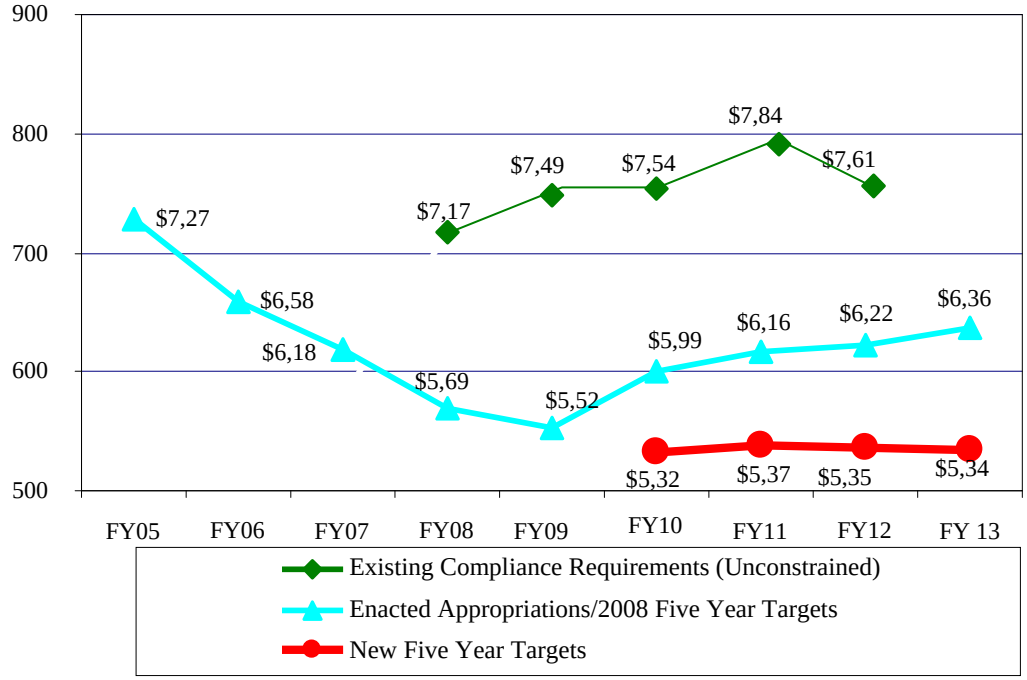
Office of Environmental Management
Funding Targets Cannot Support Regulatory Compliance Commitments or Acceptance of New Scope into the Program

Summary

The Environmental Management (EM) program cannot meet all its legally enforceable compliance obligations at current and projected funding targets. Current OMB targets, about $700 million below EM's assumed annual funding of about $6 billion, exacerbate compliance impacts and threaten cleanup progress.

In addition, DOE's other programs, Science (SC), National Nuclear Security Administration (NNSA), and Nuclear Energy (NE) have environmental liabilities, including hundreds of excess contaminated facilities and surplus nuclear materials, that need disposition. The preliminary estimate for disposition is $3.7 to $9.2 billion. Neither they nor EM have funding for this in their program plans or targets.



* Excess Facility and Material inventory not included

- 306 excess facilities
- 34 material types
- $3.7B-$9.2B cost estimate

Funding Targets and Compliance

As the Cold War ended and the amount of radioactive waste and excess nuclear materials, and the extent of environmental and facility contamination became clearer, DOE entered into numerous legally-binding cleanup agreements with states and the U.S. Environmental Protection Agency for the cleanup of its sites. These agreements establish the timeline by which each facility will come into compliance with applicable environmental laws, setting both the scope and schedule of cleanup work to be performed, and establishing due dates for the completion of specific actions, generally called compliance or enforceable milestones. In some cases, these agreements were entered into without sufficient knowledge or understanding of the full extent of the problems and the technologies, processes, timeframes and resources needed for the cleanup.

EM estimated what would be required annually to meet all existing programmatic and regulatory commitments. This estimate, which was developed assuming unconstrained funding, was $7 to $8 billion. DOE recognized that this funding level was not feasible given the fiscal constraints within which all Federal agencies must operate.

In response to the Office of Management and Budget's (OMB) FY 2008 five-year annual budget targets of approximately $6 billion, DOE took a number of actions to ensure continued cleanup progress was sustained. First, all sites re-baselined their cleanup work to the OMB budget targets rather than to existing regulatory requirements. Secondly, the baselines were independently reviewed and certified to ensure they include all known scope, are based on reasonable assumptions, have realistic costs and schedules, and have a solid assessment of project risks. Because the realigned baselines resulted in the deferral of work scope that was tied to compliance requirements and milestones, DOE proactively began to re-negotiate compliance milestones with state and federal regulators in return for lower yet predictable budget targets. In taking these actions, DOE established a credible and realistic path forward within the constraints of the annual budget targets of about $6 billion.

The life-cycle cost (LCC) of the EM program has increased over the last several years, from a projected $147 billion, with a completion date of FY 2035, to $274 - $330 billion, with a completion date beyond FY 2050. The increase is largely due to use of more realistic baseline assumptions, new scope, and the deferral of work scope all of which requires keeping cleanup resources mobilized for longer periods of time. The longer cleanup takes, the longer the program incurs the large maintenance costs required to support the cleanup infrastructure.

With the finalization of the FY 2009 budget formulation process in February 2008, OMB issued a revised set of five-year annual budget targets for EM that were significantly lower than $6 billion. These new five-year annual budget targets would fund the program at approximately $5.3 billion per year, $700 million per year less than those that

OMB provided in FY 2008. DOE and OMB entered into extensive dialogue on the possible repercussions of lower-than-expected five-year budget targets.

Approach and Impacts

Below are three budget alternatives: receiving compliant budget targets between $7 to $8 billion annually; receiving predictable and level budget targets at approximately $6 billion annually and receiving lower budget targets around $5.3 billion annually.

Compliant Budget Targets: As stated previously, budget targets that would fully fund compliance milestones would require $7 to $8 billion per year. At these levels, EM would be better positioned to reduce risks, meet its compliance obligations and make progress toward reducing the legacy footprint of the EM complex.

Predictable and Level Budget Targets: One of the major reasons for the successful cleanup and closure of Rocky Flats, Fernald and Mound was the ability to deliver stable, predictable funding levels over the course of the cleanup. Sustainable budget targets of approximately $6 billion would allow EM to continue to execute its plan based on the current independently reviewed baselines and renegotiated compliance milestones.

Declining Budget Targets: If the annual targets are significantly lower than $6 billion, the viability of EM's cleanup progress would be undermined. Budget targets of approximately $5.3 billion would essentially eliminate $700 million of planned work. The loss of $700 million translates into a significant reduction when balanced against the realization that approximately half of EM's budget funds are actual "on-the-ground" cleanup while the rest supports the infrastructure needed to maintain safe conditions and provide essential services across the cleanup complex. This reduction will result in significant cuts at EM sites across the country and impact existing compliance commitments. Strategies to manage the impacts of lower budget targets include:

- Re-baselining to the lower five year annual funding targets including the deferral of lower risk regulatory compliance commitments. This would involve renegotiating existing compliance agreements;
- Deferring a significant amount of work at a small number of sites to enable the Department to meet its compliance requirements at many other sites;
- Conducting only highest risk-based work at each site (e.g. liquid radioactive wastes and special nuclear materials);
- Exacting equal funding reductions at all sites (spreading the pain); and
- Maintaining the program in a standby configuration, which would eliminate all cleanup progress that is not tied to maintaining existing conditions.

Funding levels have a direct impact on the programs ability to reduce risk or even contain existing risk and meet compliance milestones. Under any of the alternatives identified, EM would need to inform its regulators and affected states that many of the recently re-negotiated compliance milestones would be missed. Under applicable law and/or the

relevant compliance agreements, the Department's regulators are authorized to impose fines and penalties each time the Department fails to comply with an enforceable milestone. In addition to fines and penalties, non-compliance exposes the Department to the risk of incurring several less-tangible yet equally significant costs. The Department's failure to fund cleanup at compliant levels undermines both its relationships with its regulators and their willingness to compromise on other, non-funding related issues. Moreover, failure to reach agreement administratively can lead to litigation, which carries its own additional costs.

Furthermore, failure to adequately fund cleanup work can undermine public support for all the Department's programs, complicating relationships with key stakeholders and increasing the pressure on regulators to take a stricter approach on enforcement, ongoing operations and other issues. In the past, failure to request a compliant budget has also generated sharp criticism from key congressional committees and members.

Failure to provide the funding necessary to comply with enforceable milestones by definition extends the time it will take to complete cleanup at affected sites. Thus potential environmental, worker safety, and public health risks will remain for a longer period. Longer cleanup timelines also translate into higher life-cycle costs, both because they require keeping cleanup resources mobilized for longer periods of time, and because more than fifty percent of EM's budget is consumed by the infrastructure needed to maintain safe conditions and provide essential services across the cleanup complex. The longer cleanup takes, the longer these fixed costs will be incurred.

In summary, EM's environmental liabilities are massive, the third largest in the Federal government both in terms of cost and time required to complete the cleanup. Annual budget targets over $7 billion would enable EM to make noticeable progress towards cleanup and risk reduction each year and would allow EM to be compliant with its regulatory agreements. However, in these fiscally constrained times, annual budget targets over $7 billion are not realistic for the EM program. EM can still maintain cleanup progress with sustained funding of about $6 billion per year. Targets lower than this will require EM and the Department to make tough choices among the alternatives for minimizing negative impacts. The Department would face increased risk to workers, the public, and environment; the realities of higher fixed costs; the need to renegotiate regulatory compliance renegotiations resulting from the further delay of necessary cleanup work, and potential lawsuits.

Unfunded Excess Facilities/Materials in Other DOE Programs

In addition to the cleanup scope already in EM, the Department currently has hundreds of excess contaminated facilities, contaminated media, radioactive wastes and other nuclear materials requiring remediation, processing and/or disposal. These activities represent a significant liability to the Department.

Historically, such liabilities were transferred to EM for disposition using established procedures and criteria for transfer. However, since 2001, EM has not accepted any new

cleanup scope from other programs. Each Program Secretarial Office (PSO) is currently responsible for management and maintenance of these excess facilities and materials. This has created a backlog of excess facilities and materials requiring cleanup. In August 2006, the Deputy Secretary directed EM to address these liabilities, which are not funded, to execute the work, and to incorporate these "unfunded" liabilities into its baselines commensurate with the risk such activities pose.

In December 2007, EM requested that PSOs nominate excess facility and materials for potential transfer to begin the planning process to incorporate new cleanup scope into its budget and out-year planning profiles. EM received 340 facility and material nominations from other PSOs. The preliminary cost associated with these liabilities ranges from $3.7 to $9.2 billion. EM completed an assessment in August 2008 to determine which candidates satisfy transfer criteria and is the process of determining which facilities and materials should be transferred, timeframes in which transfers could occur, and what work must be completed by the PSOs prior to transfer.

The Department submitted a Report to Congress in September 2008 that identifies its unfunded liabilities in detail, including the numbers and types of facilities and materials, as well as the projected cost and timeframe in which the EM program can take on and complete this cleanup work. The report noted that, based on EM's current plans, the earliest it could accommodate any of the new work ***without re-prioritizing*** its existing work scope is FY 2017. A summary of facilities and material groups for potential transfer to EM in the out-years is below.

Table 1: Summary of facilities and material groups for potential transfer to EM in the out-years is below.

PSO	Total by PSO/Site		Cost Range ($ in millions)	Total Facility Square Footage (by site)
	Facilities	Materials		
SC	***164***	***24***	**$1,624.4 - $3,634.2**	**3,144,903**
ANL	15		$285.1 - $611.2	1,149,237
BNL	8	3		160,252
SLAC	0	20		
FNAL	0	1		
ORNL*	124	0	$980.5 - $2,588.4	832,384
Y-12*	17	0	$358.8 - $424.6	1,003,030
NNSA	***102***	***0***	**$1,155.7 - $3,545.9**	**2,285,780**
LANL	11	0	$63.1-$135.2	92,000
LLNL	4	0		155,000
NTS	5	0		18,710

SRS	3	0		72,349
Y-12*	79	0	$1,092.6 - $3,410.7	1,947,721
NE	***40***	***10***	**$954.5 – $1,975.8**	**416,558**
INL	38	10	$886.4-$1,899.5	134,663
ORNL*	1	0	$34.5 - $40.6	26,239
Y-12*	1	0	$33.6 - $35.7	255,656
Grand Totals	**340**		**$3,734.6 – $9,145.9**	**5,847,241 (Sq. Ft.)**

* Part of Oak Ridge Integrated Facility Disposition (IFDP) project.

The largest legacy needs are at 2 sites: the Oak Ridge Reservation and Idaho National Laboratory. Oak Ridge needs have been captured in the Integrated Facilities Disposition Project (IFDP), which would roll all remaining legacy facilities and materials from the Office of Science (SC), the Office of Nuclear Energy (NE) and National Nuclear Security Administration (NNSA) into the current EM baseline at Oak Ridge. The Mission Need Statement (MSN) which establishes the need for cleanup and disposition of these facilities and materials was signed by the Deputy Secretary in July 2007. IFDP presents mutually beneficial opportunities for mission-critical disposition of excess facilities and materials for SC, NNSA, NE, and EM. Transfer of IFDP excess facilities and materials to EM will support risk reduction by completing environmental cleanup of the ORNL an Office of Science site and Y-12 a NNSA site quickly and efficiently and allow NNSA, SC, and NE to proceed with modernization initiatives and fully focus on their programmatic missions.

If IFDP remains an unfunded liability, it could impact the future mission readiness of ORNL and Y-12 and pose unacceptable risks to the safety of on site workers, the public and the environment.

Currently, NE is responsible for some legacy environmental liabilities at the Idaho Site which pre-date the 2005 establishment of the Idaho National Laboratory (INL). The NE-assigned liabilities include: numerous facilities at INL ready for decontamination and decommissioning; a significant inventory of nuclear materials and waste requiring treatment and disposition; and miscellaneous environmental restoration activities beyond NE's central mission of supporting the development and implementation of new nuclear power technologies. Many of these liabilities have regulatory and/or legal milestones associated with their completion. The estimated cost to address these liabilities is nearly $1.5 billion. The House Appropriations Committee report for the FY 2009 budget contains direction, and the Idaho Congressional delegation has voiced strong support, for transferring these liabilities at INL from NE to EM.

SC and NNSA have each prepared draft MNS that summarize all their remaining non-IFDP excess facilities and materials and justifies the need for their cleanup and/or disposition. The non-IFDP facilities represent less than 25% of excess facilities and materials that have been identified by the PSO's for potential transfer to EM. These excess facilities and materials are located at several sites across the complex (ANL, BNL, SLAC, FNAL, LLNL, LANL, NTS, and SRS) and have been process contaminated as a result of nuclear weapons research and production. The MNSs are now under review by EM and CFO. The elimination of these non-IFDP excess process contaminated facilities has benefits similar to those stated above for the IFDP project. The cost to disposition these excess facilities and materials is reflected in the table and the quality is considered rough order of magnitude.

Approach and Impacts

With respect to the ability of EM to accept new cleanup scope, there are essentially two budget alternatives the Department can take regarding the disposition of excess facilities and materials currently owned by other PSO's.

New Budget Authority: Neither EM nor the programs currently responsible for maintaining these excess facilities and materials have funding to disposition them within their current budget targets and program plans. Consequently, some of the activities may be deferred for many years, raising potential safety and contamination concerns. Logically, adding more work scope into the EM program results in the need for more funding if EM is to address these liabilities in a timely manner without re-prioritization of its existing work scope

Re-prioritize Work Scope: Given the demands already on the Department's budget, if these excess facilities and materials transfer to EM for cleanup without additional budget authority this additional work would have to be balanced against work already in EM's baseline plans. Integration of this cleanup work without additional budget authority will require EM to re-prioritize it existing work scope based on an overarching framework that accounts for health and safety, environmental stewardship, and regulatory compliance. Any re-prioritization will result in deferral of existing cleanup, which will ultimately lead to an increase in EM's life-cycle cost and schedule. This will involve trade-offs and negotiations with internal and external stakeholders, including regulators.

Some of these facilities are in poor condition as a result of inadequate maintenance being conducted and pose potential risks to the health and safety of DOE workers, the public, and the environment. In addition, they can limit the DOE's ability to modernize sites and laboratories to more effectively address current and planned missions. These liabilities also drain Departmental resources since programs must continue upkeep of facilities and safeguard materials which are no longer needed. Decision makers for EM and the Department will need to determine the appropriate balance between acquiring new budget authority and re-prioritization of existing cleanup work to mitigate the impacts associated with these unfunded liabilities.

Background: EM's History Rooted in Manhattan Project

In 1942, the U.S. government launched an effort to develop the first atomic bombs, which came to be known as the Manhattan Project. Conducted in secret, the Manhattan Project eventually employed more than 130,000 people at research and production sites including the Los Alamos research site in New Mexico and production facilities at Hanford, Washington and Oak Ridge, Tennessee. During the Cold War, the United States expanded nuclear weapons research and production, building sites in a number of locations such as the Savannah River Plant in South Carolina, the Idaho National Laboratory, and the Rocky Flats Plant in Colorado. Research and production of these weapons resulted in large volumes of nuclear waste and materials. That resulted in unique radiation hazards, unprecedented volumes of contaminated water and soil, and a vast number of contaminated structures including reactors and chemical plants for extracting nuclear materials. At that time, the United States did not have the environmental protection know how, processes, and regulations that exist today. Therefore, large amounts of nuclear waste were generated, stored, and disposed of in ways that we now consider to be unacceptable, such as in single-shell underground tanks.

Today, EM operates the world's largest nuclear cleanup program. This effort has taken place across two million acres of land located in 35 states and employs more than 30,000 federal and contractor employees, including scientists, engineers, and hazardous waste technicians. EM's mission is to safely reduce risks to workers, the public, and the environment that are posed by nuclear waste and materials, soil and groundwater contamination, and aging nuclear weapons research and production facilities.