Chapter 14, Facility Radiation Surveys, Revision 1.2 – RAIs and Proposed Resolution
April 2013

RAI No.	Section	Issue	Regulatory Link	Discussion	Path Forward
1	14.4.4.1.6.2	It is unclear whether systematic soil sampling is planned at the bottom of certain excavated areas.	10 CFR 20, Subparts E and F; NUREG-1575 (MARSSIM) Guidance	There appears to be a discrepancy in the wording of Decommissioning Plan (DP) Section 14.4.4.1.6.2 in Revision 1.2, as compared to previous communications and Table 14-24 of Revision 1.2. The current wording in DP Section 14.4.4.1.6.2 makes it unclear whether or not systematic sampling will be performed at the bottom of an excavation during certain instances of the "Final Evaluation of Residual Radioactivity in Soil Following Backfill" scenario. Details are as follows: Revision 1.2 of DP Section 14.4.4.1.6.2 indicates in the last paragraph of the sub-section titled "Final Evaluation of Residual Radioactivity in Soil Following Backfill" that: Following the completion of backfill, a FSS will be performed. In the event that soil identified as re-use is placed as backfill, the FSS will consist of a GWS of 100 percent of the exposed ground surface, and collection and laboratory analysis of soil samples only at biased locations, focusing on locations that appear to contain potentially elevated levels of	Please verify that the appropriate wording was used in Revision 1.2, based upon previous communications with the NRC regarding changes to DP Section 14.4.4.1.6.2 and clarify how material at the bottom of the excavation will be systematically sampled for Final Status Survey (FSS) purposes during the "Final Evaluation of Residual Radioactivity in Soil Following Backfill" scenario.

RAI No.	Section	Issue	Regulatory Link	Discussion	Path Forward
				residual radioactivity that were identified during the scan survey. In the event that soil obtained from an off-site borrow location is placed as backfill, performance of a scan survey or the obtainment of surface soil samples is unnecessary. Sub-surface sampling will consist of coring or drilling through the backfill layer and one meter into the lowest point where remediation occurred. While it is noted that "sub-surface sampling will consist of coring or drilling through the backfill layer and one meter into the lowest point where remediation occurred," it is not clear whether sub-surface samples at the bottom of the excavation, and beneath the backfill, will be systematically taken. The previous two sentences indicate that soil sampling where re-use soil was utilized will only occur at biased locations or not at all (i.e., not in a systematic manner). In comparison, Table 14-24 of DP Revision 1.2 indicates under the "Sampling Protocol at Each Systematic Station" heading that "coring or drilling to the lowest point where remediation occurred (ensures through the backfill) and then compositing a sample from a coring that extends one meter deeper	

RAI No.	Section	Issue	Regulatory Link	Discussion	Path Forward
				than the lowest point where remediation occurred" will be performed during the "Final Evaluation of Residual Radioactivity in Soil Following Backfill" scenario. This statement seems to imply that systematic sampling of the bottom of the excavation will be performed by coring or drilling through the backfill. Note: This revision to the DP resulted from discussions on technical changes outside the Request for Additional Information (RAI) process, and a review matrix was provided via an email from Kevin Davis to John Hayes on June 3, 2011. In that document a differently worded paragraph was also provided, which reads: Following the completion of backfill, an FSS will be performed. In the event that non-excavated surface soil remains in the survey unit, the FSS will consist of a GWS of 100 percent of the exposed non-excavated ground surface. Systematic soil sampling will consist of surface soil samples in non-excavated areas and subsurface soil samples consisting of a composite sample from 15 cm to 1.5 m (Root stratum) in non-excavated areas and soil samples consisting of	

RAI No.	Section	Issue	Regulatory Link	Discussion	Path Forward
				coring or drilling through the backfill layer and one meter into the lowest point where remediation occurred in areas that were excavated. This statement from June 3, 2011, differs from that which was provided in Revision 1.2 of the DP, and appears to indicate that systematic sampling of sub-surface soils will be performed. A revised table of changes outside the RAI process was also provided to the NRC on October 31, 2011. However, that table no longer included the above-referenced (June 2011) paragraph.	
2	14.4.5.6.3	It appears that the correct equations were not referenced in DP Section 14.4.5.6.3.		DP Section 14.4.5.6.3 refers to Equations 14-34 and 14-35, which are Scan MDC equations. This appears to be a misprint, with the appropriate equations for f_{Avg} and f_{EMC} being Equations 14-45 and 14-46, respectively.	Please verify that the correct Equations are referred to in DP Section 14.4.5.6.3.
3	Table 14-23	Table 14-23 does not include all parameters for which samples will be analyzed.		Gross alpha and gross beta should be included in Table 14-23 under Parameters. DP Section 14.5.3 indicates that samples will be analyzed for gross alpha and gross beta in addition to Tc-99 and uranium isotopes, but gross alpha and gross beta are not listed in the table.	Please update Table 14-23 to include all parameters for which samples will be analyzed.