



Department of Energy

Washington, DC 20585

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MEMORANDUM FOR DISTRIBUTION

FROM: INÉS R. TRIAY *Inés Triay*
ASSISTANT SECRETARY FOR
ENVIRONMENTAL MANAGEMENT

SUBJECT: Strategic Technology for Energy Plan

In support of the development of the Department's Strategic Technology for Energy Plan (STEP), the Office of Environmental Management (EM) is establishing a Program Planning Team. This team will be led by Ms. Merle Sykes, Deputy Assistant Secretary for Program Planning and Budget and will be comprised of EM Field Managers and the Deputy Assistant Secretaries at Headquarters. As part of this effort, EM will be required to develop strategic alternatives to meet the President's and the Secretary's cleanup objectives.

Attached is the framework EM will utilize, with specific actions to be undertaken by your organizations, to support development of EM's component of the STEP. EM's strategic planning efforts will continue to focus on alternative approaches for footprint reduction; tank waste disposition; excess nuclear materials and spent nuclear fuel disposition; and reutilization of Departmental assets, such as the establishment of Energy Parks. Focusing on these areas will support establishment of strategic alternatives for the EM portfolio, reduce the overall cost of the program, complete cleanup activities faster in an environmentally safe manner, and return assets to the surrounding communities.

I look forward to an invigorating exchange of ideas as we move the EM strategic planning process forward. Additional logistical information will be provided under separate cover. If you have questions or concerns regarding this effort, please contact Ms. Merle Sykes, Deputy Assistant Secretary for Program Planning and Budget, at (202) 586-8754 or Mr. Jay Rhoderick, Director, Office of Strategic Planning and Analysis, at (301) 903-7180.

Attachment



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Strategic Guidance Office of Environmental Management

Strategic Goals

- Improve *Safety Performance* with the goal of zero accidents/incidents
- Improve *Project Management* with the objective of delivering results consistently on time and within cost so that EM is removed from the Government Accountability Office High Risk List
- Achieve *Excellence in Management and Leadership* with the objective of making EM an employer of choice in the federal government
- Align *Headquarters and Field Operations* in order to streamline decision making and improve efficiency
- Establish *Strategic Options* for the EM portfolio in order to smartly reduce the overall cost of the program, complete cleanup activities faster in an environmentally safe manner, and return assets to the surrounding communities

Overview

To sustain support for Environmental Management (EM) activities, the EM program is proactively identifying and evaluating initiatives and enhancements to provide the foundation upon which the progress and successes of the EM program can be measured and communicated.

By strengthening planning with credible and defensible analyses, EM will be able to assess existing priorities and program elements and identify opportunities to complete additional cleanup work. As a result, EM will be able to justify additional or accelerated work; improve inter-site coordination; define impacts of budget reductions; and better communicate progress achieved for the dollars spent.

Approach

EM is looking at alternative approaches that maximize risk reduction by completing cleanup that takes full advantage of reducing the legacy footprint of the EM complex along with re-evaluating currently management and operations associated with tank waste, spent nuclear fuel, and excess special nuclear material processing. This directed strategic planning effort will concentrate on the technical and programmatic challenges facing the cleanup projects. The objective is to identify innovative solutions to drive cleanup outcomes and reduce risk faster.

EM is currently focused on four strategic areas:

- Footprint Reduction;
- Alternative approaches to tank waste disposition;
- Alternative approaches to spent nuclear fuel and excess nuclear materials disposition; and
- Reutilization of assets, such as the establishment of Energy Parks

Alternative Approaches to Footprint Reduction

Footprint reduction will be accomplished by focusing cleanup activities on decontamination and demolition of excess contaminated facilities, soil and groundwater remediation, and solid waste disposition, all of which have proven technologies and an established regulatory framework. Footprint reduction activities yield significant environmental cleanup progress and life-cycle savings.

EM is on track to reduce the legacy footprint by ~50 percent by FY 2011. EM will need to identify additional resources to achieve its 2015 footprint reduction goal of 90 percent. EM sites are directed to continue to identify additional opportunities for investments. Options and alternatives should consider the broader energy missions of the Department and factor in the strategic goals of other Departmental elements when identifying strategic alternatives.

Alternatives should factor in programmatic trade-offs, including cost savings associated with a reduction in minimum safe and essential service costs as a result of efficiencies and cost savings achieved from economies of scale that can be applied to existing cleanup activities. All alternatives should include a return on investment analysis.

In addition, please identify options for additional investment opportunities to address high-risk excess facilities (not currently in the EM portfolio) prior to FY 2017. The focus of the footprint reduction is to complete major portions of the legacy cleanup throughout the complex in order to reduce infrastructure cost.

Alternative Approaches to Tank Waste Disposition

More than half of EM's program resources are required for management of tank waste, surplus special nuclear material (SNM), and spent nuclear fuel (SNF).

EM has chartered a Tank Waste System Integrated Project Team to evaluate alternatives to optimize the treatment, storage, and disposal of radioactive liquid tank waste currently in storage at the Hanford and Savannah River Sites. The scope of the Integrated Project Team is to (1) develop a Tank Waste System Strategic Model, (2) develop and analyze optimized strategies supporting EM Complex-wide management of the tank waste using the model, and (3) identify transformational solutions. The model will provide Headquarters, Field Offices, and stakeholders with the capability to analyze tank waste system performance and costs. Optimized strategies for Hanford and Savannah River

will be developed that integrate these system attributes: (1) optimized tank waste processing, (2) area-based tank closure, and (3) research and technology. Other programmatic impacts, such as the final disposition for high-level waste, will be considered as appropriate.

Alternative Approaches to Excess Nuclear Materials Disposition and Spent Nuclear Fuel

Storage and preparation of plutonium for MOX presents resource challenges to EM and the National Nuclear Security Administration (NNSA). Significant synergism can be achieved by the realignment of activities being conducted by EM at the Savannah River Site (SRS) and activities being conducted by the NNSA at the site.

EM will continue to pursue transfer of the plutonium preparation for MOX and plutonium storage, including the landlord responsibility for all safe guards and security costs at SRS to NNSA. This would ultimately result in economies of scale associated with single ownership of plutonium storage, plutonium preparation, and the Pit Disassembly and Conversion Facility in the K Area at SRS.

In addition, EM continues to evaluate disposition alternatives and coordinate with NNSA to ensure the most cost-effective approach for disposition of the 5 metric tons of "non-MOXable" plutonium.

EM is also evaluating cost effective storage and disposition alternatives for another high cost material SNF. Alternatives range for disposition as currently planned in H-canyon to moving all SNF into interim dry storage prior to a final disposition decision.

Approaches to Support Reutilization of Assets

EM has strategic planning efforts underway to identify ways to reduce the legacy footprint of the EM complex. Footprint reduction would allow the utilization of resources such as: large, secure tracts of land; state-of-the-art facilities and technologies; and a highly trained and experienced work force. All of which could then be leveraged in establishing Energy Parks on EM sites to both produce energy and demonstrate advanced technologies; and accelerating their replication across the Nation. Options and alternatives should consider the broader energy missions of the Department and factor in the strategic goals of other Departmental elements when identifying strategic alternatives.

Departmental resources, in partnership with industry and regional stakeholders, can be used to establish Energy Parks. Designated tracts of land would be transferred to a third party for rapid development of large scale energy-related facilities, particularly those with potential to significantly influence energy, environment, and economy. Relevant technologies include but are not limited to, wind, solar, biomass, nuclear power, desalination, geothermal, liquefied natural gas transfer stations, hydrogen generation, central-station coal power with carbon sequestration, and specialty manufacturing capability.

Establishment of Energy Parks would allow states and local communities to see that there are viable alternatives to continual EM cleanup at sites that would maintain jobs for local citizens and maintain a strong local tax base once cleanup is complete.

EM has already been approached by several local community reuse organizations to determine the viability of utilizing part of the site to establish energy facilities. EM will continue to pursue the establishment of Energy Parks as a way of identifying alternative uses of EM assets, once cleanup is completed.