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A Department of Energy Site-Specific Advisory Board

July 28, 2009

Mr. Jeffrey M. Allison, Manager
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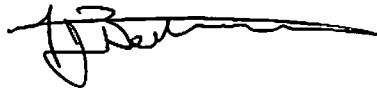
Dear Mr. Allison:

On behalf of the Board, I am pleased to forward to you the following recommendation adopted during the July 27-28, 2009, Savannah River Site (SRS) Citizens Advisory Board (CAB) meeting:

Recommendation #265 – Site Performance Metrics

We anticipate your written response prior to the September 2009 Board meeting. Thank you for your timely consideration of the enclosed advice.

Sincerely,



Manuel Bettencourt, Chairperson
SRS Citizens Advisory Board

Enclosure:

Recommendation #265

cc w/encl.

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**Recommendation #265
Site Performance Metrics**

Background:

The Government Performance and Results Act of 1993 provided “for the establishment of strategic planning and performance measurement in the Federal Government.” In response, in 1997 Department of Energy-Environmental Management (DOE-EM) established a set of 16 Corporate Performance Measures that were to be used by all EM sites. These measures are an indicator of how EM is accomplishing its cleanup mission. The measures are quantitative and focus on the accomplishment of risk-reducing actions that lead to completion of site cleanup. Each measure is tracked in the context of the total measures (life-cycle costs, actions and milestones) necessary to complete cleanup of each site as well as the EM program as a whole [Ref. 1 and 2]. Since 1997, the measures have been maintained, corrected, and continuously revised to establish performance expectations and accountability.

In addition to the corporate measures, previously referred to as “Gold Metrics”, performance is also tracked through the establishment of project baselines. The performance measure's annual targets and life-cycle estimates have been updated at least twice to be consistent with current project baselines.

These metrics measure operational performance against critical milestones for Savannah River Site (SRS) and DOE management. The milestones may be purely operational (liquid waste operations), negotiated among DOE, the Environmental Protection Agency and South Carolina's Department of Health and Environmental Control (e.g., the closure of High-Level Waste or HLW tanks), or negotiated with others (DOE and the Nuclear Regulatory Commission over the Points of Compliance for releases from closed HLW tanks). Reporting performance against performance metrics can also provide the public with a sense of cleanup progress and give citizens an opportunity to ask informed questions and offer better advice to improve the cleanup at SRS (e.g., CAB motion 261 [Ref. 3]).

Comments:

For several years DOE-SR included a copy of the current “Gold Metrics” chart in the material presented to the SRS-CAB at each full CAB meeting. Beginning in 2008, DOE-SR agreed to provide a quarterly “Performance Measures Update” briefing to the CAB to give CAB members an opportunity to better understand the performance measures and the “meaning behind the numbers”. The discussions that occurred, although informative, consistently highlighted weaknesses in the usefulness of the measures to convey quantitative progress in the areas of most concern to the CAB. For example, at the May 2009 CAB meeting in Savannah, GA, the CAB discovered that Project Baseline Summary (PBS) 11 (Plutonium and Uranium packaged for disposition) and PBS 12 (SNF packaged for disposition) targets for FY09 and current work are not relevant [Ref. 4]

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Instead of the highly aggregated metrics currently displayed, more resolution at greater detail would give the CAB a clearer picture of cleanup progress and, as a result, help the CAB provide better advice to DOE. For example, PBS 12 has 1.5 MTHM (metric tons, heavy metal) as the "Fiscal Year" target for FY09. No SNF was packaged in FY09 Q2; however, 3 MTHM were packaged through FY09 Q2 (this means that 3 MTHM were packaged through FY08, but none to date in FY09).

PBS 13 (solid wastes including Low-Level Wastes, Low-Level Mixed Wastes (LLW/LLMW), and transuranic or TRU) is nearing the completion of its legacy solid waste program, which means that SRS must shift from maximizing the disposition of "legacy" low level solid waste to minimizing newly generated LLW. Accordingly, this metric must be inverted.

In contrast, PBS 30 (environmental remediation (ER)) and PBS 40 (Facility Completions or decommissioning and dismantling (D&D)) are going to be accelerated as a result of the American Recovery & Reinvestment Act (ARRA). A new metric is needed to measure the acceleration compared to prior baselines and to measure the number of jobs created by ARRA. In general, we need new metrics for all ARRA items in a manner that displays the prior milestones and the impact of ARRA on each.

The same argument about aggregation can be applied to TRU wastes under PBS 13. This "Gold" metric hides the good news of the shipment to WIPP of legacy TRU wastes in drums (now nearing completion at about 32,000 drums) by combining data on drums with data on TRU wastes in large boxes (undergoing startup) and on TRU wastes buried on TRU Pad #1 (its safety basis is being written). It would be helpful to the CAB if it were able to disaggregate this information by category (i.e., legacy TRU wastes in drums; legacy large box TRU wastes; and legacy TRU wastes in drums and boxes on TRU Pad #1).

PBS 14 (HLW packaging, liquid wastes and HLW tanks) is causing confusion. The CAB has heard that the expected life-cycle total of 5,862 vitrified high-level waste (V-HLW) canisters is changing to 6,300 canisters for System Plan Rev. 14 [Ref. 6]. If correct, three glass waste storage buildings (GWSB) are sufficient (GWSB #1 is filled; GWSB #2 is being filled; and GSWB #3 is being designed). However, a rumor persists that 6 GWSBs are under consideration; i.e., SRS should reaffirm the currently planned and the maximum possible number of GWSB's expected.

Also under PBS 14, instead of combining the salt waste removed under the heading of "liquid waste eliminated", SRS should track its liquid wastes as separate items processed in the Defense Waste Processing Facility (DWPF; sludge, non-sludge, and total curies), Actinide Removal Process (ARP)--Modular Caustic-Side Solvent Extraction Unit (MCU), both operational; Dissolution, deliquification and adjustment (DDA); Salt Waste Processing Facility (SWPF), under construction; and Saltstone. In addition, SRS should

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track the number of tanks cleaned, partially cleaned, and annuli cleaned against the number of tanks and annuli to be cleaned.

Under PBS 14, SRS should publish the number of curies disposed in addition to the total volumes (i.e., curies in canisters, in liquid waste eliminated; etc.).

For PBS 30 (environmental remediation), the CAB noted at the meeting in Savannah that this statistic does not fully inform the public about the proportionate progress at SRS towards the completion of each project. Some sites take years to show progress. Specifically, DOE should publish the percentage of ER surface sites fully and partially remediated and the groundwater fully and partially remediated. This same should occur for D&D under PBS 40, too.

We support the ambitious effort recently undertaken by the DOE-SR Office of Integration and Planning [Ref 5] to develop a complete set of performance metrics associated with the outcomes identified in the new site Strategic Plan [Ref. 6]. Until these new metrics are available for the CAB to analyze, however, providing a preliminary set of performance metrics for SRS operations would greatly improve the communication of cleanup progress to the SRS CAB and stakeholder community.

Recommendations:

The SRS CAB advises DOE to:

1. Develop an interim set of performance metrics for SRS to more fully communicate site quantitative progress in ER, D&D, Waste Management Operations, Nuclear Materials Disposition and ARRA to the CAB and the public. These metrics are designed to demonstrate progress in the areas of most concern to the CAB. Specifically:
 - a. Provide relevant metrics for PBS 11 (Pu and U packaged for disposition) and 12 (SNF packaged for disposition) that show progress for FY09 and each year beyond.
 - b. For PBS 13:
 - i. Modify the PBS 13 metrics to show the acceleration of legacy solid waste disposition by category (LLW, LLMW, and TRU).
 - ii. Add a new metric to PBS 13 that specifically addresses the minimization and disposition of newly generated solid wastes.
 - c. Devise a new metric for ER and D&D to measure the acceleration in onsite remediation as a result of ARRA, and provide metrics for all projects with funding directly impacted by ARRA by displaying the old milestone and the impact of ARRA on each project along with the number of jobs created by project and overall.
 - d. Devise a metric that disaggregates the data for TRU waste drums, large boxed TRU wastes, and drummed and boxed TRU wastes on TRU Pad #1.

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- e. Reaffirm, revise as necessary, and republish the total number V-HLW canisters expected to be produced by DWPF and the number of GWSBs expected to be built to temporarily store the canisters.
 - f. Devise a metric that disaggregates "liquid waste eliminated" and publish as separate items the sludge, salt waste and curies processed and by the facilities where the liquid wastes were processed.
 - g. Devise a metric that disaggregates the number of tanks cleaned, partially cleaned, and annuli cleaned compared to the number of tanks with and without annuli to be cleaned.
 - h. Publish the number of HLW curies and volumes stored and treated and to be treated each year (in canisters; in liquid waste eliminated; etc.). The total number of curies of HLW that have been disposed should also be expressed as a percentage of the total curies of HLW remaining on site.
 - i. For PBS 30 (ER) and PBS 40 (D&D), publish the percentage of sites completed in addition to the number of sites cleaned, and publish the amount of work in progress (e.g., "20% of site ___ (site identity listed) is finished" etc.).
2. Review a draft of the new metrics with the SRS CAB by the November 2009 SRS CAB meeting.

References:

1. DOE-SR Presentation by Helen Belencan to the Strategic & Legacy Management Committee, "Performance Measures and End State Vision Update", August 14, 2007
2. <http://www.em.doe.gov/Pages/BudgetPerformance.aspx>
3. DOE SRS CAB Recommendation #261 (2009, May 19) SRS Budget Process - Improvements.
4. DOE-SR Presentation by Doug Hintze to the SRS CAB, Savannah, GA, "Quarterly Performance Measures Update", May 18, 2009.
5. DOE-SR Presentation by Doug Hintze to the SRS CAB Strategic and Legacy Management Committee, Aiken, SC, "SRS Performance Measures", June 16, 2009.
6. DOE-SR Strategic Plan, May 29, 2009 (SRS-SP-09).

List of Acronyms:

ARP	Actinide Removal Process
ARRA	American Recovery & Reinvestment Act
D&D	Deactivation & Decommissioning
DDA	Dissolution, Deliquification and Adjustment
ER	Environmental Remediation
GWSB	Glass Waste Storage Building
HLW	High-Level Wastes
LLW/MLLW	Low-Level Wastes/Mixed LLW
MCU	Modular Caustic Side Solvent Extraction Unit

Agency Responses

[Department of Energy - SR](#)