

Table 2.3.2 DESIGN DATA FOR HI-STORM UMAX ISFSI			
	Type	Value (minimum or nominal, as applicable)	Comment
8.	Strain compatible effective shear wave velocity in Space C, V	485 ft/sec minimum	This space may be remediated with vertical reinforcement such as pilings to enhance V.
9.	Strain compatible effective shear wave velocity in Space D, V (Figure 2.4.4)	485 ft/sec minimum	This space will typically contain native soil.
10.	Design Basis Earthquake	<p>Top of the Grade (Ground surface) spectra per Figure 2.4.1 with horizontal ZPA, <math>a_H</math> and vertical ZPA, <math>a_V</math> scaled as follows:</p> <p><math>a_H = 1.0g</math>  <math>a_V = 0.75g</math></p> <p>and foundation surface pad spectra per Figure 2.4.2 with horizontal ZPA, <math>a_H</math> and vertical ZPA, <math>a_V</math> of:</p> <p><math>a_H = 0.93g</math>  <math>a_V = 0.71g</math></p>	<p>Horizontal and vertical spectra shown in Figures 2.4.1 and 2.4.2 are based on 5% damping.</p> <p>Following the Newmark 100-40-40 response combination technique [2.6.7] endorsed by the Regulatory Guide 1.92 [2.4.7], the <i>resultant ZPA</i> for a 3-D earthquake site is defined as: <math>a_R = a_1 + 0.4a_2 + 0.4a_3</math>, where <math>a_1</math>, <math>a_2</math> and <math>a_3</math> are the site's ZPAs in three orthogonal directions and <math>a_1 \geq a_2 \geq a_3</math>.</p> <p>Hence, the DBE <i>resultant ZPAs</i> at ground surface and foundation surface elevations are</p> <p>1.3 g's (=1.0×1.0g's + 0.4×0.75 g's) and 1.214 g's (=1.0×0.93g's + 0.4×0.71 g's), respectively.</p>
11.	Permissible long-term settlement of the SFP	0.2 inch maximum	Used as the input value in the strength qualification of the SFP.
12	Density of plain concrete in the Closure Lid (min nom)	150 lb/cubic feet	Used in shielding calculations
13	Reference compressive strength of plain concrete in the Closure Lid	4,000 psi	Used in analysis of mechanical loadings on the Closure Lid
14	Minimum compressive strength of SES in Space A (see Figure 2.4.4)	1,000 psi	Used in tornado missile impact analysis and SSI analysis
15	Density of CEC plenum shield concrete, if applicable	120 lb/ cubic feet	Used in shielding calculations

Table 5.3.2

COMPOSITION OF THE MATERIALS IN THE HI-STORM FW SYSTEM

Component	Density (g/cm <sup>3</sup> )	Elements	Mass Fraction (%)
Metamic	2.642	B-10	4.388
		B-11	20.436
		Al	68.275
		C	6.901
Metamic-HT	[PROPRIETARY INFORMATION WITHHELD IN ACCORDANCE WITH 10 CFR 2.390]		
Carbon steel	7.82	Fe	99.0
		C	1.0
SS304	7.94	Cr	19.0
		Mn	2.0
		Fe	69.5
		Ni	9.5
Concrete	2.4 (150 lb/ft <sup>3</sup> ) [note 1 deleted]	O	53.2
		Si	33.7
		Ca	4.4
		Al	3.4
		Na	2.9
		Fe	1.4
		H	1.0
Soil	1.7	H	0.962
		O	54.361
		Al	12.859
		Si	31.818

[Note 1 deleted]

Table 5.4.6	
DOSE RATES ADJACENT TO THE HI-STORM UMAX MODULE WITH VERSION B LID FOR NORMAL CONDITIONS MPC-37 DESIGN BASIS ZIRCALOY CLAD FUEL	
Location	Value
Side of the VVM lid Adjacent to the Inlet Vent	22 mrem/hr

Table 5.4.7	
DESIGN BASIS DOSE RATE LIMITS	
Location	Value
Side of HI-TRAC	3500 mrem/hr
Standard Lid (On the side of the closure lid approximately midheight)	66 mrem/hr
Version B Lid (On the side of the closure lid approximately midheight and adjacent to the inlet vent)	22 mrem/hr