



**INFORMATION SYSTEM ON OCCUPATIONAL EXPOSURE**

**General Distribution**

**July 2012**

**ISOE Information Sheet**

**North American Technical Center  
Information System on Occupational Exposure**

**North American Boiling Water Reactor (BWR)  
2008 Occupational Dose Benchmarking Charts**

**NATC ISOE Information Sheet No. 08-5**

NATC ISOE Information Sheet No. 08-5 presents the North American Boiling Water Reactor (BWR) occupational exposure results for FY 2008. Exposure categories per unit include refueling outage duration and dose, normal operations dose, and total dose.

The 2008 BWR charts are arranged in the following format:

**Table 1a-d: Outage Duration Quartiles**

**Table 2a-d : Outage Dose Quartiles**

**Table 3a-d : Normal Operation Dose Quartiles**

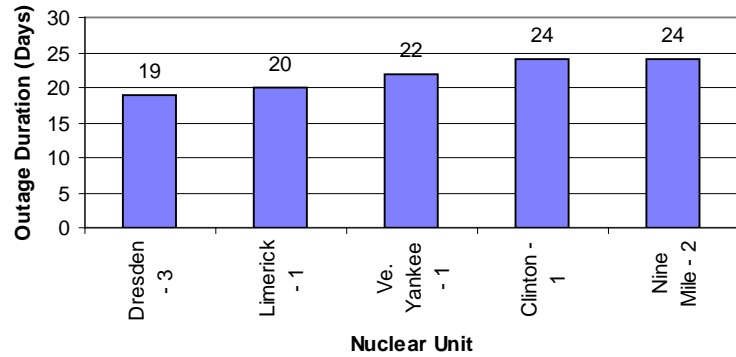
**Table 4a-d : Total Dose Quartiles**

**Table 5: 2008 BWR Occupation Dose Data**

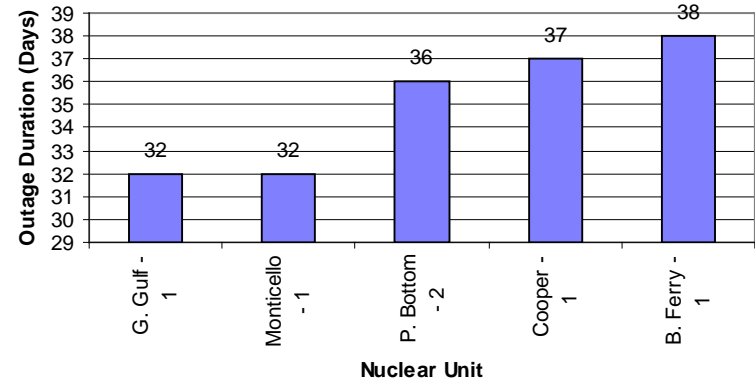
For reference, selected data for 2008 BWR collective dose per reactor unit is provided in the table below:

<b>Country</b>	<b>Collective Dose per Reactor (man.Sv)</b>
United States	1.29
Mexico	4.69
Japan	1.45

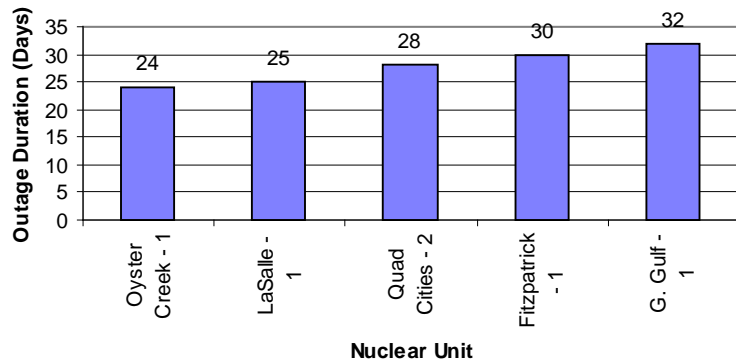
**Table 1a: 2008 BWR Outage Duration - Top Quartile**



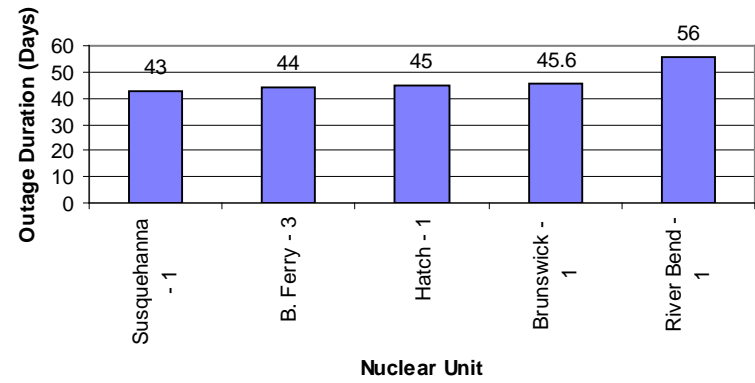
**Table 1c: 2008 BWR Outage Duration - Third Quartile**

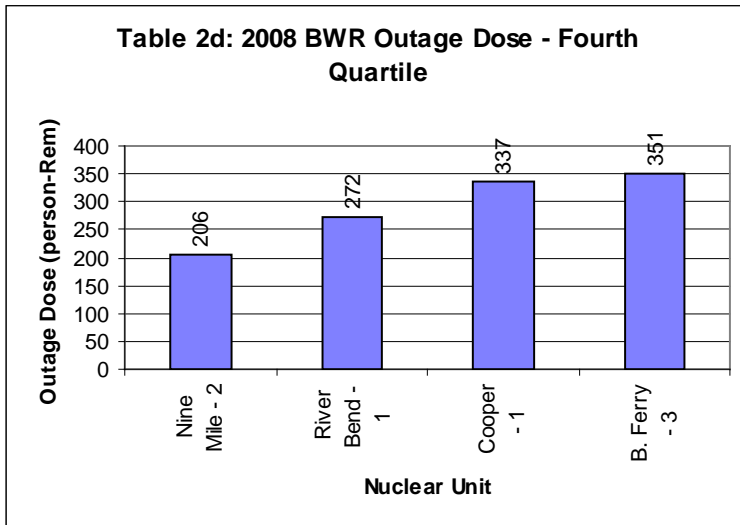
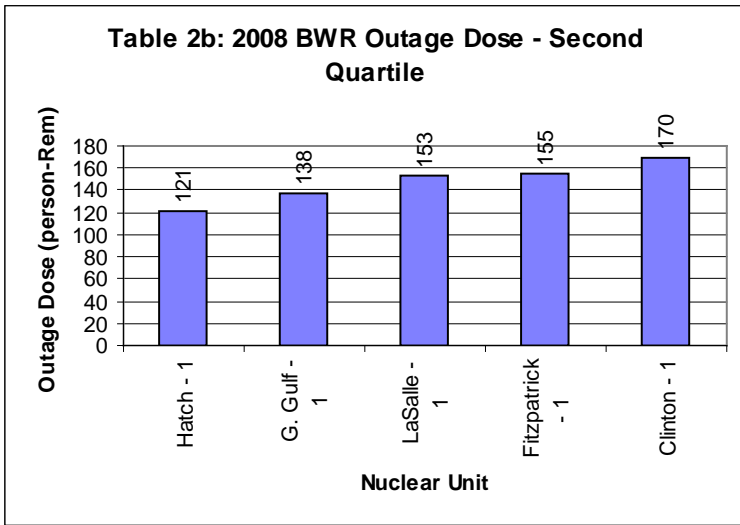
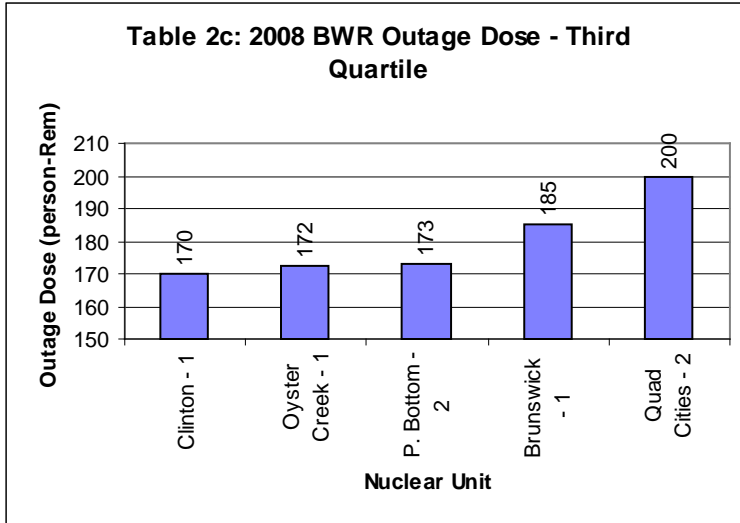
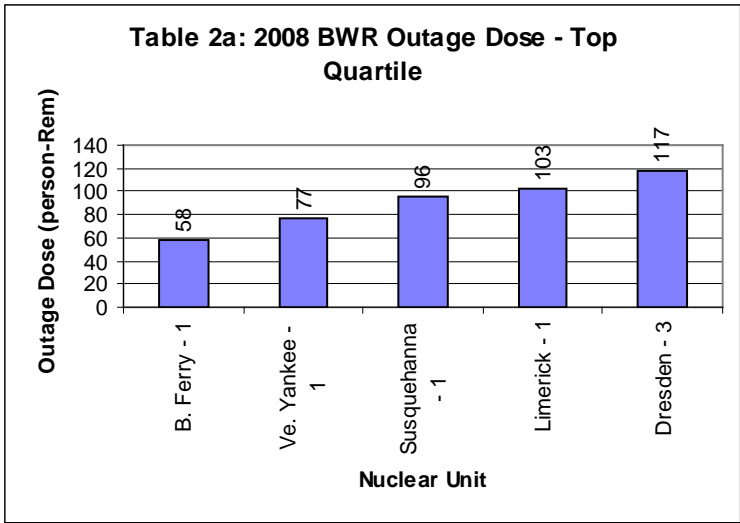


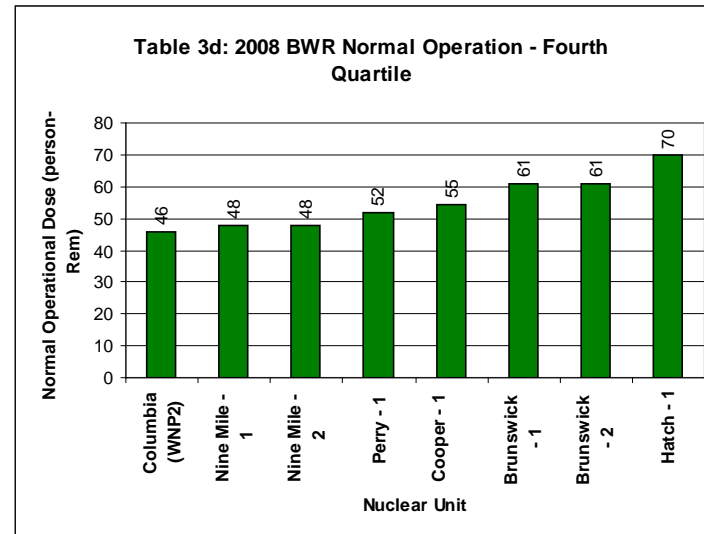
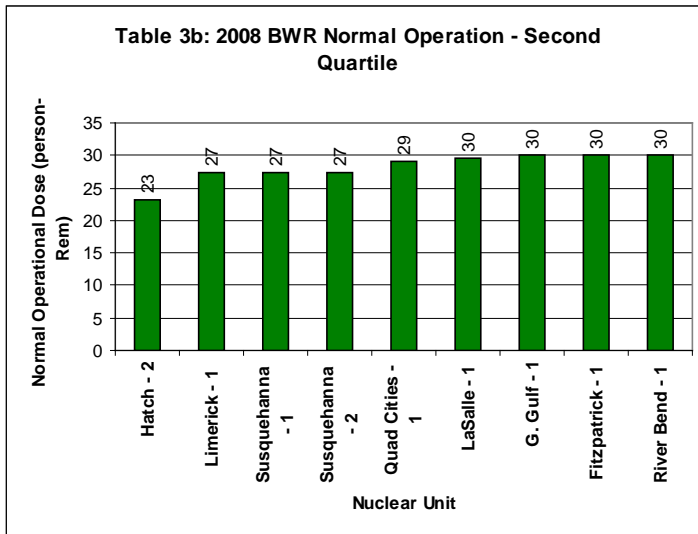
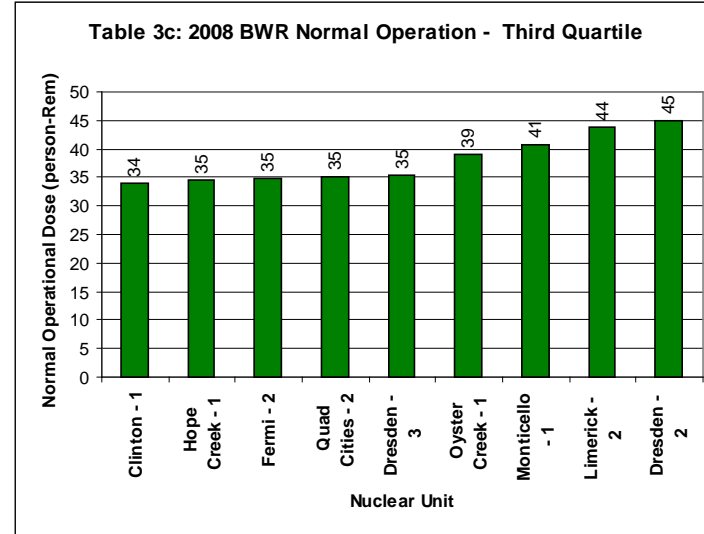
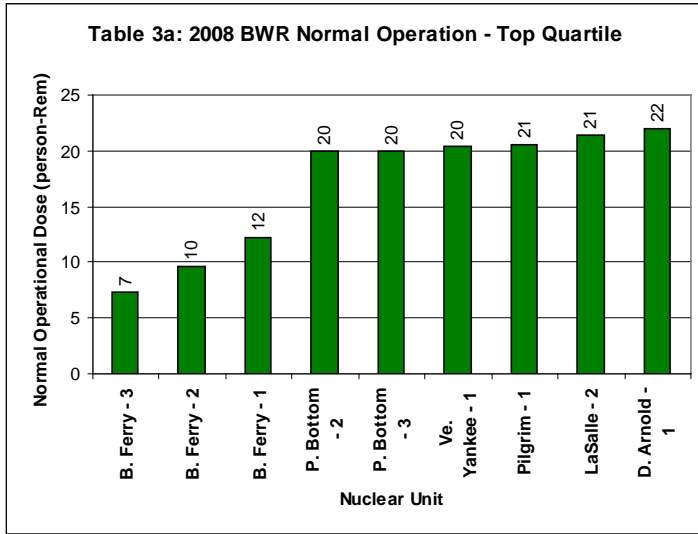
**Table 1b: 2008 BWR Outage Duration - Second Quartile**



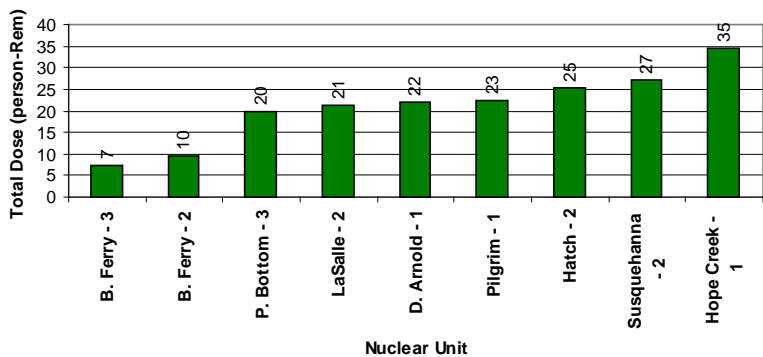
**Table 1d: 2008 BWR Outage Duration - Fourth Quartile**



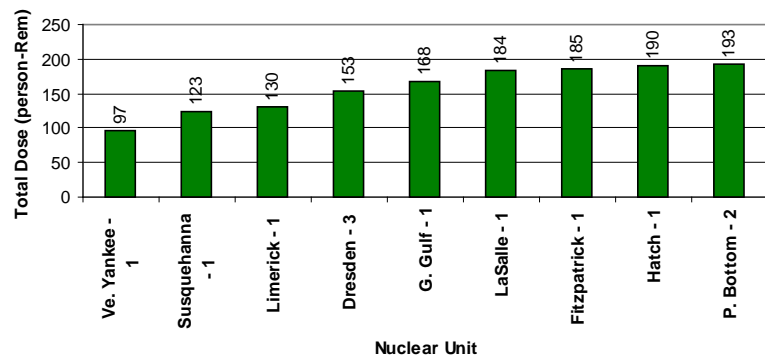




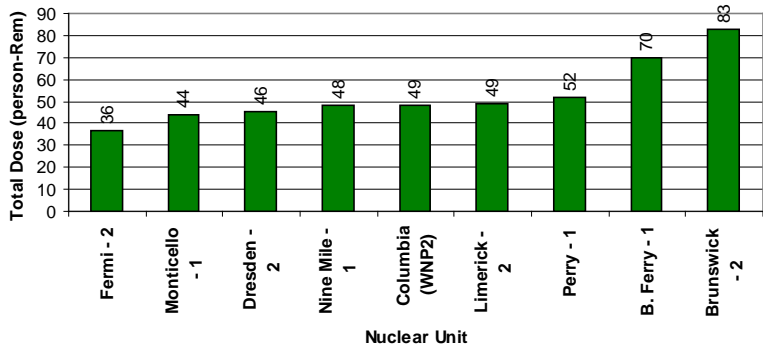
**Table 4a: 2008 BWR Total Dose - Top Quartile**



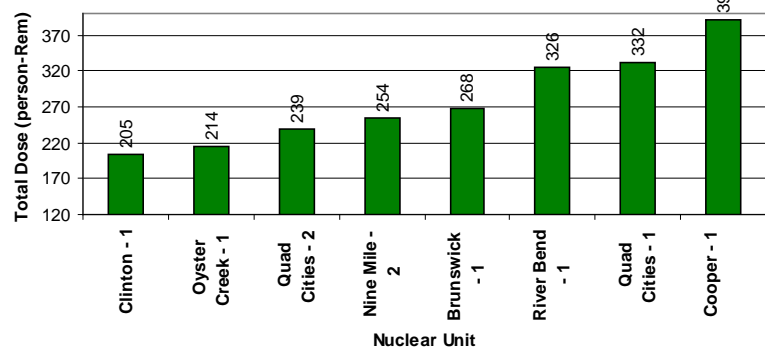
**Table 4c: 2008 BWR Total Dose - Third Quartile**



**Table 4b: 2008 BWR Total Dose - Second Quartile**



**Table 4d: 2008 BWR Total Dose - Fourth Quartile**



**Table 5: 2008 BWR Occupation Dose Data**

Nuclear Unit	Outage Start Date	Outage End Date	Outage Duration	Outage Dose	Normal Operation	Other Shutdowns	Total Dose	TLD Values
B. Ferry - 1	10/25/2008	12/5/2008	38	57.659	12.246	0.217	69.905	
B. Ferry - 2					9.586		9.586	
B. Ferry - 3	3/18/2008	4/30/2008	44	350.527	7.305		7.305	482.127
Brunswick - 1	3/15/2008	5/1/2008	45.6	185.185	60.911	6.448	268.108	
Brunswick - 2					60.911	3.936	82.923	354.212
Clinton - 1	1/12/2008	2/4/2008	24	170	34		204.871	205.086
Cooper - 1	4/12/2008	5/18/2008	37	336.849	54.59	1.5	391.439	359.926
Dresden - 2					44.933	0.583	45.516	
Dresden - 3	11/3/2008	11/21/2008	19	117.2	35.437		152.627	198.153
D. Arnold - 1					22		22	24.187
Fermi - 2					34.786	0.4	36.463	35.186
G. Gulf - 1	9/12/2008	12/13/2008	32	137.839	30		167.859	167.859
Hatch - 1	2/4/2008	3/20/2008	45	120.596	69.74	2.346	190.336	
Hatch - 2					23.176	2.146	25.322	189.433
Hope Creek - 1					34.51		34.51	34.51
Fitzpatrick - 1	9/14/2008	10/15/2008	30	154.772	30		184.772	154.772
LaSalle - 1	2/4/2008	2/28/2008	25	153.4	29.64	1.272	184.376	
LaSalle - 2					21.366		21.366	217.567
L. Verde - 1								
L. Verde - 2								
Limerick - 1	2/29/2008	3/19/2008	20	102.798	27.284	0.098	130.18	
Limerick - 2					43.89	5.316	49.206	176.825
Millstone - 1								
Monticello - 1	3/1/2008	4/2/2008	32		40.7	3.077	43.777	43.777
Nine Mile - 1					48		48	

<b>Nuclear Unit</b>	<b>Outage Start Date</b>	<b>Outage End Date</b>	<b>Outage Duration</b>	<b>Outage Dose</b>	<b>Normal Operation</b>	<b>Other Shutdowns</b>	<b>Total Dose</b>	<b>TLD Values</b>
Nine Mile - 2	3/22/2008	4/16/2008	24	205.821	48		253.821	301.824
Oyster Creek - 1	10/25/2008	11/18/2998	24	172.489	38.971	2.464	213.924	211.932
P. Bottom - 2	9/14/2008	10/21/2008	36	172.741	20		192.741	
P. Bottom - 3					20		20	212.741
Perry - 1					52.058		52.058	52.058
Pilgrim - 1					20.57	1.998	22.568	22.568
Quad Cities - 1					29.015	2.513	331.52873	
Quad Cities - 2	3/3/2008	3/30/2008	28	199.7	35.08	1.726	238.7	266.525
River Bend - 1	1/6/2008	3/3/2008	56	271.616	30.102	9.979	325.697	311.697
Susquehanna - 1	3/4/2008	4/17/2008	43	95.7	27.284		122.984	
Susquehanna - 2					27.284		27.284	150269
Ve. Yankee - 1	10/19/2008	11/2/2008	22	77	20.357		97.357	97.357
Columbia (WNP2)					45.579	2.93	48.509	54.957