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January 7, 2002

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Ms. Karen Patterson, Chairperson  
SRS Citizens Advisory Board  
1103 Conger Drive  
Aiken, SC 29803

**SUBJECT: South Carolina Department of Health & Environmental Control responses to the Citizens Advisory Board Recommendation 145 – Groundwater Mixing Zones.**

Dear Ms. Patterson:

The South Carolina Department of Health and Environmental Control (DHEC) has received the Savannah River Site (SRS) Citizens Advisory Board (CAB) recommendation 145 which discusses the use of groundwater mixing zones in remedial actions at SRS.

Enclosed please find DHEC's responses to the subject recommendation. We appreciate the Board's input and wish to encourage continued active participation in the challenging issues we face in the regulation and cleanup at the Savannah River Site. If you need further assistance, please contact Keith Collinsworth of my staff at (803) 896-8955.

Sincerely,

R. Lewis Shaw, P.E.  
Deputy Commissioner  
Environmental Quality Control

cc: A. Stanley Meiburg, EPA Region IV  
Julie Corkran, EPA Region IV  
Thomas Heenan, DOE-SRS  
Myra Reece, EQC Lower Savannah

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

**DHEC RESPONSE TO THE SRS CITIZENS ADVISORY BOARD (CAB)**  
**RECOMMENDATION NO. 145**

Recommendation 145 discusses the streamlined use of groundwater mixing zones as part of remedial actions at SRS and includes three specific recommendations. The three recommendations and the corresponding SCDHEC responses are presented below.

*Recommendation 1) The three agencies finalize a streamlined protocol, analogous to the Plug-In ROD concept, on mixing zones.*

SCDHEC strongly supports any recommendation to streamline the remedial action selection and implementation process for SRS, including the use of groundwater mixing zones. A Groundwater Mixing Zone Protocol, agreed to by DOE, EPA and SCDHEC, exists for SRS (Environmental Restoration Division, Regulatory Document Handbook, Groundwater Mixing Zone Module, Module 9, September 1, 1998). The protocol describes the conditions under which a groundwater mixing zone would be an appropriate component of a remedial strategy for a site. The Regulatory Document Handbook, referenced above, also contains a protocol for groundwater modeling (Module 8). The groundwater modeling protocol is used to support groundwater mixing zone applications and currently is being evaluated for possible changes/updates. The aforementioned protocols are used to streamline the evaluation and implementation of groundwater mixing zones for sites at SRS.

The Plug-In ROD concept, however, is not appropriate for the use of groundwater mixing zones at SRS because the Plug-In ROD concept assumes that one remedial strategy is appropriate for a group of very similar sites. Groundwater mixing zones are applied at sites that have very different contaminants and groundwater conditions. Furthermore, groundwater mixing zones often are only one component of an overall remedial strategy for a site.

*Recommendation 2) The three agencies continue to solicit stakeholder input (SRS CAB and the public) during the initial phases of remedy selection on any restoration site.*

SCDHEC agrees with the SRS CAB that stakeholders should be involved in the initial phases of the remedial selection process.

*Recommendation 3) The three agencies provide a Plan of Action & Milestones (POAM) for the protocol and present it to the SRS CAB at the January 2002 Board Meeting.*

For the reasons discussed in the response to Recommendation 1), SCDHEC believes that a streamlined approach to the evaluation and implementation of groundwater mixing zones for sites at SRS already exists. Therefore, a Plan of Action & Milestones for this (groundwater mixing zone) protocol is not warranted at this time. SCDHEC representatives will be present at the January 2002 CAB meeting and will be glad to discuss this matter further at the meeting if requested.