Record of Decision

FOR THE MERCURY MANAGEMENT EIS

April 2004

Defense Logistics Agency
Defense National Stockpile Center
Fort Belvoir, Virginia

DEPARTMENT OF DEFENSE
Defense Logistics Agency

Record of Decision for the Final Mercury Management Environmental Impact Statement; Notice

AGENCY: Defense Logistics Agency, Defense National Stockpile Center

ACTION: Notice of Availability of a Record of Decision for the Final Mercury Management Environmental Impact Statement

SUMMARY: The Defense Logistics Agency (DLA) announces the availability of the Record of Decision for the Final Mercury Management Environmental Impact Statement (Final EIS). This announcement is made pursuant to the Council on Environmental Quality's regulations (40 CFR Parts 1500–1508) and the DLA regulation (DLAR 1000.22, Environmental Considerations in DLA Actions in the United States) that implement the National Environmental Policy Act (NEPA). The Notices of Availability for the Final EIS were published in the ***Federal Register*** on March 26, 2004 (69 FR 15820 and 15830).

The Defense National Stockpile Center (DNSC) has decided to consolidate its commodity-grade, elemental mercury stockpile at one site. This decision is based on a combination of environmental and economic factors, policy considerations, and stakeholder comments. The Consolidated Storage Alternative and the rationale for selecting it are presented in detail in the Supplementary Information section. DNSC will select a site for consolidated storage after completion of a procurement process. If a site other than one of those evaluated in the Final EIS is selected, additional environmental documentation may be required.

The Final EIS analyzes in detail three alternatives for managing the National Defense Stockpile inventory of excess mercury: 1) no action, i.e., leave the mercury at the existing storage locations; 2) consolidated storage of the mercury stockpile at one site; and 3) sale of the stockpile. Agencies are required by regulation to identify a preferred alternative in the final EIS. The preferred alternative is the one that best meets an agency's objectives. The Consolidated Storage Alternative is DNSC's Preferred Alternative in the Draft and Final EIS. DNSC has selected Consolidated Storage at one site in this Record of Decision as the alternative it will implement.

NEPA requires identification of an environmentally preferable alternative in the record of decision. An environmentally preferable alternative is the alternative that poses the fewest overall impacts and the least risk. It may differ from both the preferred alternative and the alternative selected for implementation in the record of decision. DNSC has identified the No Action Alternative as the Environmentally Preferable Alternative. Details are provided in the Supplementary Information section.

FOR FURTHER INFORMATION: Paper copies of the Final EIS (about 1,000 pages) and the Executive Summary (about 20 pages) are available by writing to: Attention: Project Manager, Mercury Management EIS; DNSC-E; Defense National Stockpile Center, 8725 John J. Kingman Road, Suite 3229, Fort Belvoir, Virginia 22060-6223, or by calling toll free at 1-888-306-6682. Electronic versions of the Final EIS, the Executive Summary, and this Record of Decision are available on the Internet at www.mercuryeis.com. Requests for information can be made by: leaving a voice message at 1-888-306-6682 or faxing a message to 1-888-306-8818 (through May 31, 2004); emailing a request to information@mercuryeis.com; or accessing the Mercury Management EIS website at www.mercuryeis.com.

SUPPLEMENTARY INFORMATION:

Background

DNSC is responsible for the disposition of stockpiled materials declared in excess of national defense needs. The U.S. Congress has determined that the U.S. Department of Defense no longer needs to maintain a stockpile of commodity-grade mercury because of the increased use of mercury substitutes and because of increases in the Nation's secondary mercury production through recovery and recycling. Therefore, as custodian of the mercury, DNSC must decide on a strategy for long-term management of this material.

The DNSC inventory of mercury (approximately 4,890 tons [4,436 metric tons]) is safely stored in enclosed warehouses at four sites in the United States: Hillsborough, New Jersey (2,885 tons [2,617 metric tons]); New Haven, Indiana (614 tons [557 metric tons]); Oak Ridge, Tennessee (770 tons [699 metric tons]); and Warren, Ohio (621 tons [563 metric tons]). DNSC excess mercury was offered for sale in open competitions until 1994, when concerns over mercury accumulation in the environment prompted DNSC to suspend sales. Mercury is a pollutant of environmental concern because it is toxic and persistent; it accumulates in the environment; and it poses human health and ecological risks.

The potential impacts of transporting and storing mercury under the various alternatives are summarized in this document. Terms used in this Record of Decision and their definitions are provided in **Tables** 1 and 2.

Table 1. Impact Categories and Definitions

Impact Category		Definition
Beneficial Impacts	Major	An action that would greatly improve current conditions
	Moderate	An action that would moderately improve current conditions
	Minor	An action that would slightly improve current conditions
Negligible or No Impact		An action that would neither degrade nor improve current conditions
Adverse Impacts	Minor	An action that would slightly degrade current conditions
	Moderate	An action that would moderately degrade current conditions
	Major	An action that would greatly degrade current conditions

Note**:** Impacts may also be categorized as short term (less than 5 years) or long term.

Table 2. Risk Categories and Definitions

Risk Category		Definition
Reduced Risk	Major	An action that would greatly reduce risk
	Moderate	An action that would moderately reduce risk
	Minor	An action that would slightly reduce risk
Negligible or No Risk	Increase	An action that would neither reduce nor increase risk
Increased Risk	Minor	An action that would slightly increase risk
	Moderate	An action that would moderately increase risk
	Major	An action that would greatly increase risk

Note**:** Impacts may also be categorized as acute (less than or equal to 24 hours) or chronic

Alternatives Considered

In compliance with NEPA and DLAR 1000.22, DNSC prepared an EIS to evaluate the environmental impacts of a range of reasonable alternatives for long-term management (i.e., 40 years) of the excess mercury. The alternatives evaluated in detail in the EIS are: (1) No Action; (2) Consolidated Storage; and (3) Sales.

Under the No Action Alternative, DNSC would continue to store its excess mercury at the four current storage sites for up to 40 years. Monitoring and maintenance would continue. There would be no major modifications to existing storage buildings or the mercury storage containers. This alternative would not allow DNSC to downsize or close storage depots and is not compatible with the U.S. Department of Energy's (DOE's) mission at the Y-12 National Security Complex (Y-12) in Oak Ridge, Tennessee.

Under the Consolidated Storage Alternative, which DNSC has selected for implementation, the entire DNSC mercury stockpile would be stored for up to 40 years at one of the three DNSC depots where mercury is currently stored (i.e., in Hillsborough, New Jersey; near New Haven, Indiana; or near Warren, Ohio) or at a non-DNSC site. DNSC mercury is also stored at a fourth site, Y-12. Y-12 is not considered for consolidated storage because it does not have enough space, and long-term storage of DNSC mercury is not part of its national security mission.

The non-DNSC sites analyzed in the Final EIS are the Hawthorne Army Depot in Hawthorne, Nevada; the PEZ Lake Development near Romulus, New York; and the Utah Industrial Depot in Tooele, Utah. These sites, together with the DNSC storage locations, represent a wide range of environmental and socioeconomic settings. The PEZ Lake Development is no longer under consideration as a consolidated storage site because the facility managers withdrew it from consideration based on business and site development plans.

The Sales Alternative consists of two options: 1) selling the mercury at the proposed maximum allowable market rate over a period of approximately 26 years and 2) selling the entire inventory in one year to reduce mercury mining.

Under the first sales option, the mercury would be sold at the estimated maximum allowable market rate of 5,000 flasks per year. The mercury could be sold directly to producers and users or to traders or brokers, who would then sell it to producers and users. Producers include mercury mining, refining, and recovery companies. Users include chemical processors and manufacturers of such products as lights, electrical switches, thermometers, dental materials, medicine, and medical equipment.

The second sales option calls for sale of the entire inventory to a mercury mining company. To avoid undue disruption of the mercury market, as required by the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98, et. seq.), an agreement would be negotiated requiring the mining company to sell DNSC mercury at a rate no greater than the rate of sale for newly mined mercury.

DNSC considered evaluating alternatives for treatment of mercury that would enable disposal in a qualified landfill. However, there are currently no viable commercially-available technologies capable of rendering large quantities of elemental mercury stable enough for placement in landfills. For this reason, and because the U.S. Environmental Protection Agency (EPA) has not approved a path forward for treatment and disposal of elemental mercury, this alternative is not evaluated in detail in the EIS.

Preferred Alternative

Agencies are required by regulation (40 CFR 1502.14[e]) to identify a preferred alternative in the final EIS and are encouraged to identify one as early as possible in the NEPA process. Consolidated Storage at one site is identified as DNSC's Preferred Alternative in both the Draft and Final EIS.

Environmentally Preferable Alternative

Agencies are required by regulation (40 CFR 1505.2[b]) to identify an environmentally preferable alternative in the record of decision. An environmentally preferable alternative is the one that poses the fewest overall impacts and the least risk. It may differ from both the preferred alternative and the alternative selected for implementation in the record of decision.

Identification of the environmentally preferable alternative is based on weighing higher–intensity, short-term impacts and risks (e.g., transportation risks) against lower-intensity, long-term impacts and risks that could occur during storage of mercury.

DNSC has identified the No Action Alternative as the Environmentally Preferable Alternative. The analysis in the Final EIS indicates that it would have negligible long-term environmental impacts and negligible-to-low human health and ecological risk. Because the mercury would not be relocated under this alternative, there would be no additional transportation risks.

As described in the Final EIS, few discriminating factors among the impacts associated with the alternatives were identified. The differences in environmental impacts are

largely due to the number of sites affected and the duration of the impacts. The differences in human health and ecological risks are primarily a function of the distance shipped.

Although the No Action Alternative is considered marginally environmentally preferable, this alternative would not allow DNSC to downsize or close storage depots and is not compatible with DOE's national security mission at Y-12.

Public Participation

DNSC began the mercury management EIS process by publishing a notice of intent in the ***Federal Register*** on February 5, 2001. The Notice of Intent described the proposed action, provided background information on anticipated issues and potential impacts, and identified a preliminary list of alternatives to implement the proposed action.

As part of this early and open process, DNSC sought input from the public to help identify the alternatives, issues, and potential environmental impacts to be analyzed in the Draft EIS. Five public scoping meetings were held in communities near current mercury storage sites and in Washington, D.C., during the scoping period that ended on June 30, 2001. Issues that were raised at the meetings and those submitted in comments by letter, email, fax, and phone are documented in the report, Scope of the Mercury Management EIS (December 2001). Scoping comments were considered in developing the Draft EIS and are summarized in that document.

The Draft EIS or its Executive Summary was mailed to more than 830 individuals and organizations. The public comment period for the Draft EIS began with the publication of the EPA Notice of Availability in the ***Federal Register*** on April 11, 2003, and continued until July 18, 2003. In response to public requests to extend the comment period, the deadline for submittal of comments was extended informally until September 2, 2003.

During the comment period, DNSC held seven meetings to receive comments on the Draft EIS. The meetings were held in the communities that could be affected by the proposed actions, as well as in Washington, D.C. Approximately 230 people attended the public meetings.

DNSC received 295 comment documents (i.e., letters, emails, faxes, voice messages, comment forms, and meeting transcripts) containing 633 comments. Volume II of the Final EIS presents the comment documents, identifies the specific comment(s) within each, and provides DNSC's responses. The majority of the comments received on the Draft EIS are related to the Consolidated Storage Alternative, impacts on human health and safety, and environmental and economic impacts. Input from the public meetings along with comments received by other means, was considered in preparing the Final EIS. DNSC considered these comments as well when preparing this Record of Decision.

The Notices of Availability for the Final EIS were published in the ***Federal Register*** on March 26, 2004 (69 FR 15820 and 15830). The Final EIS or the Executive Summary

was mailed to more than 1,200 individuals and organizations.

Summary of Environmental Impacts

As described in the Final EIS, the potential environmental and socioeconomic impacts of alternatives for mercury management are generally negligible to minor. The Final EIS analyzes weather, air quality and noise, waste management, socioeconomics, geology and soils, water resources, ecological resources, cultural resources, land use and visual resources, infrastructure, and environmental justice. These would be largely unaffected, because the alternatives involve low-intensity activities associated with maintaining the stored mercury and do not involve building construction and land disturbance. Human health, ecological, and transportation risks are discussed in the Summary of Risks section.

The absence of transportation and the low level of activity associated with the No Action Alternative would result in negligible impacts. However, because DNSC depots would not be able to downsize or close, this alternative is not compatible with DNSC's long-term closure strategy. This alternative is also not compatible with DOE's national security mission at Y-12.

The Consolidated Storage Alternative would result in negligible-to-minor impacts. The impacts of the Consolidated Storage Alternative would be slightly greater than the No Action Alternative because of the higher level of activity associated with shipping the mercury. There would be minor beneficial impacts at the existing storage locations after removal of the mercury.

The Sales Alternatives would result in negligible-to-minor impacts from continuing to store the mercury until it is shipped and from preparing the mercury for shipment. Impacts of the Sales Alternatives would be slightly greater than those of the No Action Alternative because of the activities associated with shipping the mercury. Under the Sales at the Maximum Allowable Market Rate Alternative, the impacts of mercury storage would continue for up to 26 years until all the mercury is sold. Under the Sales to Reduce Mercury Mining Alternative, the impacts of mercury storage would end after one year. Minor beneficial impacts would occur at the existing storage locations after the mercury is removed.

Mercury would be sold directly or indirectly to users where the mercury would be employed in commercial processes. Because changes to the supply and cost of mercury on the world mercury market are expected to be negligible under either sales option, it is anticipated that users would continue their commercial processes as before and would not be expected to use more or less mercury because of DNSC mercury sales. Therefore, it is likely that there would be no additional impact at the users' locations resulting from implementation of either DNSC mercury sales option. In addition, sales to reduce mercury mining would result in moderate beneficial impacts of reduced mercury mining and refining.

Summary of Risks

Mercury is toxic and may pose human health and ecological risks. The human health and ecological risks of mercury storage, handling, and transportation activities during routine operations and accident conditions were evaluated. This analysis considered potential impacts on sensitive individuals such as children and the elderly.

"Routine operations" refers to the conduct of activities without incident. Activities entail use of equipment such as mercury vapor detectors and personal protective gear, and procedures designed to protect workers and minimize any emissions of mercury to the environment. Facility accident scenarios evaluated include slow leaks, dropped and punctured flasks, pallet collapse, forklift fires, building fires, wildfires, earthquakes, high winds and tornadoes, lightning, snow loads, aircraft and vehicle crashes, and explosions and fires at nearby facilities. In addition, truck and rail car spills and associated fires were analyzed.

Human health and ecological risks for the No Action Alternative would be negligible during normal operations and facility accidents. Because the mercury would not be transported under this alternative, there would be no transportation risks.

When compared with the No Action Alternative, the Consolidated Storage Alternative requires the transport of mercury, which could result in low, short-term risk to the public and negligible-to-low, short-term ecological risk. Higher levels of activity associated with preparing the mercury for transport could result in low risk to the public from facility accidents and negligible-to-low ecological risk. Negligible-to-moderate ecological risks could result if an accident resulting in a spill of mercury and a fire occurs while it is raining. The Consolidated Storage Alternative would result in reduced human health and ecological risk at the existing storage locations after the mercury is removed.

When compared with the No Action Alternative, the Sales Alternatives require the transport of mercury, which could result in moderate, short-term risk to the public and negligible-to-moderate, short-term ecological risk. Like the Consolidated Storage Alternative, higher levels of activity associated with preparing the mercury for transport could result in low risk to the public from facility accidents and negligible-to-low ecological risk.

If, during a rainstorm, a facility accident occurs that results in both a spill of mercury and a fire, negligible-to-moderate ecological risks would be expected. If, during a rainstorm, a transportation accident occurs that results in both a spill of mercury and a fire, negligible-to-high ecological risks would be expected. However, Chapter 4 of the Final EIS states that an accident during a rainstorm and resulting in a fire is a low probability event that is predicted to occur once in 10,000 to 1 million years.

In addition, the Sales Alternatives would result in reduced human health and ecological risk at existing storage locations after the mercury is removed. The Sales to Reduce Mercury Mining Alternative is estimated to result in reduced human health and ecological risk from reduced mercury mining and refining.

Mitigation
All practicable measures to avoid and minimize environmental impacts and risks that could result from consolidated storage are in place. These measures are found in DNSC's standard operating practices . No additional mitigation measures are necessary.

Cumulative Impacts
As described in the Final EIS, the impacts from implementing any of the mercury management alternatives would represent a negligible-to-minor contribution to cumulative impacts in the areas near the sites and to regional and global environments.

Summary of Costs
As described in the Final EIS, the estimated cost for 40 years of storage under the No Action Alternative is approximately $26 million. The estimated cost for 40 years of storage under the Consolidated Storage Alternative is $29 million. The Sales at the Maximum Allowable Market Rate Alternative costs range from $6.1 million to revenues of $12 million. For purposes of evaluation in the EIS, the market price of mercury is assumed to range from $58 to $195 per flask. This alternative includes the cost of storage for up to 26 years while the mercury is being sold. The estimated revenue from the Sales to Reduce Mercury Mining Alternative ranges between $7.5 and $25 million. This alternative does not include storage costs, because it is assumed that all the mercury would be sold in less than 1 year.

Basis for the Decision
DNSC has selected Consolidated Storage at one site for implementation. Consolidated Storage at one site is identified as the Preferred Alternative in the Draft and Final EIS. Selection of this alternative gives consideration to environmental and economic factors; policy considerations, and stakeholder comments, as summarized below:

- Consolidating the DNSC mercury inventory at one site results in negligible-to-minor environmental impacts at that site and improves environmental conditions at sites from which the mercury would be removed;
- Human health risks to the public are negligible for normal operations and negligible to low for facility and transportation accidents;
- Ecological risks are negligible for normal operations and negligible to low for facility and transportation accidents with dry deposition. Ecological risks are negligible to moderate for facility and transportation accidents if it is raining during an accident which results in a release of mercury and a fire;
- Consolidating the mercury inventory simplifies storage operations and results in economies of scale (i.e., fewer resources required to manage the mercury inventory);
- Consolidating the excess mercury inventory facilitates DNSC's long-term closure strategy at the sites from which the mercury is removed;
- Removing DNSC's excess mercury inventory is consistent with the national security mission of Y-12; and,
- The stored DNSC commodity-grade elemental mercury will be available for

future uses.

DNSC will select a site for consolidated storage after completion of a procurement process. If a site other than one of those evaluated in the Final EIS is selected, additional environmental documentation may be required. DNSC will announce the selection of its consolidated, long-term mercury storage site after completion of the procurement process.

Recent legislation, (Section 113 of Public Law 108-199, Consolidated Appropriations Act for Agriculture, Rural Development, Food and Drug Administration, and Related Agencies), requires the Secretary of Defense to submit a report on the consolidation of the mercury stockpile to Congress on June 1, 2004. Additionally, for 180 days after the report is submitted to Congress, DNSC is prohibited from making a decision to consolidate at a site that is not currently storing DNSC mercury.

Mercury flasks at the New Haven, Somerville, and Warren depots are currently stored in 30-gallon (114-liter) drums (overpacks); flasks from Y-12 are not overpacked. As described in the Final EIS, to provide an additional layer of protection, DNSC has made a commitment to overpack the flasks currently stored at Y-12 before they are placed in the consolidated storage facility.

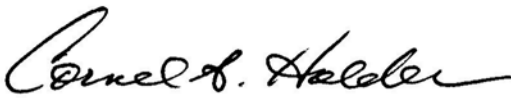
Because of the lack of space and rigid security constraints, it is not feasible to overpack the flasks at Y-12. The Warren Depot, located 536 miles (863 kilometers) from Y-12, has warehouse space available for this overpacking. Therefore, these mercury flasks will be transported by truck to the Warren Depot, near Warren, Ohio, for overpacking and storage pending selection of the consolidated storage location.

The impacts and risks of overpacking and storing the mercury at the Warren Depot are comparable to those identified in the Mercury Reflasking Environmental Assessment (EA), for which a Finding of No Significant Impact (FONSI) was signed on October 19, 2000; and in the Mercury Overpacking at Somerville, New Jersey EA, for which a FONSI was signed on May 24, 2001. The impacts and risks of overpacking the Y-12 mercury flasks at the Warren Depot would be similar to or less than those evaluated in these documents.

The risks of transporting to and storing the mercury at the Warren Depot are less than those associated with the Consolidated Storage Alternative analyzed in the Final EIS. Under the Consolidated Storage Alternative, the shipment of 4,890 tons (4,436 metric tons) of mercury to the Warren Depot is analyzed. The Final EIS estimates that transportation of the entire stockpile of mercury would result in low risk to human health and moderate risk to plants and animals. Because only 16 percent (770 tons [699 metric tons]) of the total amount of mercury analyzed in the Final EIS (4,890 tons [4,436 metric tons]) would be transported to the Warren Depot for overpacking, the impacts would be considerably less than the EIS analysis indicates, and no significant human health or ecological risks would be expected. Similarly, storing a total of 30 percent of the mercury stockpile at Warren would pose no significant human health or ecological risks.

In accordance with DLAR 1000.22, a Record of Determination, based on the EAs and FONSIs discussed above and the Final EIS, has established that no significant impacts can be expected to result from moving the mercury from Y-12 to the Warren Depot and overpacking and storing it at the Warren Depot. A copy of this Record of Determination has been placed in the Administrative Record.

Issued in Fort Belvoir, Virginia, on this 22nd day of April, 2004.



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