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A Department of Energy Site-Specific Advisory Board

March 24, 2009

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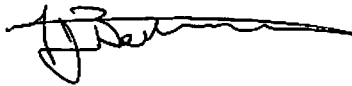
Dear Mr. Allison:

On behalf of the Board, I am pleased to forward to you the following recommendation adopted during the March 23-24, 2009, Savannah River Site (SRS) Citizens Advisory Board (CAB) meeting:

Recommendation #260 – A/M Groundwater Plume Program Update to the Public

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

Sincerely,



Manuel Bettencourt, Chairperson
SRS Citizens Advisory Board

Enclosure:

Recommendation #260

cc w/encl.

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**Recommendation #260
A/M Groundwater Plume Program Update to the Public**

Background

During the Savannah River Site (SRS) operations in the 1950-1980s reactor fuel and target fabrication activities were conducted in the 300-M Area to provide input materials for production reactor operation. The fabrication processes adopted, at that time, involved the use of organic solvents to clean the metals involved in the process. That fabrication process used large amounts of solvents (for example TCE), and the handling and disposal of the organic solvents were not environmentally friendly. It was common, at that time, to use settling basins for disposal of solvents. Present environmental regulations prohibit the use of such settling basins. Over a 30 to 40 year period a large amount of solvents were released to the surrounding soils and groundwater in the A and M Areas. It is estimated that as much as 3.5 million pounds of solvents were released through multiple sources.

In the early 1980's it became clear that the release of these solvents posed a serious threat to the environment (as demonstrated by their presence in plant drinking water). At one time, it was projected that organic solvents in the groundwater would reach unacceptable levels and that the groundwater plume containing these solvents could or would affect the groundwater in surrounding communities, such as Jackson, SC. Cleanup activities began in the early 1980's, and were later conducted under a South Carolina Department of Health and Environmental Control (SCDHEC) Resource Conservation and Recovery Act (RCRA) Permit issued in 1987.

Cleanup of the solvents from the groundwater included a number of treatment technologies including air-stripping, soil vapor extraction, recirculation wells and dynamic underground stripping. All of these technologies involved taking water from the soil and extracting the solvents in the water or removing solvents directly from the soil. A number of innovative and creative methods were used to both control the groundwater plume, to remove the source contaminants, and to release the treated water to surface streams. Over 4.8 billion gallons of groundwater have been treated and 1.4 million pounds of solvents have been removed from the subsurface since 1983.

The measures taken over the past 25 years have worked very effectively and the SRS now projects that the groundwater plume containing solvents will not migrate off-site. The efforts taken to date make a good news story for SRS. Remediation efforts will need to continue; but the extent of the problem is much reduced.

Comment

SRS has made several presentations on this topic to the CAB. This is an ongoing program that has been underway for over 25 years, and it has been very productive and effective. It seems from the progress to date that remediation is sufficiently mature and that the information developed thus far should be shared with the public. The

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A/M Groundwater Plume Program Update to the Public**

groundwater plume containing organic solvents is not expanding and is likely reducing its footprint. Further, it appeared from the discussions that progress is adequately advanced that more emphasis can be placed on passive measures and only periodic inspections (actions requiring less day to day activities with active equipment and personnel) with perhaps less involvement of active programs. This may offer some opportunity for cost savings. While this program continues to have importance and significance, it appears that no major active programs are needed to contain the existing plume. The recommendations are written to get DOE to inform the public of the status of their efforts to date and to publicize that no major active programs (except for periodical monitoring) will be necessary to contain the groundwater plume.

Recommendation

1. The CAB recommends that DOE advise the CAB and the public by August 1, 2009 the highlights of major milestones and accomplishments pertaining to the A/M groundwater organic solvents plume. These accomplishments should include a description of plume size reduction and migration control, as well as, source removal efforts. DOE's evaluation of the protection of groundwater resources both on and off the Site should be presented to the SRS CAB and the public. We request a public workshop to share these successes prior to the end of FY 2009.
2. The SRS CAB recommends that the DOE continue to evaluate cleanup strategies that accelerate groundwater cleanup as cost-efficient as possible.

References

1. SRS Presentation to Citizens Advisory Board Facilities Disposition and Site Remediation Committee by Chris Bergren on November 6, 2008- A/M Area Groundwater Cleanup Status Update.

Agency Responses

Department of Energy-SR