

REQUEST FOR ADDITIONAL INFORMATION (RAI) REGARDING THE DRAFT FINAL STATUS SURVEY REPORT FOR SELECT AREAS WITHIN THE EXCAVATION BOUNDARY NON-TIME CRITICAL REMOVAL ACTION FOR SOLID WASTE DISPOSAL AREAS WESTSIDE DRIVE, BAYSIDE DRIVE, AND NORTH POINT DRIVE INSTALLATION RESTORATION SITE 12 (PHASE III) NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA

U.S. Nuclear Regulatory Commission (NRC) staff and its contractor, Oak Ridge Associated Universities, reviewed the submittal referenced above and prepared the following RAIs:

COMMENT 1: SECTION 3.1 “PLANNED ACTIVITIES AND OBJECTIVES” AND SECTION 4.6.2 “EXCAVATION SIDEWALL SURFACES”

Information is requested in respect to the radiological controls currently in place and controls planned during future remediation of the Bayside sidewall SU9 and Northpoint sidewall SU5. Because debris is reported in the sidewalls, it is the NRC staff’s understanding that continued remediation in these adjacent areas will occur at a future date.

Description: The report describes that final radiological characterization was not completed because extensive solid waste/debris was identified beyond the lateral boundaries of both SWDAs Bayside and North Point, and that complete lateral debris removal was not possible under the action that the Final Status Survey (FSS) report covers. Currently the report only states that plastic sheeting was used as a delineator to protect clean fill from sidewall surfaces that displayed visible debris. The report did not discuss if the remaining solid waste/debris contains, or may potentially contain, radionuclides of concern (ROCs). If ROCs are expected in the remaining debris, the report should describe measures established that would confidently prevent cross-contamination during future remediation or migration from behind the plastic sheeting or other scenarios that could affect the final radiological status of adjacent survey unit excavation bottom or sidewall surfaces for which an FSS has been completed and included in the request for unrestricted release.

Basis: Please refer to guidance supporting the regulations in 10 *Code of Federal Regulations* 20.1402 (related to the dose criterion of 25 millirem per year) in NUREG-1757, Vol. 2, Appendix K.1.3: “The difference between a dose assessment for license termination of the entire site license and a dose assessment for a PSR [partial site release] is that other sources under control of the licensee may affect the potential dose on the PSR. In license termination of the entire site, when the site is released for unrestricted use, there are no offsite sources remaining under the control of the licensee to affect the projected dose for residents or workers using the site. In contrast, after a PSR, the remaining licensed site may still be operating and thus have dose contributions to the critical group receiving dose from the PSR, such as from surface water runoff or ground water migration. In addition, sources on the remaining licensed site may result in dose to the public after unrestricted release of the remaining site in the future, such that members of the PSR critical group receive doses from sources on both the PSR and on the remaining (now terminated) site.”

RAI: Please provide clarification whether the remaining visible debris described in the sidewalls of excavations will be addressed by future remediation. If additional remediation will occur, please provide discussion of isolation radiological controls for the areas that are adjacent to or otherwise may be impacted by the remediation.

COMMENT 2: SECTION 3.2.4.1 “3-INCH BY 3-INCH SODIUM IODIDE” AND SECTION 4.4 “SCREENING LEVEL”

Please enhance the descriptions and justification of the investigation level for gamma radiation scans.

Description: The report does not provide a gamma radiation scan minimum detectable concentration (MDC).

Basis: Section 3.2.4.1 describes the method for the *a priori* gamma radiation scan count rate investigation level (IL). The IL selected was a function of the mean reference area count plus three standard deviations. This IL may or may not be appropriate because the reference area appears to have backgrounds in excess of that of the survey units. Typically, the IL is based upon data collected in the survey unit.

Further independent assessment would require additional information regarding the correlation of the IL to an activity concentration (pCi/g) that may be detected at a desired performance level (d' as discussed in MARSSIM) and a direct comparison of the resulting scan MDC to the release criterion for the ROC. Only the analytical MDC was provided within Section 4.0 of the report.

RAI: Please provide scan MDCs and justify the adequacy of the IL used relative to the release criteria, i.e., 1 pCi/g for Ra-226 above background. If the scan MDC exceeded the Derived Concentration Guideline Levels (DCGL_{emc}), there is a possibility that contamination exceeding the 25 millirem per year dose criterion could exist.