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Subject: Review of Final Status Survey Report for Building 344 dated May 7, 2008.

Dear Mr. Foote:

I have been retained to review the "Final Status Survey Report for Building 344, Naval Station Treasure Island, San Francisco, California" dated May 7, 2008.

I offer the following comments and questions:

Executive Summary. At the end of the Executive Summary, there is a statement about the calculated dose to the critical group from contamination in Building 344 being less than 1 mrem y^{-1} TEDE, but the significance of that value is not made clear. It appears that the significance of the 1 mrem y^{-1} dose rate as a benchmark is tied to the fact that it is the dose rate that corresponds to the acceptable surface contamination levels presented in Regulatory Guide 1.86, as is pointed out in Section 3.3. If comparison of the calculated dose rate to that benchmark is important enough to include in the Executive Summary, it would be good to make the origin of the value clearer there and to mention the comparison in the Section 10.0 Dose Modeling discussion and/or the Section 11.0 Conclusions.

Section 1.4 Report Objectives. Section 1.4 states that the objective of the report is to demonstrate that the estimated residual dose to the critical group is less than 25 mrem y^{-1}. In that section, the critical group is identified as "a receptor assumed to occupy a room in the building with contaminated floor, ceiling, and walls for light industrial use." However, Section 10.0 indicates that RESRAD-BUILD was used to evaluate residual dose to the critical group using the *residential* scenario. Please explain this apparent discrepancy and indicate whether reported dose rates are representative of residential or light industrial occupancy.

Section 8.2.2 Step Two– Identify the Decision. The decision to be made includes reference to "the β/γ release limits of 5,000 dpm/100 cm^2 (5,000 dmp *[sic]* /15.5 in^2)." As stated in Section 3.6.1 and 3.6.2, that Investigation Level value actually applies to β radiation surveys, while the Investigation Level for gamma surveys is based on the reference area mean + 3σ. The typographical error should be corrected (dmp), and the description of the Investigation Level should be clarified.

Section 9.7 Static Gamma Measurement Results. The only place where radioactivity above background was reported to have been detected was near Location 7 in Survey Unit 2. Based on gamma spectrometric analysis performed off site (Appendix F), that radioactivity was determined to be lead-210, a decay product of natural radon-222 and was excluded from the statistical tests performed to evaluate suitability for unconditional release. It appears that the elevated radioactivity

was appropriately attributed to natural sources, most likely aggravated by the partially underground nature of the structure and the orientation of the measurement location relative to the ventilation system supply flow. I would recommend, regardless of the source of the radioactivity, that something be briefly said about whether the levels of radioactivity found could pose a significant health hazard to anyone who might visit the area.

Section 11. Conclusions. The last paragraph on Page 11-1 states that dose modeling based on average net concentration levels of the ROC resulted in calculated doses of 0.83 mrem y^{-1} or less for both survey units. What is the significance of that 0.83 mrem y^{-1} value, given that both Maximum Dose values presented in Table 10-1 are equal to 0.004 mrem y^{-1}?

Please contact me if you have any comments or questions about my review or the information contained in this letter. I can be reached at (415) 618-3207 or by e-mail as twidner@chemrisk.com.

Respectfully,

Thomas E Widner

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