a conversion facility results in the potential for both facility and transportation accidents involving hazardous chemicals that could have severe consequences. However, it must be recognized that the probability of such accidents is low, and accident prevention and mitigative measures are well established for these types of industrial activities. In addition, beneficial socioeconomic impacts tend to be smallest for the no-action and long-term storage as UF_6 alternatives and greatest for those alternatives involving conversion. Finally, the differences in impacts among the alternatives tend to be small when considering the uncertainties related to the actual processes and technologies that will be used and the fact that actual sites have not been identified. In general, because of the relatively small risks that would result under all alternatives and the absence of any clear basis for discerning an environmental preference, DOE concludes that no single alternative analyzed in depth in the Final PEIS is clearly environmentally preferable compared to the other alternatives.

VII. Mitigation

Specific mitigation measures may need to be developed as part of the design of the particular conversion facilities. Such measures would be addressed during the preparation of project-specific NEPA reviews.

VIII. Comments on Final PEIS

The Final PEIS was mailed to stakeholders in mid-April 1999, and the EPA issued a notice of availability in the April 23, 1999, **Federal Register**. In addition, DOE issued a notice of availability in the April 29, 1999, **Federal Register**. The entire document was also made available on the World Wide Web. Comments were received by five reviewers, and at the same time, about two dozen responses to the aforementioned expression of interest were received. The following is a summary of the comments received by reviewers of the Final PEIS:

- *Comments related to the preferred alternative.* One reviewer, BNFL Inc., reiterated their previous comments that DOE should have analyzed in depth, the environmental impacts of conversion of the depleted UF_6 to depleted uranium metal for long-term storage and disposal. DOE addressed these comments in volume 3 of the Final PEIS and earlier in this ROD. At this time, the Department does not believe that long-term storage as depleted uranium metal and disposal as depleted uranium metal are reasonable alternatives; however, the Department remains open to exploring these options further. Should the Department be persuaded that it is reasonable to convert the depleted UF_6 to depleted uranium metal for long-term storage or disposal, these alternatives would be analyzed in detail in future NEPA reviews, as necessary.
- *General comments.* The U.S. Environmental Protection Agency commented that the Department has adequately addressed its concerns on this project and suggested that DOE use a single location for a conversion pilot plant as it conducts its further planning and environmental analysis. The Kentucky Heritage Council recommended that any previously undisturbed areas impacted by the proposed project be surveyed by a professional archaeologist. Should the Department decide to construct a conversion facility in the State of Kentucky, the decision to conduct the requested survey would be addressed at that time. The Kentucky Department for Environmental Conservation, Division of Water, affirmed that the concerns they raised on the Draft PEIS have been addressed in the Final PEIS. The Kentucky Department for Environmental Conservation, Division of Waste Management, reiterated the concerns that were raised in their April 23, 1998, letter regarding the Draft PEIS. These comments were addressed in volume 3 of the Final PEIS. The Kentucky Department for Environmental Conservation, Underground Storage Tank Branch, is currently waiting for closure reports and documentation for several tanks from the Paducah Site. This comment was forwarded to the site for appropriate action. Finally, should the Department decide to construct a conversion facility in the State of Kentucky, the Department would address the issue of using on-site landfills for disposal of waste generated by such a facility at that time.

IX. Other Factors

Public Law 105–204. In accordance with this law, the Secretary of Energy submitted to Congress a plan for the construction of plants at Paducah, Kentucky, and Portsmouth, Ohio, to convert its large inventory of depleted uranium hexafluoride. These proposed activities would be subject to review under NEPA. The preferred alternative is consistent with this legislation.

Cost. As part of the analysis done to develop a long-term management plan, the comparative costs associated with representative technologies for each of the alternatives were calculated. The Cost Analysis Report provided life-cycle cost estimates for each of the alternatives and estimates the primary capital and operating costs for each alternative reflecting all development, construction, operating, and decontamination and decommissioning costs as well as potential offsetting revenues from the sale of recycled materials. The costs are estimated at a preconceptual design level. Depending on the technology and the option selected for disposal, conversion, long-term storage, and cylinder preparation, there was a wide variation in the cost of various alternatives. In general, the no-action alternative was the least costly, while the disposal and use as metal alternatives were the most costly.

Atomic Vapor Laser Isotope Separation (AVLIS). USEC Inc. announced on June 9, 1999, that it would suspend AVLIS technology development activities. The Final PEIS had identified that the AVLIS process could potentially be used to re-enrich depleted UF_6. USEC Inc. has announced that it will move forward with evaluating potentially more economical technology options, such as the Silex laser enrichment process and gas centrifuge technology.

X. Decision

DOE has decided that it will select the preferred alternative from the Final PEIS. This decision includes the following actions:

- DOE will take the necessary steps to promptly convert the depleted UF_6 inventory to depleted uranium oxide, depleted uranium metal, or a combination of both. Conversion to depleted uranium metal would occur

only when uses for the converted material are identified.

- The depleted uranium oxide will be used as much as possible and the remaining depleted uranium oxide will be stored for potential future uses or disposal, as necessary.
- Any proposal to proceed with the location, construction, and operation of a facility or facilities for conversion of the depleted UF_6 to a form other than depleted UF_6 will involve additional NEPA review (i.e., project-specific EIS).
- The proposed facilities to be constructed to support this conversion decision would be built consistent with the plan submitted as required by Public Law 105–204.
- DOE anticipates that approximately 4,700 cylinders containing depleted UF_6 that are located at the East Tennessee Technology Park at Oak Ridge would be shipped to a conversion facility.
- Depleted UF_6 will be available for use until all of it has been converted to another form.

XI. Conclusion

DOE believes conversion of the depleted UF_6 inventory to depleted uranium oxide as soon as possible is the prudent and proper decision. Several factors, including increased chemical stability, socioeconomic benefits associated with the conversion, and public and congressional desire to move forward with conversion, have contributed to this decision. Conversion to depleted uranium metal would be performed only when uses for the converted material are identified. At this time, the Department does not believe that long-term storage as depleted uranium metal and disposal as depleted uranium metal are reasonable alternatives; however, the Department remains open to exploring these options further. DOE will continue to safely maintain the depleted UF_6 cylinders while moving forward to implement the decisions set forth in this ROD.

Issued in Washington, D.C. this second day of August, 1999.

Bill Richardson,

Secretary of Energy.

[FR Doc. 99–20471 Filed 8–9–99; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Request for Information on Potential Studies in the Russian Federation of Low Dose-Rate Radiation Health Effects

AGENCY: Office of Environment, Safety and Health, DOE.

ACTION: Request for information.

SUMMARY: The U.S. Department of Energy (DOE), announces a request for information (RFI) on potential studies in the Russian Federation of low dose-rate radiation health effects. Specifically, DOE is interested in receiving information on new ideas for epidemiologic, dosimetric/biodosimetric, and/or molecular epidemiologic studies that would: (1) Build upon collaborative research already conducted on workers and populations in the Southern Urals; or (2) utilize information on other similar cohorts in the Russian Federation. Information submitted in response to this RFI will be used to define the scope of a Request for Applications (RFA) that may be issued in late calendar year 1999.

DATES: The deadline for receipt of submissions is October 5, 1999.

ADDRESSES: U.S. Department of Energy, Office of International Health Programs, EH–63/270CC, 19901 Germantown Road, Germantown, Maryland 20874–1290

FOR FURTHER INFORMATION CONTACT: Requests for further information on this announcement may be directed to Elizabeth White, Office of International Health Programs (EH–63), U.S. Department of Energy, telephone: (301) 903–7582; facsimile: (301) 903–1413; electronic mail: elizabeth.white@eh.doe.gov. Responses may be submitted, preferably by electronic mail or facsimile, to Ms. White.

SUPPLEMENTARY INFORMATION:

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I. Purpose

The Office of International Health Programs, Office of Environment, Safety and Health, in partnership with ministries of the Russian Federation, funds epidemiologic studies of cohorts of workers and populations to evaluate the health consequences (cancer and other diseases) of exposure to low dose-rate ionizing radiation. These ongoing studies are coordinated through the Joint Coordinating Committee for Radiation Effects Research (JCCRER). Section II (''Background'') provides a description of the JCCRER and Section III (''Description of Ongoing Projects'') sets forth a description of the populations currently being studied in the Russian Federation under the auspices of the JCCRER.

The purpose of this Notice is to encourage the submission of information on potential radiation health effects research. The Office of International Health Programs is interested in ideas for new epidemiologic, dosimetric/biodosimetric, and/or molecular epidemiologic studies that would: (1) Build upon low dose-rate radiation health effects research already conducted under the auspices of the JCCRER in the Southern Urals. In particular, DOE is looking for ideas for new projects involving the worker and population cohorts (See Section II) affected by radiation emitted from the Mayak Production Association; or (2) use other similar epidemiologic and dosimetric databases in the Russian Federation to further elucidate the health effects of chronic low dose-rate radiation exposure. In particular, we are interested in learning about other cohorts or potential cohorts of radiation-exposed workers and populations, and the potential scientific studies that could be developed for these cohorts.

DOE, with the help of its standing Scientific Review Group, will review the information submitted in response to this RFI for use in defining the scope of an RFA that may be issued in late calendar year 1999. DOE anticipates that approximately $1,000,000 may be available in fiscal year 2000 to initiate new feasibility projects.

II. Background

The JCCRER is a bilateral Government committee representing agencies from the United States and ministries from the Russian Federation. It was established to implement the Agreement on Cooperation in Research on Radiation Effects for the Purpose of Minimizing the Consequences of Radioactive Contamination on Health and the Environment signed on January 1, 1994, by U.S. Secretary of State Warren Christopher and Russian Foreign Minister Andrey Kozyrev to support and facilitate joint cooperative research.

Radiation research conducted jointly with the Russian Federation provides a unique opportunity to learn more about possible risks to groups of people from lengthy exposure to radiation. This could include people receiving exposure from uranium mining, operations of nuclear facilities, transport and disposal of radioactive materials, the testing and dismantling of nuclear weapons, radiation accidents, and grossly contaminated sites or facilities.

Currently, the JCCRER and DOE are focusing on population and worker studies in the Southern Urals region of