



Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

February 14, 2008

Mr. Steve McCracken
Assistant Manager for Environmental Management
DOE-Oak Ridge Office
P.O. Box 2001, EM-90
Oak Ridge, TN 37831

Dear Mr. McCracken:

Recommendation 164: Recommendation on Engineering and Technology Development on the Oak Ridge Reservation

At our February 13 meeting, the Oak Ridge Site Specific Advisory Board approved the enclosed recommendation.

Based on a presentation to our Environmental Management Committee in December 2007, the Oak Ridge Environmental Technology Program does not appear to be sufficiently focused on developing appropriate technologies for key Oak Ridge cleanup needs nor is it adequately funded.

As noted in the enclosed recommendation, we believe the re-establishment of the Oak Ridge Site Technology Coordination Group would be a good first step in improving the status of the Oak Ridge Environmental Technology Program.

Thank you for considering our recommendation, and we look forward to receiving your written response by May 13, 2008.

Sincerely,

A handwritten signature in black ink, appearing to read "Lance J. Mezga".

Lance J. Mezga, Chair

Enclosure

cc/enc:

Dave Adler, DOE-ORO
Mike Farmer, Roane County Mayor
Doug Frost, DOE-HQ
Pat Halsey, DOE-ORO
Connie Jones, EPA Region 4

Rex Lynch, Anderson County Mayor
James O'Connor, Oak Ridge City Manager
Melissa Nielson, DOE-HQ
John Owsley, TDEC
Elizabeth Phillips, DOE-ORO



Recommendation 164

Oak Ridge Site Specific Advisory Board

Recommendation on Engineering and Technology

Development on the Oak Ridge Reservation

Background

At the Fall 2006 meeting of the chairs of the Environmental Management (EM) Site Specific Advisory Board (SSAB) Dr. Larry Bailey discussed the Department of Energy's (DOE) EM Ten Year Plan. He said the plan focuses on the development and deployment of technologies for addressing remediation of contaminants at DOE sites.

The chairs wanted to identify expectations and opportunities as DOE moved forward with that effort. In a letter to DOE Assistant Secretary for EM James Rispoli¹, the chairs recommended that the Office of Engineering and Technology, along with DOE field sites, develop a public process, such as forums at each site, to incorporate 'these values at the front-end when evaluating remedy selections.'

Mr. Rispoli responded that public participation in the development and deployment of new remedies and technologies 'is a sound one that merits further discussion as to how best to achieve that objective.'² Mr. Rispoli directed Mark Gilbertson, Deputy Assistant Secretary for Engineering and Technology to make a presentation to the SSAB chairs at the Spring 2007 meeting.

At that meeting, Mr. Gilbertson said the Office of Engineering and Technology (EM-20) is focused on reducing technical risks to the overall EM program and is composed of the Offices of Waste Processing, Groundwater and Soil Remediation, and Decontamination and Decommissioning and Facility Engineering. He said EM-20 combines technology and engineering advances and translates EM's needs into something that can contribute to greater mission success.

Additionally, Mr. Gilbertson said EM-20 is pursuing 'high-input new generation technologies and is soliciting demonstration proposals.'

He said EM-20 had initiated a number of workshops, some of which were web-cast for greater accessibility. The goal of the workshops is to encourage constructive dialog and produce innovative results.

In concluding his presentation, Mr. Gilbertson said DOE EM needs to continue working with the SSABs on issues and priorities. He said DOE EM will continue to address lessons learned and to host additional workshops. He also said EM-20 will continue to support Federal Project Directors and provide them technical resources to confront EM's challenges. Mr. Gilbertson said EM-20 will continue to refine the Engineering and Technology Roadmap.

In April 2007, Mr. Gilbertson distributed to the SSABs a draft Engineering and Technology Roadmap³. The roadmap is divided into three program areas: Waste Processing, Groundwater and Soil Remediation,

¹ Recommendation to include Public Participation in Technology Development and Deployment at DOE Sites, September 8, 2006, http://www.em.doe.gov/pdfs/Jan_4_07_to_Todd_Martin.pdf.

² Ibid.

³ U.S. Department of Energy Office of Environmental Management, Engineering and Technology Roadmap, April 2007 draft, [http://www.em.doe.gov/pdfs/DRAFT%20P%20E&T%20Roadmap%20\(04-9-07\).pdf](http://www.em.doe.gov/pdfs/DRAFT%20P%20E&T%20Roadmap%20(04-9-07).pdf).

and Deactivation and Decommissioning/Facility Engineering. The roadmap includes strategic initiatives that address technical risks and uncertainties in the EM program.

Mr. Gilbertson said in an accompanying memo that the roadmap was a ‘living document.’ He said sites should identify ‘any applied research needs...that could address technical risks and uncertainties at [a specific] site.’ Included with the roadmap was a newsletter that highlighted recent successes of the engineering and technology program⁴. A second newsletter was distributed in October 2007⁵.

Discussion

In December 2007, the EM Committee of the Oak Ridge Site Specific Advisory Board (ORSSAB) asked Elizabeth Phillips, the program manager for the Oak Ridge DOE EM Technology Development Program, to discuss engineering and technology issues on the Oak Ridge Reservation (ORR).

In her presentation she referenced the EM-20 technology roadmap. She said the roadmap appeared to meet the goals for Oak Ridge except it did not address needs for a no-pathway-to-disposal waste disposal category for waste that is in current inventory or may be generated by future activities.

Ms. Phillips said the Oak Ridge technology program funds contractors MSE Technology Applications, Florida International University, and NuVision Engineering.

Ms. Phillips concluded by presenting a wish list for technology development for the ORR. The list included more funding, primarily for Oak Ridge National Laboratory; funding for a mercury planning program; ORR technology development contractor support; a mercury-contaminated technology demonstration site outside of the perimeter intrusion detection and assessment system; more Q-cleared workers; and total maximum daily loads of mercury that can be met.

Recommendation

As currently structured and funded, the Oak Ridge EM Environmental Technology Program does not appear to be focused on developing appropriate technologies for key Oak Ridge needs and does not possess the resources necessary to produce these technologies on schedules that meet regulatory milestones. While some of the currently funded technology applications have applicability to solving DOE cleanup issues, the lack of adequate funding levels, reliance upon the currently mandated contractors as the technical heart of the research program, and the disconnected nature of the oversight and execution of the program jeopardizes the viability of the current program.

Given the considerable expertise available at ORR for developing new technology applications, we believe a better system for connecting new technology to upcoming cleanup needs should be implemented using this expertise. The ORSSAB recommends that EM re-establish the Oak Ridge Site Technology Coordination Group, focused specifically on ORR cleanup issues and involving all key stakeholders associated with the Oak Ridge cleanup program and technology development program. The ORSSAB believes the Site Technology Coordination Group, along with proper funding, is a necessary requisite if improvements in the Environment Technology Program are to be realized.

⁴ Environmental Management Engineering and Technology – Making a Difference, U.S. Department of Energy, Office of Environmental Management, March 2007, [http://www.em.doe.gov/pdfs/DOE_EM_PRINT%20\(3\)41307.pdf](http://www.em.doe.gov/pdfs/DOE_EM_PRINT%20(3)41307.pdf).

⁵ Environmental Management Engineering and Technology – Making a Difference, U.S. Department of Energy, Office of Environmental Management, October 2007, http://www.em.doe.gov/pdfs/DOE_EM_9-07final.pdf.