Record of Decision for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky, Site

AGENCY: Department of Energy

ACTION: Record of Decision

SUMMARY: The Department of Energy (DOE) prepared a *Final Environmental Impact Statement for Construction and Operation of a Depleted Uranium Hexafluoride Conversion Facility at the Paducah, Kentucky, Site* (FEIS) (DOE/EIS-0359). The FEIS Notice of Availability was published by the U.S. Environmental Protection Agency (EPA) in the *Federal Register* (69 FR 34161) on June 18, 2004. In the FEIS, DOE considered the potential environmental impacts from the construction, operation, maintenance, and decontamination and decommissioning (D&D) of the proposed depleted uranium hexafluoride (DUF_6) conversion facility at three alternative locations within the Paducah site, including transportation of depleted uranium conversion products and waste materials to a disposal facility; transportation and sale of the aqueous hydrogen fluoride (HF) produced as a conversion co-product; and neutralization of aqueous HF to calcium fluoride (CaF_2) and its sale or disposal in the event that the aqueous HF product is not sold. An option of shipping the East Tennessee Technology Park (ETTP) cylinders to the Paducah site has also been considered, as has an option of expanding operations by increasing efficiency or extending the period of operation. A similar EIS was issued concurrently for construction and operation of a DUF_6 conversion facility at DOE's Portsmouth, Ohio, site (DOE/EIS-0360).

DOE has decided to construct and operate the conversion facility in the south-central portion of the Paducah site, the preferred alternative identified in the FEIS as Location A. Groundbreaking for construction of the facility will commence on or before July 31, 2004, as anticipated by Public Law (P.L.) 107-206. The aqueous HF produced during conversion will be sold for use, pending approval of authorized release limits, as appropriate.

ADDRESSES: The FEIS and this Record of Decision (ROD) are available on the DOE National Environmental Policy Act (NEPA) Web site at http://www.eh.doe.gov/nepa and on the Depleted UF_6 Management Information Network Web site at http://web.ead.anl.gov/uranium. Copies of the FEIS and this ROD may be requested by e-mail at Pad_DUF6@anl.gov, by toll-free telephone at 1-866-530-0944, by toll-free fax at 1-866-530-0943, or by contacting Gary S. Hartman, Oak Ridge Operations Office, U.S. Department of Energy, SE-30-1, P.O. Box 2001, Oak Ridge, Tennessee 37831.

FOR FURTHER INFORMATION CONTACT: For information on the conversion facility construction and operation, contact Gary Hartman at the address listed above. For general information on the DOE NEPA process, contact Carol Borgstrom, Director, Office of NEPA Policy and Compliance (EH-42), U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585, 202-586-4600, or leave a message at 1-800-472-2756.

SUPPLEMENTARY INFORMATION:

I. Background

The United States has produced DUF_6 since the early 1950s as part of the process of enriching natural uranium for both civilian and military applications. Production took place at three gaseous diffusion plants (GDPs), first at the K-25 site (now called ETTP) at Oak Ridge, Tennessee, and subsequently at Paducah, Kentucky, and Portsmouth, Ohio. The K-25 plant ceased enrichment operations in 1985, and the Portsmouth plant ceased enrichment operations in 2001. The Paducah GDP continues to operate.

Approximately 440,000 t (484,000 tons) of DUF_6 is presently stored at Paducah in about 36,200 cylinders. The majority of the cylinders weigh approximately 12 t (14 tons) each, are 48 inches (1.2 m) in diameter, and are stored on outside pads. DOE has been looking at alternatives for managing this inventory. Also in storage at Paducah are approximately 1,940 cylinders of various sizes that contain enriched UF_6 or normal UF_6 (collectively called "non-DUF_6" cylinders) or are empty. [The non-DUF_6 cylinders would not be processed in the conversion facility.]

As a first step, DOE evaluated potential broad management options for its DUF_6 inventory in a *Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexafluoride* (DUF_6 PEIS) (DOE/EIS-0269) issued in April 1999. In the PEIS Record of Decision (64 FR 43358, August 10, 1999), DOE decided to promptly convert the DUF_6 inventory to a more stable uranium oxide form and stated that it would use the depleted uranium oxide as much as possible and store the remaining depleted uranium oxide for potential future uses or disposal, as necessary. In addition, DOE would convert DUF_6 to depleted uranium metal, but only if uses for metal were available. DOE did not select specific sites for the conversion facilities but reserved that decision for subsequent NEPA review. Today's Record of Decision announces the outcome of that site-specific NEPA review. DOE is also issuing today a separate but related ROD announcing the siting of a DUF_6 conversion facility at Portsmouth, Ohio.

Congress enacted two laws that directly addressed DOE's management of its DUF_6 inventory. The first law, P.L. 105-204, signed by the President in July 1998, required the Secretary of Energy to prepare a plan to commence construction of, no later than January 31, 2004, and to operate an on-site facility at each of the GDPs at Paducah, Kentucky, and Portsmouth, Ohio, to treat and recycle DUF_6, consistent with NEPA. The second law, P.L. 107-206, signed by the President on August 2, 2002, required that no later than 30 days after enactment, DOE must award a contract for the scope of work described in its Request for Proposals (RFP) issued in October 2000 for the design, construction, and operation of a DUF_6 conversion facility at each of the Department's Paducah, Kentucky, and Portsmouth, Ohio, gaseous diffusion sites. It also stipulated that the contract require groundbreaking for construction to occur no later than July 31, 2004, at both sites.

In response to these laws, DOE issued the *Final Plan for the Conversion of Depleted Uranium Hexafluoride as Required by Public Law 105-204* in July 1999, and awarded a contract to Uranium Disposition Services (UDS) for construction and operation of two conversion facilities on August 29, 2002, consistent with NEPA.

On September 18, 2001, DOE published a Notice of Intent (NOI) in the *Federal Register* (66 FR 48123) announcing its intention to prepare an EIS for the proposed action to construct, operate, maintain, and decontaminate and decommission two DUF_6 conversion facilities: one at Portsmouth and one at Paducah. Following the enactment of P.L. 107-206, DOE reevaluated the appropriate scope of its site-specific NEPA review and decided to prepare two separate EISs, one for the plant proposed for the Paducah site and a second for the Portsmouth site. This change in approach was announced in the *Federal Register* on April 28, 2003 (68 FR 22368).

The two draft conversion facility EISs were mailed to stakeholders in late November 2003, and a Notice of Availability was published by the EPA in the *Federal Register* on November 28, 2003 (68 FR 66824). Comments on the draft EISs were accepted during a 67-day review period that ended on February 2, 2004. DOE considered these comments and prepared two FEISs. The Notice of Availability for the two FEISs was published by the EPA in the *Federal Register* (69 FR 34161) on June 18, 2004.

II. Purpose and Need for Agency Action

DOE needs to convert its inventory of DUF_6 to more stable chemical form(s) for use or disposal. This need follows directly from (1) the decision presented in the August 1999 ROD for the PEIS, namely, to begin conversion of the DUF_6 inventory as soon as possible, and (2) P.L. 107-206, which directs DOE to award a contract for construction and operation of conversion facilities at both the Paducah site and the Portsmouth site.

III. Alternatives

No Action Alternative. Under the no action alternative, conversion would not occur. Current cylinder management activities (handling, inspection, monitoring, and maintenance) would continue; thus the status quo would be maintained at Paducah indefinitely.

Action Alternatives. The proposed action evaluated in the FEIS is to construct and operate a conversion facility at the Paducah site for conversion of the Paducah DUF_6 inventory into depleted uranium oxide (primarily triuranium octaoxide [U_3O_8]) and other conversion products. The FEIS review is based on the conceptual conversion facility design proposed by the selected contractor, UDS. The UDS dry conversion process is a continuous process in which DUF_6 is vaporized and converted to a mixture of uranium oxides (primarily U_3O_8) by reaction with steam and hydrogen in a fluidized-bed conversion unit. The hydrogen is generated from anhydrous ammonia (NH_3). The depleted U_3O_8 powder is collected and packaged for disposition in bulk bags (large-capacity, strong, flexible bags) or the emptied cylinders to the extent practicable. Equipment would also be installed to collect the aqueous HF (also called HF acid) co-product and process it into HF at concentrations suitable for commercial resale. A backup HF acid

neutralization system would convert up to 100% of the HF acid to CaF_2 for sale or disposal in the future, if necessary. The conversion products would be transported to a disposal facility or to users by truck or rail. The conversion facility will be designed with four parallel processing lines to convert 18,000 t (20,000 tons) of DUF_6 per year, requiring 25 years to convert the Paducah inventory.

Three alternative locations within the site were evaluated, Locations A (preferred), B, and C. In addition, an option of transporting the ETTP cylinders to Paducah rather than to Portsmouth was considered, as was an option of expanding conversion facility operations.

Alternative Location A (Preferred Alternative). Location A is the preferred location for the conversion facility. It is located south of the administration building and its parking lot, immediately west of and next to the primary location of the DOE cylinder yards and east of the main plant access road. This location is an L-shaped tract consisting mostly of grassy field. However, the southeastern section is a wooded area. A drainage ditch crosses the northern part of the site, giving the cylinder yard storm water access to Kentucky Pollution Discharge Elimination System (KPDES) Outfall 017. This location is about 35 acres (14 ha) in size and was identified in the RFP for conversion services as the site for which bidders were to design their proposed facilities.

Alternative Location B. Location B is directly south of the Paducah maintenance building and west of the main plant access road. The northern part of this location is mowed grass and has a slightly rolling topography. The southern part has a dense covering of trees and brush, and some high-voltage power lines cross it, limiting its use. This location has an area of about 59 acres (23 ha).

Alternative Location C. Location C is east of the Paducah pump house and cooling towers. It has an area of about 53 acres (21 ha). Dykes Road runs through the center of this location from north to south. Use of the eastern half of this location could be somewhat limited because several high-voltage power lines run through this area.

Under the action alternatives, DOE evaluated the impacts from packaging, handling, and transporting depleted uranium oxide conversion product (primarily U_3O_8) from the conversion facility to a low-level waste (LLW) disposal facility that would be (1) selected in a manner consistent with DOE policies and orders and (2) authorized to receive the conversion products by DOE (in conformance with DOE orders), or licensed by the U.S. Nuclear Regulatory Commission (NRC) (in conformance with NRC regulations), or an NRC Agreement State agency (in conformance with state laws and regulations determined to be equivalent to NRC regulations). Assessment of the impacts and risks from on-site handling and disposal at an LLW disposal facility has been deferred to the disposal site's site-specific NEPA or licensing documents. While the FEIS presents the impacts from transporting the DUF_6 conversion products to both the Envirocare of Utah, Inc., facility and the Nevada Test Site (NTS), DOE plans to decide the specific disposal location(s) for the depleted U_3O_8 conversion product after additional NEPA review, as necessary. Accordingly, DOE will continue to evaluate its disposal options and will consider any further information or comments relevant to that decision. DOE

will give a minimum 45-day notice before making its specific disposal decision and will provide any additional NEPA analysis for public review and comment.

The following alternatives were considered but not analyzed in detail in the FEIS: Use of Commercial Conversion Capacity, Sites Other Than Paducah, Alternative Conversion Processes, Long-Term Storage and Disposal Alternatives, Transportation Modes Other Than Truck and Rail, and One Conversion Plant Alternative.

IV. Summary of Environmental Impacts

The FEIS evaluated potential impacts from the range of alternatives described above. The impact areas included human health and safety, air quality, noise, water and soil, socioeconomics, ecological resources, waste management, resource requirements, land use, cultural resources, environmental justice, and cumulative impacts. In general, the impacts are low for both the no action and the proposed action alternatives. Among the three alternative locations considered at the Paducah site for the conversion facility, there are no major differences in impacts that would make one location clearly environmentally preferable. The discussion below summarizes the results of the FEIS impact analyses, highlighting the differences among the alternatives.

Human Health and Safety —Normal Operations and Transportation. Under all alternatives, it is estimated that potential exposures of workers and members of the general public to radiation and chemicals would be well within applicable public health standards and regulations. UDS would confirm, prior to conversion or at the initiation of the conversion operations, that polychlorinated biphenyl (PCB) releases to the workplace from the paint coating of some cylinders manufactured prior to 1978 would be within applicable Occupational Safety and Health Administration (OSHA) limits. Transportation by rail would tend to cause fewer impacts than by truck primarily because of exhaust emissions from the trucks and the higher number of shipments for trucks than for rail. The option of converting the aqueous HF to CaF_2 and transporting the CaF_2 to a disposal facility would result in increased shipments. The impacts associated with transportation of uranium oxide product to a disposal facility in the western United States by truck would be about the same if bulk bags are used or two filled cylinders are loaded onto a truck. If only one cylinder is loaded onto a truck, the impacts would be higher because of the increased number of shipments.

Human Health and Safety —Accidents. DOE has extensive experience in safely storing, handling, and transporting cylinders containing UF_6 (depleted, normal, or enriched). In addition, the chemicals used or generated at the conversion facility are commonly used for industrial applications in the United States, and there are well-established accident prevention and mitigative measures for their storage and transportation.

Under all alternatives, it is possible that accidents could release radiation or chemicals to the environment, potentially affecting both the workers and members of the general public. It is also possible that, similar to other industrial facilities, workers could be injured or killed as a result of on-the-job accidents unrelated to radiation or chemical exposure. Similarly, during transportation of materials, both crew members and members of the public may be injured or killed as a result of traffic accidents.

Three kinds of accidents have the largest possible consequences: (1) those involving the DUF_6 cylinders during storage and handling under all alternatives, (2) those involving chemicals used or generated by the conversion process at the conversion site (in particular NH_3 and aqueous HF) under the action alternatives, and (3) those occurring during transportation of chemicals and cylinders under the action alternatives. The severity of the consequences from such accidents would depend on weather conditions at the time of the accident, and, in the case of the transportation accidents, the location of the accident, and could be significant. However, those accidents would have a low estimated probability of occurring, making the risk low. (Risk is determined by multiplying the consequences by the probability of occurrence).

In comparing truck versus rail transportation, even though the consequences of rail accidents are generally higher (because of the larger cargo load per railcar than per truck), the accident probabilities tend to be lower for railcars than for trucks. As a result, the risks of accidents would be about the same under either option.

Under the no action alternative, the risks associated with cylinder storage and handling would continue to exist as long as the cylinders are there. However, under the action alternatives, the risks associated with both the cylinder accidents and the chemical accidents would decline over time and disappear at the completion of the project.

Air Quality and Noise. Under the action alternatives, the total (modeled plus background value) concentrations due to emissions of most criteria pollutants — such as sulfur dioxide, nitrogen oxides, and carbon monoxide — would be well within applicable air quality standards. For construction, the primary concern would be particulate matter (PM) released from near-ground-level sources. Total concentrations of PM_{10} and $PM_{2.5}$ (PM with an aerodynamic diameter of 10 μm or less and 2.5 μm or less, respectively) at the construction site boundaries would be close to or above the standards because of the high background concentrations. Accordingly, construction activities would be conducted so as to minimize further impacts on ambient air quality.

Water and Soil. During construction of the conversion facility, concentrations of any potential contaminants in soil, surface water, or groundwater would be kept well within applicable standards or guidelines by implementing storm water management, sediment and erosion controls, and good construction practices. During operations, no impacts would be expected because no contaminated liquid effluents are anticipated.

Socioeconomics. Under the action alternatives, construction and operation of the conversion facility would create more jobs and personal income in the vicinity of the Paducah site than would be possible under the no action alternative. The number of jobs would be approximately 190 direct and 290 total during construction, and 160 direct and 330 total during operations.

Ecology. For the action alternatives, the total area disturbed during conversion facility construction would be up to 45 acres (18 ha). Although vegetation communities in the disturbed area would be impacted by a loss of habitat, impacts could be minimized (e.g., by appropriate placement of the facility within each location), and negligible long-term impacts to vegetation

and wildlife are expected at all locations. Impacts to wetlands could be minimized, depending on where exactly the facility was placed within each location and by maintaining a buffer near adjacent wetlands during construction. Construction of the conversion facility in the eastern portion of Location C could impact potential habitat for cream wild indigo (state-listed as a species of special concern) and compass plant (state-listed as threatened). For construction at all three locations, potential impacts to forested areas could be avoided if temporary construction areas were placed in previously disturbed locations. During construction, trees with exfoliating bark (such as shagbark hickory or dead trees with loose bark) that can be used by the Indiana bat (federal- and state-listed as endangered) as roosting trees during the summer would be saved if possible.

Waste Management. Under the action alternatives, waste generated during construction and operations would have negligible impacts on the Paducah site waste management operations, with the exception of possible impacts from disposal of CaF_2. If the aqueous HF were not sold but instead neutralized to CaF_2, it is currently unknown whether (1) the CaF_2 could be sold, (2) the low uranium content would allow the CaF_2 to be disposed of as nonhazardous solid waste, or (3) disposal as LLW would be required. The low level of uranium contamination expected (i.e., less than 1 ppm) suggests that sale or disposal as nonhazardous solid waste would be most likely. Waste management for disposal as nonhazardous waste could be handled through appropriate planning and design of the facilities. If the CaF_2 had to be disposed of as LLW, it could represent a potentially large impact on waste management operations.

The U_3O_8 produced during conversion would amount to about 80% of Paducah's annual projected LLW volume.

Option of Shipping ETTP Cylinders to Paducah. The cylinders at ETTP would require preparation for shipment by either truck or rail. Three cylinder preparation options were considered for the shipment of noncompliant cylinders: cylinder overpacks, shipping "as-is" under a U.S. Department of Transportation (DOT) exemption, and use of a cylinder transfer facility (there are no current plans to build such a facility at ETTP). The operational impacts (e.g., storage, handling, and maintenance of cylinders) from any of the options would be small and limited primarily to external radiation exposure of involved workers. The annual impacts from conversion operations at Paducah would remain the same, however the conversion period would be approximately 3 years longer. If a decision was made to construct and operate a transfer facility at ETTP in the future, additional NEPA review would be conducted.

Conversion Product Sale and Use. The conversion of the DUF_6 inventory produces products having some potential for reuse. These products include aqueous HF and CaF_2, which are commonly used as commercial materials. DOE is currently pursuing the establishment of authorization limits (allowable concentration limits of uranium) in these products to be able to free-release them to commercial users. In addition, there is a small potential for reuse of the depleted uranium oxide product.

D&D Activities. D&D impacts would be primarily from external radiation to involved workers and would be a small fraction of allowable doses. Wastes generated during D&D operations

would be disposed of in an appropriate disposal facility and would result in low impacts in comparison with projected site annual generation volumes.

Cumulative Impacts. The FEIS analyses indicated that no significant cumulative impacts at the Paducah site and its vicinity would be anticipated due to the incremental impacts of the proposed action when added to other past, present, and reasonably foreseeable future actions.

Option of Expanding Conversion Facility Operations. The throughput of the Paducah facility could be increased by making process efficiency improvements. Such an increase would not be expected to significantly change the overall environmental impacts when compared with those of the current plant design.

The conversion facility operations could be extended to process any additional DUF_6 for which DOE might assume responsibility by operating the facility longer than the currently anticipated 25 years. With routine facility and equipment maintenance and periodic equipment replacements or upgrades, it is believed that the conversion facility could be operated safely beyond this time period. If operations were extended beyond 25 years and if the operational characteristics (e.g., estimated releases of contaminants to air and water) of the facility remained unchanged, it is expected that the annual impacts would be essentially unchanged.

V. Environmentally Preferred Alternative

In general, the FEIS shows greater impacts for the no action alternative than for the proposed action of constructing and operating the conversion facility mainly because of the relatively higher radiation exposures of the workers from the cylinder management operations and cylinder yards and because the cylinders and associated risk would remain if no action occurred. However, considering the uncertainties in the impact estimates and the magnitude of the impacts, the differences are not considered to be significant. The no action alternative has the potential for groundwater contamination with uranium over the long-term; this adverse impact is not anticipated under the proposed action alternatives. Beneficial socioeconomic impacts would be higher for the action alternatives than for the no action alternative.

The impacts associated with transportation of materials among sites would be comparable whether the transportation is by truck or rail.

With all alternatives, there is the potential for some high-consequence accidents to occur. The risks associated with such accidents can only be completely eliminated when the conversion of the DUF_6 inventory has been completed.

Although there are some differences in impacts among the three alternative locations for the conversion facility, these differences are small and well within the uncertainties associated with the methods used to estimate impacts. 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 FEIS is clearly environmentally preferable compared to the other alternatives.

VI. Comments on Final EIS

The Final EIS was mailed to stakeholders in early June 2004, and the EPA issued a Notice of Availability in the *Federal Register* on June 18, 2004. The entire document was also made available on the World Wide Web. Two comment letters were received on the DUF6 Conversion Facility Final EISs. The State of Nevada indicated that it had no comments on the Final EISs and that the proposal was not in conflict with state plans, goals, or objectives. The U.S. Environmental Protection Agency, Region 5 in Chicago, stated that the Portsmouth Final EIS adequately address its concerns, and that it concurs with the Preferred Alternative and has no further concerns.

DECISION:

I. Bases for the Decision

DOE considered potential environmental impacts as identified in the FEIS (including the information contained in the classified appendix); cost; applicable regulatory requirements; Congressional direction as included in P.L.s 105-204 and 107-206; agreements among DOE and the States of Ohio, Tennessee, and Kentucky concerning the management of DUF_6 currently stored at the Portsmouth, ETTP, and Paducah sites, respectively; and public comments in arriving at its decision. In deciding among the three alternative locations at the Paducah site for the conversion facility, DOE considered environmental factors, site preparation requirements affecting construction, availability of utilities, proximity to cylinder storage areas, and potential impacts to current or planned site operations. DOE has determined that Location A is the best alternative. DOE believes that the decision identified below best meets its programmatic goals and is consistent with all the regulatory requirements and public laws.

II. Decision

DOE has decided to implement the actions described in the preferred alternative from the FEIS at Location A. This decision includes the following actions:

- DOE will construct and operate the conversion facility at Location A within the Paducah site. Construction will commence on or before July 31, 2004, as intended by Congress in P.L. 107-206.

- All shipments to and from the conversion site, including any potential shipments of non-DUF_6 cylinders currently stored at ETTP to Paducah, will be conducted by either truck or rail, as appropriate. Cylinders will be shipped in a manner that is consistent with DOT regulations for the transportation of UF_6 cylinders.

- Current cylinder management activities (handling, inspection, monitoring, and maintenance) will continue, consistent with the Cylinder Project Management Plan for Depleted Uranium Hexafluoride, effective October 2003, which cover actions

needed to meet safety and environmental requirements, until conversion could be accomplished.

- The aqueous HF produced during conversion will be sold for use, pending approval of authorized release limits as appropriate. If necessary, CaF_2 will be produced and reused, pending approval of authorized release limits, or disposed of as appropriate.

- The depleted U_3O_8 conversion product will be reused to the extent possible or packaged for disposal in emptied cylinders at an appropriate disposal facility. DOE plans to decide the specific disposal location(s) for the depleted U_3O_8 conversion product after additional appropriate NEPA review. Accordingly, DOE will continue to evaluate its disposal options and will consider any further information or comments relevant to that decision. DOE will give a minimum 45-day notice before making the specific disposal decision and will provide any supplemental NEPA analysis for public review and comment.

III. Mitigation

On the basis of the analyses conducted for the FEIS, the DOE will adopt all practicable measures, which are described below, to avoid or minimize adverse environmental impacts that may result from constructing and operating a conversion facility at Location A. These measures are either explicitly part of the alternative or are already performed as part of routine operations.

- The conversion facility will be designed, constructed, and operated in accordance with the comprehensive set of DOE requirements and applicable regulatory requirements that have been established to protect public health and the environment. These requirements encompass a wide variety of areas, including radiation protection, facility design criteria, fire protection, emergency preparedness and response, and operational safety requirements.

- Cylinder management activities will be conducted in accordance with applicable DOE safety and environmental requirements, including the Cylinder Management Plan.

- Temporary impacts on air quality from fugitive dust emissions during reconstruction of cylinder yards or construction of any new facility will be controlled by the best available practices, as necessary, to comply with the established standards for PM_{10} and $PM_{2.5}$.

- During construction, impacts to water quality and soil will be minimized through implementing storm water management, sediment and erosion controls, and good construction practices consistent with the Soil, Erosion, and Sediment Control Plan and Construction Management Plan.

- If live trees with exfoliating bark are encountered on construction areas, they will be saved if possible to avoid destroying potential habitat for the Indiana bat.

Issued in Washington, D.C. this 20TH day of July 2004.

Jessie Hill Roberson
Assistant Secretary for Environmental Management