

QA:NA

To: Jane Summerson/YD/RWDOE@CRWMS, Joseph Rivers/YD/RWDOE@CRWMS  
cc:  
Subject: Clarification

JS 8/25/07

LSN: Not Relevant - ~~Privileged~~  
User Filed as: Excl/AdminMgmt-14-4/QA:N/A

MOL.20070913.0505

Use this information instead of email from one hour ago.

In response to: An updated number of waste packages, by type, for the LA design and adequate waste package design information to determine the surface area of Alloy 22 or stainless steel that could be exposed to water under long-term conditions. Any design changes to emplacement pallets that would change the amount of exposed materials (Alloy 22 and stainless steel) from that considered in the FEIS.

----- Forwarded by Janice Roberson/YM/RWDOE on 03/15/2007 02:56 PM -----



Michael Anderson  
03/15/2007 02:29 PM

To: Janice Roberson/YM/RWDOE@CRWMS, Gregory Mitchem/YM/RWDOE@CRWMS, Lauralee Schwartzwalter/YM/RWDOE  
cc: Mark Johnson/YM/RWDOE@CRWMS, Gary Robinson/YM/RWDOE@CRWMS, Robert Boutin/YM/RWDOE@CRWMS  
Subject: Fw: SEIS Support

JS 8/25/07

LSN: Not Relevant - Not Privileged  
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MJA.07-048

Here is the table from the proper reference. (N. B., print in Landscape mode to see the whole table.)

QA: NA

Table 2-11. Required Emplacement Length Sample Calculation for a Waste Package Spacing of 0.3 ft (0.1m)

Type of WP	WP Quantities <sup>a</sup>	WP Length <sup>b</sup>		Required Emplacement Drift Length <sup>c,d</sup>		References for Waste Package Lengths
		Meters	Inches	Meters	Feet	
21 PWR/44 BWR TAD	7,365	5.8499	230.31	43,820.814	143,769.672	000-MWK-DNF0-00102-000-00A <sup>e</sup> [DIRS 176681]
Total Commercial SNF	7,365			38,375.893	125,904.464	
5 DHLW Short/1 DSNF Short	1147	3.8338	150.94	4,511.869	14,803.005	000-MW0-DS00-00102-000-00A [DIRS 166946]
5 DHLW Long/1 DOE SNF Long	1,406	5.4404	214.19	7,789.602	25,556.558	000-MW0-DS00-00202-000-00A [DIRS 166949]
2 MCO/2 DHLW	149	5.4404	214.19	825.320	2,707.754	000-MW0-DS00-00302-000-00A [DIRS 166919]
5 DHLW Long/1 DOE SNF Short	31	5.4404	214.19	171.552	562.839	000-MW0-DS00-00202-000-00A [DIRS 166949]
HLW Long Only	679	5.4404	214.19	3,761.732	12,341.697	000-MW0-DS00-00202-000-00A [DIRS 166949]
Naval Short	144	5.2149	205.31	765.146	2,510.332	000-MWK-DNF0-00202-000-00A <sup>e</sup> [DIRS 176682]
Naval Long	156	5.8499	230.31	927.984	3,044.581	000-MWK-DNF0-00102-000-00A <sup>e</sup> [DIRS 176681]
Total DOE/HLW	3,712			18,753.205	61,526.765	
TOTAL	11,077			62,574.02	205,296.44	

Source: BSC 2005 [DIRS 174153].

NOTES: <sup>a</sup>It is assumed that the 12-PWR and 24-BWR waste packages in the nominal inventory are full; this created an upper limit for TAD waste packages.

<sup>b</sup>It is assumed that the shield plug introduced in the HLW-bearing waste packages is 15 in. thick based on the site specific canister conceptual design.

<sup>c</sup>The lengths in meters and feet do not match exactly due to rounding in the conversion of waste package lengths between meters and inches.

<sup>d</sup>This computation assumes 0.1 m between each waste package, less 0.2 m for the two end waste packages.

<sup>e</sup>Until the lifting of the quality product stand down and the revision of the configuration drawings for the Naval Waste Packages, these sketches must serve as the interim reference.

MJA.07-047

Reference(s):

- (1) ~~BSC 2006. *Basis of Design for the TAD Canister-Based Repository Design Concept*. 000-3DR-MGR0-00300-000-000. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20061023.0002. [DIRS 177636]~~
- (1) DOE 2006. *Yucca Mountain Project Conceptual Design Report*. TDR-MGR-MD-000014, Rev. 05. Las Vegas, Nevada: U.S. Department of Energy, Office of Repository Development. ACC: ENG.20060505.0003. [DIRS 176937]
- (2) BSC 2007. *TAD Waste Package Configuration*. 000-MW0-DSC0-00101-000-00B. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070301.0010.
- (3) BSC 2007. *5-DHLW/DOE SNF - Short Co-disposal Waste Package Configuration*. 000-MW0-DS00-00101-000-00C. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070306.0003.
- (4) BSC 2007. *5-DHLW/DOE SNF - Long Co-disposal Waste Package Configuration*. 000-MW0-DS00-00201-000-00C. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070306.0004.
- (5) BSC 2007. *2-MCO/2-DHLW Waste Package Configuration*. 000-MW0-DS00-00301-000-00C. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070205.0011.
- (6) BSC 2007. *Naval Long Waste Package Configuration*. 000-MW0-DNF0-00101-000-00C. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070301.0013.
- (7) BSC 2007. *Naval Short Waste Package Configuration*. 000-MW0-DNF0-00201-000-00C. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070301.0016.
- (8) BSC 2007. *Naval Short Waste Package Configuration*. 000-MW0-DNF0-00201-000-00B-DCN001. Las Vegas, Nevada: Bechtel SAIC Company. ACC: ENG.20070111.0005.

One and all;

A possible inventory of waste packages for the revised suite of configurations is shown in the *Basis of Design for the TAD Canister-Based Repository Design Concept* document [1, Table 2-11]. Please note that this is a representative possible inventory and is in no wise to be considered limiting.

The waste package configuration drawings that are suitable for estimating the exposed surface area of Alloy 22 are as shown below. There is no exposed stainless steel on the waste package. There has been no change in the design of the emplacement pallets.

(Note that in each case the references are provided for the first sheet of a multi-sheet drawing. Necessary dimensions for the calculation are shown in the subsequent sheets and the Document Identifiers for those sheets follow the established convention.)

TAD-bearing Waste Package [2]  
 5-DHLW/DOE SNF Short Co-disposal Waste Package [3]  
 5-DHLW/DOE SNF Long Co-disposal Waste Package [4]  
 2-MCO/2-DHLW Waste Package [5]  
 Naval Long Waste Package [6]  
 Naval Short Waste Package [7,8]

Regards,

Mike