**Department of Energy**
Washington, DC 20585

July 10, 2006

MEMORANDUM FOR DISTRIBUTION

FROM: CHARLES E. ANDERSON
PRINCIPAL DEPUTY ASSISTANT SECRETARY FOR
ENVIRONMENTAL MANAGEMENT

SUBJECT: Policies for Environmental Management Operating Project Performance Baselines, Contingency and Federal Risk Management Plans, and Configuration Control

Based on discussions at the Quarterly Project Reviews (QPRs), it is necessary to issue supplemental guidance on the process and requirements to identify, develop, control and validate Environmental Management (EM) Performance Baselines. In the EM Contingency Policy dated February 3, 2005, Headquarters provided guidance on the identification of contingency for both Line Item and Operating Projects. This memorandum provides additional clarification and guidance for operating projects but does not undermine or change the fundamental tenets of the contingency policy. Likewise, this memorandum also provides additional clarification to the guidance in the Federal Life Cycle Baseline Policy Memorandum of October 19, 2004. I am also directing our Office of Project Management and Oversight (EM-53) to work directly with the Office of Engineering and Construction Management (OECM) to ensure this additional policy and guidance is correctly implemented.

The guidance in attachments 1 - 3 provide the details of what constitutes a Performance Baseline (Attachment 1), how unfunded contingency is to be identified and reported via the Federal Risk Management Plan (Attachment 2), and establishes the configuration control policy for operating project Performance Baselines (Attachment 3). Attachment 4 provides the life cycle costs for the EM operating funded Project Baseline Summaries (PBS) which are under Configuration Control. The costs in Attachment 4 shall be considered the life cycle cost for each project and will be used in all reporting to the Deputy Secretary, Congress, and in all other reporting forums. It is recognized that currently not all projects reflect adequate contingency. EM-53 will continue to work with the sites as baselines are validated to ensure adequate contingency is reflected in each project. The approved life cycle cost may only be changed upon my written approval by the Acquisition Executive.

If you have any further questions, please contact me at (202) 586-7709 or Mr. John E. Surash, Deputy Assistant Secretary, Acquisition & Project Management, at (202) 586-3867.

Attachments

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**Attachment 1**
**The Performance Baseline**

***Performance Baseline***

The total cost of the Performance Baseline for an Environmental Management (EM) operating project is the life cycle cost of the Project Baseline Summary (PBS) plus unfunded contingency. The life cycle cost of a PBS consists of several components: prior project costs, near-term scope, out-year scope, management reserve, and fee. To calculate the total cost of the Performance Baseline, unfunded contingency and any DOE direct costs associated with the near term work scope are included. There shall be no time gaps in the performance baseline, and the entire scope shall include both an estimated cost and an associated schedule. Each Federal Project Director is responsible to ensure that accurate progress and Earned Value Assessment against the contract Performance Measurement Baseline (PMB) are being reported to senior management in the Department and Congress. Figure 1 graphically illustrates the seven components that make up an EM Performance Baseline (also referred to as the Federal Life Cycle Baseline). The left side includes the prior project costs, the PMB for the near-term scope or current contract period of performance, the fee and management reserve that addresses the contractor's identified risks, and finally the planning packages for the balance of the life cycle baseline. On the right side, the DOE contingency is the unfunded portion of the Performance Baseline that addresses the DOE programmatic risks associated with federal actions, activities or deliverables. Any DOE direct costs associated with the project scope are also included. The total EM Performance Baseline including the unfunded DOE contingency is what is evaluated during the External Independent Reviews conducted by the Office of Engineering and Construction Management (OECM).

***Performance Baseline Cost Estimates (PBCE) and Project Baseline Summary (PBS) Life Cycle Costs for Operating Projects***

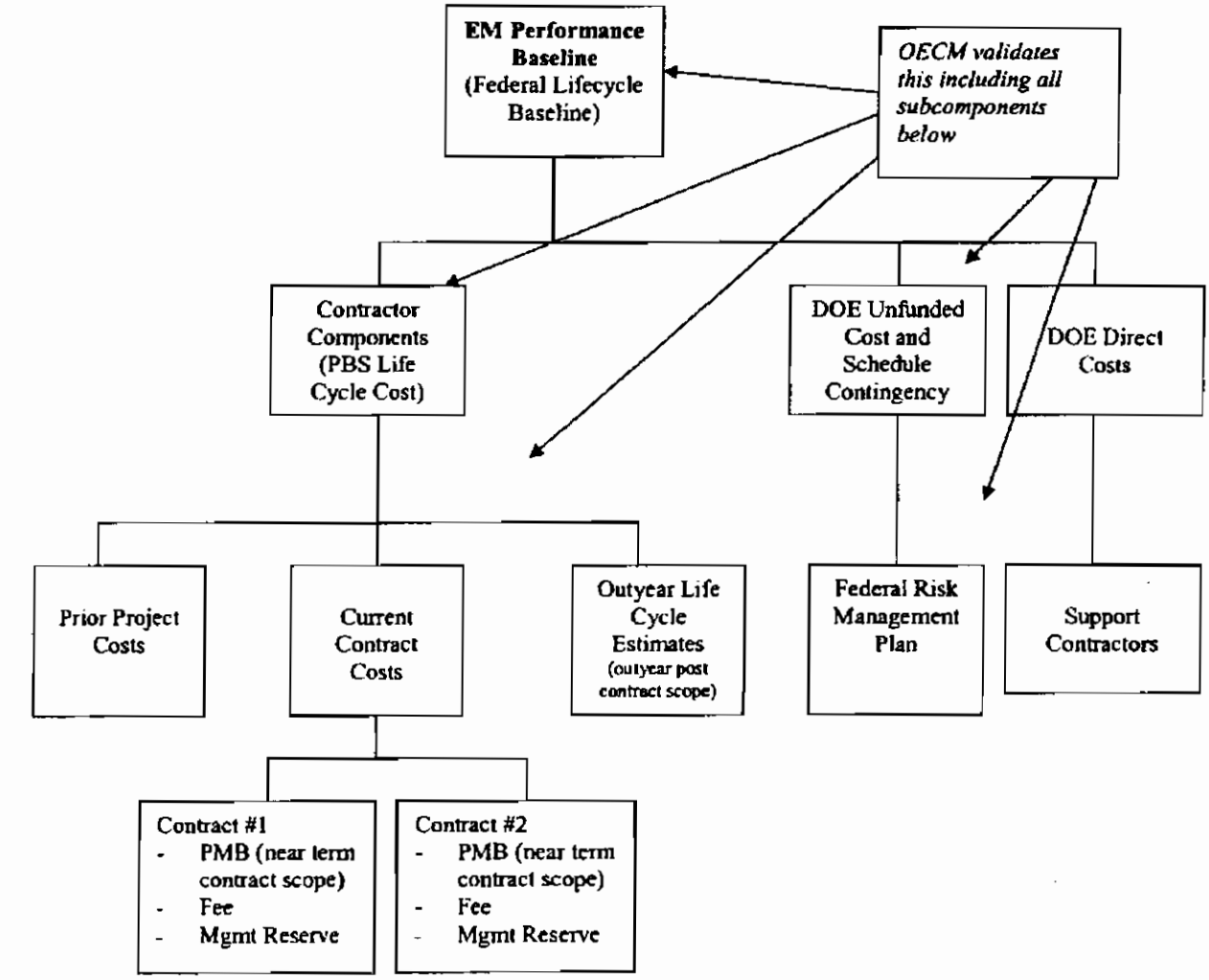
Because there are a variety of requirements for tracking and reporting project costs and project estimates, the following definitions shall apply to EM Operating Projects:

Performance Baseline Cost Estimate (PBCE). These cost estimates will be stored in the IPABS Project Execution Module and include the PBS Life Cycle Cost plus the DOE unfunded contingency. The PBCE represents an 80% confidence level estimate to complete all work including the DOE unfunded contingency. The PBCE shall also be reported in PARS and in the monthly DEPSEC report (alongside the Life Cycle Costs), and shall be used to support the OECM validation of the EM Performance Baseline.

PBS Life Cycle Costs. These costs are currently stored in the IPABS planning module and in the Project Execution Module, and are under configuration control and cover the life cycle costs (including the contractors PMB, management reserve, fee, prior project costs, and out year lifecycle estimates) for the project but do not include DOE unfunded contingency. The PBS Life Cycle Costs generally represent a 50% confidence level of funding and shall be used for Earned Value Management Analysis, for reporting in PARS and in the monthly DEPSEC report, in the annual environmental liability report, and for budgetary/funds reporting to Congress.

As baselines are validated and projects proceed, unfunded contingency will only be added to the Life Cycle Costs when those estimates associated with a specific risk or mitigation strategy are converted to funds appropriated to deal with that particular risk event or execution of a particular mitigation strategy. This can only be accomplished and the Life Cycle Costs can only be changed upon written approval of the Acquisition Executive.

Figure1: Components of the EM Performance Baseline which are validated by OECM



**Attachment 2**
**Management Reserve, Unfunded Contingency and the**
**Federal Risk Management Plan**

Under DOE Order 413.3, "contingency" refers to DOE contingency whereas contractor contingency that is part of the contractor's performance baseline is referred to as "management reserve (MR)." Differentiation between the two components is explained in DOE Manual 413.3-1 section 8.3. MR and Contingency are both critical components of the Performance Baseline and will be validated by OECM, the only exception being that for EM operations funded projects, contingency remains unfunded until it is authorized for use, at which time the authorized portion is funded for specific work and becomes part of the PMB and the PBS life cycle cost. These two components represent cost estimates for mitigating known project risks for the contractor and DOE, respectively. It is imperative to the success of a project that these risks (contract and programmatic) are identified and addressed.

PMB

***Contractor's Risk and Management Reserve***

The contractor's Performance Baseline is the sum of the Performance Measurement Baseline (PMB), MR, and fee that should represent at least a 50% confidence level. The MR is managed and controlled by the contractor to mitigate risks that are solely identified, controlled and managed by the contractor. MR is the risk-adjusted amount identified by a risk analysis resulting from known, identified risks with accompanying risk mitigation strategies. DOE approval of the use of MR is not required; however, the contractor must report the usage of MR in their monthly report to the Federal Project Director (FPD). Contractor fee is also a component of the performance baseline and included in the PBS life cycle costs. It must include the maximum amount of fee the contractor can earn based upon the fee structure outlined in the contract. If there is more than one prime contractor working within the PBS, the contractor fee would be the sum of the maximum amount each contractor can earn. The MR is not part of the PMB, but it is a component of the near-term performance baseline and is included in the PBS Life Cycle Costs. The PBS Life Cycle Costs and Contractor PMB shall be used for Earned Value Management Analysis, for reporting in PARS and in the monthly DEPSEC report, used in the annual environmental liability report, and for budgetary/funds reporting to Congress.

***DOE Unfunded Contingency and the Federal Risk Management Plan***

The Federal Risk Management Plan identifies the project and programmatic risks for the entire project (both for the near-term baseline and the balance of the lifecycle baseline) and establishes the DOE unfunded contingency for these risks. These project and programmatic risks are known risks but are outside the control and management of the contractor. The DOE unfunded contingency is determined by DOE management staff assigned to a project. This estimate has two components: the costs associated with mitigating identified programmatic risks; and the costs associated with accommodating these risk mitigation strategies into the project schedule. To estimate unfunded contingency, DOE first performs a project life-cycle risk analysis of known, identified programmatic risks and estimates the cost of implementing derived methodologies and mitigation strategies for managing those risks. Then, DOE estimates the costs associated with potential schedule impacts and includes these costs in the final calculated contingency amount. It is standard practice that DOE unfunded contingency represent a potential funding level of at least 80% confidence. The DOE unfunded contingency is included

in the Performance Baseline Cost Estimate (PBCE) and is reported in the IPABS Project Execution Module, and is also reported in PARS. Since the unfunded contingency is a critical component of the Performance Baseline that will be validated by OECM, it is incumbent on the FPDs to ensure that the risks and contingencies (cost and schedule) are identified and addressed in a Site Federal Risk Management Plan.

The Federal Risk Management Plan identifies both contractor and programmatic risks for the entire life cycle of the project and establishes the DOE unfunded contingency. These risks are not solely the risks that are controlled and managed by the contractor and identified as part of the contractor's performance baseline (which are mitigated through use of the contractor's MR). These risks also include programmatic risks exclusively under the control and responsibility of DOE. Programmatic risks generally involve activities associated with federal deliverables and can include: costs and funds availability risks; pricing and market conditions; technical complexities including providing various waste disposal services, nuclear material disposition or disposal paths; regulatory uncertainties including undefined end-states or cleanup levels; funding shortfalls; schedule challenges; uncertainties regarding the extent of contamination; waste disposal site availability/limitations; timely approval by DOE of Critical Decisions, Policies, Sensitive State Agreements or Litigation; and others. In some cases these risks cover the unknowns or unquantifiable risks. These risks are equally important to the success of current contractor plans to clean or close many sites. In many cases, these federal deliverable risks can prevent or preclude a contractor from successfully completing their assigned contract work.

DOE Order 413.3 states "....an essential part of project planning is to ensure that the risks associated with the project have been identified, analyzed, and determined to be either eliminated, mitigated or manageable." It further states that each of the identified risks must be monitored at future Critical Decisions and review points to ensure that they have been satisfactorily addressed, eliminated, and/or managed. To accomplish these requirements for operating projects, the EM Policy on Contingency requires a quantitative risk analysis process to determine contingency (with exceptions made for small projects under $20 million). Project cost estimates shall be calculated to take into account the following three considerations: risks; risk impacts; and an appropriate confidence level for planning purposes. Value Engineering studies should be used to determine alternative methods for meeting the contingency requirements at reduced costs. No contingency funding is to be requested or budgeted in advance. When contingency is needed for operating projects, it should be obtained by increasing project efficiencies, managing funds between projects, requesting additional funds from the EM Configuration Control Board, or requested during the next cyclic budget call. The only time unfunded contingency will be added and reported as part of the PBS Life Cycle Costs will be after those estimates have been converted to funds appropriated to deal with a specific risk event or upon execution of a particular mitigation strategy and only after written approval of the Acquisition Executive.

It should be noted that the EM Performance Baseline must not be adjusted for contractor or EM accelerated cost and schedule challenges. These challenges should be reflected and tracked on a working schedule but not on the performance baseline. EV will only be measured against the approved performance measurement baseline and not against any accelerated challenges. If challenges that accelerate work or reduce costs over the approved baseline are accomplished, a positive cost and/or schedule variance with a reduced estimate at completion will be reported in IPABS and in PARS against the approved performance measurement baseline. If these

challenges are not achieved, EM will not be penalized or report negative cost and schedule variances for accelerated challenges, but will continue to report the performance only against the approved performance baseline.

***EM Liability***

EM is required to report a liability associated with the EM program in the annual Departmental Financial Statement. The EM liability is composed of the EM program wide life-cycle costs plus an uncertainty that is statistically calculated based on site-submitted uncertainty scores. This uncertainty amount is to cover the unknown, unquantifiable risks and is reported only at the EM program level and is therefore not used in any individual project Earned Value Management Reporting or Analysis.

As stated in the June 30, 2005, memo between EM and OECM on Protocol for External Independent Review (EIRs) on EM Operating Projects: "The nature of the risks will dictate whether they are included in the EM liability determination or are included in the project baseline for each PBS." It also states: In addition to the contractor's management reserve for normal [known] project risks, EM will include a separately identified contingency estimate for unfunded risks based on uncertainty score determinations." These uncertainty scores are to be used to calculate an uncertainty liability amount on an individual PBS basis. These results are to be reported in the Federal Risk Management Plan and must be included in the validation package that OECM will review when they are performing EIRs of the EM Performance Baseline.

**Attachment 3**
**Configuration Control Policy for Performance Baselines of Environmental Management Operating Projects**

***Prior Project Baseline Costs***

All EM operating funded projects will use the beginning of Fiscal Year (FY) 1997 as the project start date for the purpose of computing the Project Baseline Summary (PBS) Life Cycle Cost. Costs will be captured as a single entry with the budgeted cost of work scheduled (BCWS), budgeted cost of work performed (BCWP), budgeted cost at completion (BAC), and estimate at completion (EAC) being set equal to the actual cost of work performed (ACWP) for the time period of October 1996 to September 2003. If the sites have performance data that they do not want to lose, they can maintain that information at the site level; however, from an EM life-cycle stand point these costs are only to be used to establish an accurate and complete life-cycle baseline for the project. These numbers will not be added in to determine the cumulative earned value performance data reported monthly in integrated planning, accountability and budgeting system (IPABS) or in the Deputy Secretary report because it can skew or mask the current contractor's performance. However, this data can be used to determine how the life-cycle performance baseline is performing and should be included in the estimate at completion determination presented in the Quarterly Progress Reviews. If a Federal Project Director determines that performance data on the prior project baseline is valuable information and should be included in determining the cost and schedule variance, a white paper should be presented to the Principal Deputy Assistant Secretary for consideration and a determination will be made on a project by project (PBS) basis how that information will be reported. Pre-FY 2004 information will not be used to determine the performance of the near term work.

***Near-Term Baseline or Current Contract Period of Performance***

The near-term baseline is the scope, cost and schedule of the life-cycle baseline that is currently under contract(s) and being executed at the site. The near-term baseline begins in October 2003 (FY 2004) and is the start date for computing the cumulative earned value for the PBS. A later start date may be used if the PBS was initiated after October 2003. This portion of the life-cycle baseline is subject to all of the requirements of DOE Order 413.3, including Critical Decision approvals, External Independent Review, Independent Project Review, Earned Value Management Analysis (EVMS) validation, change control, a resource-loaded schedule, acceptable cost estimates, a defined scope of work, milestones, regulatory requirements, a validated baseline, contingency, risk management, reporting in IPABS and project assessment and reporting system (PARS), etc.

All PBSs, whether validated by OECM or not, will be subject to acquisition executive approvals and change control thresholds established in the Deputy Secretary memorandum dated October 3, 2005, subject, Delegation of Acquisition Executive Authority for Office of Environmental Management Operating Projects. If a PBS is completed within the period of performance of the current contract, a CD-4 decision will be executed to close the project. For longer term PBSs, new project baselines or baseline changes will be prepared with the turnover of contractors, and will be subject to CD-2/3 decisions and all associated prerequisites.

***Out Year or Remaining Lifecycle Baseline Scope***

Out year scope is represented by the scope, cost and schedule of the remaining EM work beyond what is described as near term scope or the current contract period of performance, through project completion. The information will be kept at a summary level with enough detail to ensure it represents a reasonable approach to project completion. The reliability of the estimates will vary depending on the completeness of the scope definition, regulatory certainty, and estimated completion date. Estimates should be based on realistic assumptions and be supportable for a reasonableness review and could range from a Rough Order of Magnitude (ROM) to a detailed estimate. As the near-term baseline moves from one timeframe to the next or from one contract to the next, the remaining life-cycle baseline becomes smaller and smaller until the final segment of the life-cycle baseline becomes the final near-term baseline. Key information in the total life-cycle baseline includes the near term baseline for the project and the estimated cost at completion. This will allow a comparison of the budget at completion with an EAC in order to determine a variance at completion, the end date, and an estimated completion date.

***Configuration Control***

Attachment 4 provides the PBS Life Cycle Costs excluding unfunded DOE contingency for EM operating funded PBS's which are under Configuration Control. They shall be considered the current Life Cycle Costs for each project and used for EVMS, and for reporting in PARS, and in the monthly reporting to the Deputy Secretary. As baselines are validated and projects proceed, unfunded contingency will only be added to the Life Cycle Costs when those estimates are converted to funds appropriated to deal with a specific risk event or upon execution of a particular mitigation strategy. This can only be accomplished and the Life Cycle Costs can only be changed upon written approval of the Acquisition Executive.

**Attachment 4: PBS Life Cycle Costs Under Configuration Control**
**(Excludes DOE Unfunded Contingency)**
**(Current Dollars)***

| PBS | Site | Life Cycle Costs ($K) |
|---|---|---|
| RF-0011, 0013, 0030, 0040, 0041 | Rocky Flats | 6,142,816 |
| SR-0014C | SRS | 12,674,969 |
| SR-0011B | SRS | 5,716,428 |
| SR-0030C | SRS | 2,617,996 |
| SR-0013C | SRS | 1,880,720 |
| SR-0040C | SRS | 2,864,780 |
| SR-0011C | SRS | 1,759,056 |
| SR-0012 | SRS | 542,805 |
| OH-FN-0013 | Fernald | 1,593,310 |
| OH-FN-0030 | Fernald | 1,377,772 |
| OH-FN-0050 | Fernald | 282,665 |
| OH-MB-0040 | Miamisburg | 482,919 |
| OH-MB-0013 | Miamisburg | 284,482 |
| OH-MB-0030 | Miamisburg | 191,949 |
| CH-BRNL-0030 | Brookhaven | 262,618 |
| VL-SN-0030 | Sandia | 228,554 |
| ORP-0014C | Hanford | 26,189,867 |
| RL-0040C | Hanford | 7,010,991 |
| RL-0013C | Hanford | 5,785,027 |
| RL-0041 | Hanford | 4,230,049 |
| RL-0012 | Hanford | 1,947,758 |
| RL-0011 | Hanford | 2,228,284 |
| RL-0030C | Hanford | 1,633,594 |
| RL-0042 | Hanford | 807,633 |
| RL-0080 | Hanford | 85,364 |
| PO-0040 | Portsmouth | 5,425,170 |
| PO-0041 | Portsmouth | 79,802 |
| PO-0013 | Portsmouth | 358,008 |
| PA-0040 | Paducah | 5,482,327 |
| PA-0013 | Paducah | 279,851 |
| ID-0014B | Idaho | 1,777,375 |
| ID-0013 | Idaho | 2,715,809 |
| ID-0040B | Idaho | 874,136 |
| ID-0030B | Idaho | 1,380,166 |
| ID-0012B-D | Idaho | 469,584 |
| ID-0050B | Idaho | 137,531 |
| OR-0040 | Oak Ridge | 2,116,225 |
| OR-0041 | Oak Ridge | 986,336 |
| OR-0013B | Oak Ridge | 973,947 |
| OR-0042 | Oak Ridge | 646,103 |
| OR-0013A | Oak Ridge | 441,003 |
| OR-0030 | Oak Ridge | 351,955 |
| OR-0043 | Oak Ridge | 111,735 |
| OR-0031 | Oak Ridge | 69,206 |

| PBS | Site | Life Cycle Costs in k |
|---|---|---|
| OH-CL-0040 | Columbus | 163,430 |
| VL-LLNL-0030 | LLNL Main Site | 123,186 |
| VL-LLNL-0031 | LLNL Site 300 | 123,627 |
| VL-LLNL-0013 | LLNL Main Site | 67,789 |
| VL-PX-0030 | Pantex | 170,650 |
| CB-0080 | Carlsbad | 4,515,146 |
| CB-0090 | Carlsbad | 766,004 |
| OH-WV-0040 | West Valley | 596,244 |
| OH-WV-0013 | West Valley | 228,796 |
| VL-NV-0030 | Nevada | 1,926,082 |
| VL-NV-0013 | Nevada | 72,343 |
| VL-NV-0080 | Nevada | 163,799 |
| VL-LANL-0030 | Los Alamos | 1,006,127 |
| VL-LANL-0013 | Los Alamos | 436,586 |
| VL-LANL-0040N | Los Alamos | 18,136 |
| CH-BRNL-0040 | Brookhaven | 101,954 |
| CH-BRNL-0041 | Brookhaven | 51,917 |
| VL-KCP-0030 | Kansas City | 28,409 |
| ID-0014C | Idaho | 3,103,034 |
| ID-0030C | Idaho | 1,368,814 |
| ID-0050C | Idaho | 0 |
| ID-0012C | Idaho | 1,259,306 |
| ID-0040C | Idaho | 1,047,392 |
| CBC-Moab-0031 | Moab | 598,162 |
| OH-WV-0014 | West Valley | 378,661 |
| OH-AB-0030 | Ashtabula | 144,527 |
| CBC-ETEC-0040 | ETEC | 208,142 |
| VL-SPRU-0040 | SPRU | 245,738 |
| CBC-SLAC-0030 | Stanford | 35,935 |
| PO-0011X | Portsmouth | 850,448 |
| PA-0011X | Paducah | 1,210,252 |

* Life-cycle costs under configuration control as of April 10, 2006. These numbers will be updated as part of the FY 2008-12 budget formulation process. New life-cycle costs will be provided by June 30, 2006 in support of the environmental liability estimate.