



ENERGY AND ENVIRONMENT CABINET

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Leonard K. Peters
Secretary

November 13, 2013

Ms. Rachel Blumenfeld
US Department of Energy
Portsmouth/Paducah Project Site Office
PO Box 1410
Paducah, Kentucky 42002

RE: Retraction of the Approval of the Explanation of Significant Differences to the Record of Decision for the Interim Remedial Action of the Northeast Plume (DOE/LX/07-1291&D2)

Paducah Gaseous Diffusion Plant
Paducah, McCracken County, Kentucky
KY8-890-008-982

Ms. Blumenfeld:

On August 20, 2013 the Division of Waste Management (Division) approved the *Explanation of Significant Differences to the Record of Decision for the Interim Remedial Action for the Northeast Plume*. In doing so, it inadvertently approved a 60,000 pCi/L Tc-99 discharge limit for treated Northeast Plume pump-and-treat system effluent. The limit, as codified in 902 KAR 100:019 § 44 (10 CFR 20, Appendix B), exceeds the top end of EPA's risk range and therefore should not be applied at a CERCLA outfall. Therefore, the Division regrets that it must revoke its approval of the ESD so that the FFA parties can address this oversight.

Although cited as ARAR in the ESD, the effluent concentration referenced in 902 KAR 100:019 § 44 is a dose-based limit for all discharges from the DOE facility (CERCLA and non-CERCLA) and is not in and of itself protective for this CERCLA project. The 900 pCi/L drinking water MCL has historically been applied as a conservative treatment goal or limit for effluent associated with other remedial projects onsite. In order to insure protectiveness under CERCLA, it is the Division's position that DOE should continue to apply 900 pCi/L to Tc-99 effluent discharges for the Northeast Plume pump-and-treat system. In accordance with the Federal Facility Agreement (FFA) Section X.X.I. Finalization of Documents, the Division is

issuing a conditional concurrence on this Primary Document. In order for the Division to approve a revised D2 document, the DOE must make the following changes:

1. Include new text alongside text describing the new treatment units (e.g., Table 1, Key Design Changes) stating that extracted groundwater containing (or assumed to contain) Tc-99 above 900 pCi/L will be treated using ion-exchange resin (or other filtration technology) to reduce Tc-99 concentrations below 900 pCi/L.
2. Include text on page 25 below Table 3, "The discharge limit for Tc-99 (401 *KAR* 100:019 § 44 [10 *CFR* § 20, Appendix B]) is an annual concentration limit for all the CERCLA projects at the Paducah Site that include this citation as ARAR. For this project, there is a daily maximum effluent discharge limit of 900 pCi/L from each of the ATU(s), if treatment becomes necessary."

Please modify the existing ESD accordingly and resubmit for Division approval by December 13, 2013. If you have any questions or require additional information, please contact Todd Mullins of my staff at (502) 564-6716, or e-mail at todd.mullins@ky.gov.

Sincerely,



Anthony R. Hatton, P.G., Director
Division of Waste Management

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