

## Enclosure 2 – Matrix Describing the Status of Resolving Issues Raised by NRC

Issue Raised by NRC	Enclosure 1 Reference #	Status of Resolution of NRC Identified Issue
Probabilistic analyses did not consider uncertainty in flow (Reference 3)	21a 24 24a	The Special Analysis under development and anticipated to be provided to NRC by December 2013 will include updated probabilistic analyses incorporating flow variability.
Multiple quality assurance problems with probabilistic analyses (Reference 3)	5a 5b 5g	The probabilistic model was updated and rerun for Case A and Case K.
The revised probabilistic model (References 5a, 5b, and 5g) needs further revision to address additional concerns including 1) unsupported reconcentration of Tc-99 in the disposal unit concrete 2) use of average-Kd model, and 3) unsupported timing of saltstone fracturing (Reference 13)	21a 24 24a	The Special Analysis under development and anticipated to be provided to NRC by December 2013 will include updated probabilistic analyses with a new case that will not include the Case K identified issues of reconcentration of Tc-99 in the disposal unit concrete, average Kd model, or unsupported timing of saltstone fracturing.
Due to optimistic water flow assumptions with the base case, sensitivity analyses, and synergistic case evaluation, NRC requested a revised base case. Case K was provided by DOE but NRC identified additional issues with Case K (Reference 3)	19 19a 21a 22 24 24a	<p>The modeling parameters planned for a new case evaluation were provided to NRC and was the topic of a public meeting on January 17, 2013. NRC has provided feedback associated with the planned modeling runs which DOE will factor into the Special Analysis under development.</p> <p>The Special Analysis anticipated to be provided to NRC by December 2013 will provide a new case evaluation.</p>
Need to evaluate saltstone fracturing, consistent with current conditions to allow oxidation (Reference 3)	17a 17e 19a 21a 22 24	The results of an evaluation for measuring oxidation front movement in saltstone and a literature review of transport through cracked concrete are being incorporated into the modeling parameters for a new case evaluation. The modeling parameters were provided to NRC and were the topic of a public meeting on January 17, 2013. NRC has provided feedback which DOE will factor into the Special Analysis under

Enclosure 2 – Matrix Describing the Status of Resolving Issues Raised by NRC

	24a	<p>development. The Cementitious Barriers Partnership (CBP) toolbox will be used to model degradation of saltstone and vault materials.</p> <p>The Special Analysis anticipated to be provided to NRC by December 2013 will provide results of a new case evaluation with increased model support including a sensitivity analysis of impacts associated with potential grout or vault fracturing.</p>
Additional support needed for saltstone degradation and hydraulic performance (Reference 3)	17b 17d 17f 20a 21c 23a 23b 19a 21a 22 24 24a	<p>Reports documenting saltstone grout curing conditions (temperature, water-to-premix ratios, and humidity) and degradation (biodegradation; see above entry on oxidation and fracturing) have been completed to provide additional model support for the new case analysis. The modeling parameters for the new case were provided to NRC and were the topic of a public meeting on January 17, 2013. NRC has provided feedback associated with the planned modeling runs which DOE will factor into the Special Analysis under development. The CBP toolbox will be used to model degradation of saltstone and vault materials over time.</p> <p>The Special Analysis anticipated to be provided to NRC by December 2013 will provide results of the new case evaluation including increased model support and a sensitivity analysis of impacts associated with potential grout or vault fracturing.</p>
Additional support needed for Tc chemical reduction and retention (Reference 3)	5e 17g 17h 19 21a 22 24 24a 26a	<p>Additional technetium sorption and solubility testing have been performed and provide increased model support for a new case evaluation utilizing solubility, versus cementitious sorption, as the release mechanism in reduced grout. This information will be incorporated in the Special Analysis under development.</p>

Enclosure 2 – Matrix Describing the Status of Resolving Issues Raised by NRC

NRC continuing to evaluate the basis of DOE's revised inventory projections identified in Reference 7a (Reference 13)	5c	DOE has provided sample results for Interim Salt Disposition Program Macrobatches 6 demonstrating lower technetium-99 as projected in Reference 7a.
	7a	
	15a	
	21b	