Radiological HSA Report
NRC Comments
WRAMC Forest Glen Annex

Comment Number	Page Number	Section/Figure/ Table/Appendix	Commentor-ORG	Comment	Response By	Response
1	General		NRC	This a review of the Historical Site Assessment (HSA) Review for the Forest Glen Annex of Walter Reed Army Medical Center, Silver Spring, MD and the leased Gillette Building and Taft Building, Rockville, MD dated January 2009 which was performed during inspection.	Cabrera	Acknowledged.
2	viii	Executive Summary	NRC	There is a statement that only material with a half life off over 1 year HSA the potential for residual activity. This statement is repeated in several locations. Only material which has a half life of < 120 days may be discounted as being decayed. Some isotopes such as Cd-109, Mn-54, Na-22, and Zn-65 have half lives > 120 days but < 1 year.	Cabrera	Cd-109 and Na-22 actually have half-lives greater than one year. Cd-109 has a half-life of 462.3 days, and Na-22 has half-life of 2.605 years. Mn-54 has a half-life of 312 days and Zn-65 has a half-life of 243.8 days, so only they fall in the span of >120 days but <1 year. However, Mn-54, Zn-65, Na-22, and Cd-109 were only ever present in the DORF building (516), with Zn-65 also having historical presence in Building 508 (which was closed out in 1998 when all RAM usage ceased, therefore, since over 7-10 half-lives have passed, it can be concluded that any contamination would have decayed to negligible levels by now), and Na-22 also having historical presence in Building 500 (which was closed out in 1997 when all RAM usage ceased). Historically, the >1 year half-life cut-off has been used as a measuring stick for what can be considered RCOPCs for similar facilities. 120 days can certainly be used as the measuring stick in the future, but for the RCOPCs involved in this study, it should make no significant difference.
3	3-1		NRC	Page 3-1 gives the definition of non-impacted sites. They include areas of operational or storage of RAM where surveys exist documenting decontamination, decommissioning, closeout or free-release. For final release these areas ARE impacted locations. They must have surveys performed and submitted to be released from your site. It was difficult in reviewing Appendix B to determine if a sufficient survey was performed in accordance with MARSSIM. These could be survey class 3 areas for which minimal survey requirements are required by MARSSIM; there is a MARSSIM abbreviated survey method, but it is unclear if your past surveys meet that criteria.	Cabrera	MARSSIM is not entirely clear on the issue of "formerly used, now clean," and much of this is left up to subjectivity. For our purposes, we have historically considered areas that would have been considered impacted, but have shown proper release to be non-impacted, as there is no point in re-doing a close-out survey if something has already met closure criteria. If closure criteria has changed (such as with DORF), then re-doing a closure survey could be appropriate; however, for all non-DORF buildings demonstrating previous close-out, the nature of RAM usage would not dictate replicating a closure survey. Although not named official MARSSIM Final Status Surveys, the building close-out surveys performed by the WRAMC HPO staff have been completed to a standard with the rigor of MARSSIM FSS or greater. If review of individual close-out surveys is necessary, the close-out surveys used to base these decisions can be found in the electronic reference library (Appendix B), under the following filenames: (2000-07-12) Building 500 - Decommissioning and Close-out.pdf (1997-06-23) Building 149A Decommissioning and Close-out.pdf (1997-06-23) Building 188 - Decommissioning and Close-out.pdf (1997-07-07) Building 513 - Decommissioning and Close-out.pdf (1998-03-05) Building 508 - Decommissioning and Close-out.pdf (1999-05-07) Northern Half of Gillette Bldg Ground Floor Decommissioning and Cl (1999-06-08) Building 506 - Decommissioning and Close-out.pdf (1999-10-20) Final Survey of USTs at Bldg 516 (DORF).pdf (2000-07-12) Building 500 - Decommissioning and Close-out.pdf

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4	General		NRC	There were some tanks stored on the grounds of the DORF Building. Ground contamination should be checked in this region. There was no indication that ground contamination had been checked.	Cabrera	These tanks have indeed been removed, and the ground has sufficiently been checked. Please see the Final Survey Report included in the electronic reference library (Appendix D), under the filename, (1999-10-20) Final Survey of USTs at Bldg 516 (DORF).pdf. Also see the soils analysis, filename: (2001-04-15) Former DORF UST Soil Analysis.pdf.
5	4-3		NRC	Page 4-3 discusses that there is “unknown material” under the reactor but does not discuss anything more about it.	Cabrera	A more appropriate term would be "uncharacterized." Based on visual inspection, i seems that no coring/scabbling has occurred on the floor of the exposure room, therefore, it would not be known if any contamination exists sub-surface because complete characterization has not occurred.
6	7-6	Table 7-1	NRC	Table 7-1 doesn’t have Ba-133 or Cr-51 value for DCGL. These values should be calculated from DandD.	Cabrera	Agreed. No screening values exist for these isotopes, so DCGLs would need to be developed during DandD. These isotopes are only applicable to DORF. Cr-51 has a half-life of only 27 days, so it is likely to be decayed to negligible levels between the time of RAM removal to the time characterization/close-out occurs, and therefore no DCGL would be necessary. For reference, Ba-133 has a half-life of 7.2 years, so a DCGL would be developed based on characterization data.
7	7-8		NRC	Page 7-8, material that was irradiated. You proposed a 12uR/hr above background. A formal amendment request will need to be submitted to allow for volumetric release criteria that you described. I do not believe that this release criteria will be approved as it is based only on the direct radiation pathway and not other pathways..	Cabrera	DORF is to be addressed under separate action from the rest of the WRAMC Forest Glen Annex. The final release criteria would most assuredly be developed based on characterization data. The release criteria in the HSA was only a recommendation presented as a starting point based on very limited qualitative data.
8	General		NRC	The following isotopes and materials were on the license and was not addressed in the HSA. Np-237 was licensed from 9/24/62 through 7/16/82. Po-210 was licensed in 1974 through 9/22/1984. 200# of Uranium and Thorium from SUB 603 (4/18/68) 5 Kg Thorium and 50 Kg of Uranium for teaching and Lab Research (7/18/79) Guillette Building expected to use Cr-51 and Fe-59 (3/10/93)	Cabrera	It is understood that many more isotopes show up on the license(s) than what is presented in the HSA. Given the nature of research facilities, such as WRAMC, although the facility may be licensed for certain isotopes, they may never actually use or even possess them. So the list of isotopes presented in the HSA was primarily based on WRAMC inventories/authorizations, likely a more accurate reflection of what actually was present. Many short-lived isotopes on the license (i.e. Fe-59 with a half-life of 44.51 days, Cr-51 with a half-life of 27 days, and Po-210 with a half-life of 138.4 days) would all be decayed to negligible levels by now regardless. Something such as Np-237, which has a half-life of 2.1 million years, of course would not be decayed by now, but there is no indication that it was used in any Forest Glen buildings. The HSA mentions that the list of radionuclides presented does not represent a comprehensive list of all radionuclides allowed. The licenses do not distinguish whether radionuclides were used on the Main Post vs. Forest Glen vs. any other WRAMC facilities, so it is likely that if something did r

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9	General		NRC	The following buildings were listed as had been used but were not listed in the HSA. Ceased use of Forest Glen Buildings 508, 500, 506 (12/12/97) Ceased Using Buildings 149 and 513 (6/25/97)	Cabrera	These buildings were indeed listed as being used at some point, but close-out documentation exists, therefore they were considered non-impacted. Close-out documentation is available in the electronic reference library (Appendix D), under the filenames (1997-06-23) Building 149A Decommissioning and Close-out.pdf, (1997-07-07) Building 513 - Decommissioning and Close-out (1998-03-05).pdf, Building 508 - Decommissioning and Close-out.pdf, (1999-06-08) Building 506 - Decommissioning and Close-out.pdf, and (2000-07-12) Building 500 - Decommissioning and Close-out.pdf. Depending on what course of action is chosen based on the concern expressed in Comment 3, these would be the additional buildings to investigate.