



INFORMATION SYSTEM ON OCCUPATIONAL EXPOSURE

General Distribution

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ISOE Information Sheet

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

**North American Pressurized Water Reactor (PWR)
2010 Occupational Dose Benchmarking Charts**

NATC ISOE Information Sheet No. 10-4

NATC ISOE Information Sheet No. 10-4 presents the North American Pressurized Water Reactor (PWR) occupational exposure results for FY 2010. Exposure categories per unit include refueling outage duration and dose, normal operations dose, and total dose.

The 2010 PWR charts are arranged in the following format:

Table 1a-d: Outage Duration Quartiles

Table 2a-d : Outage Dose Quartiles

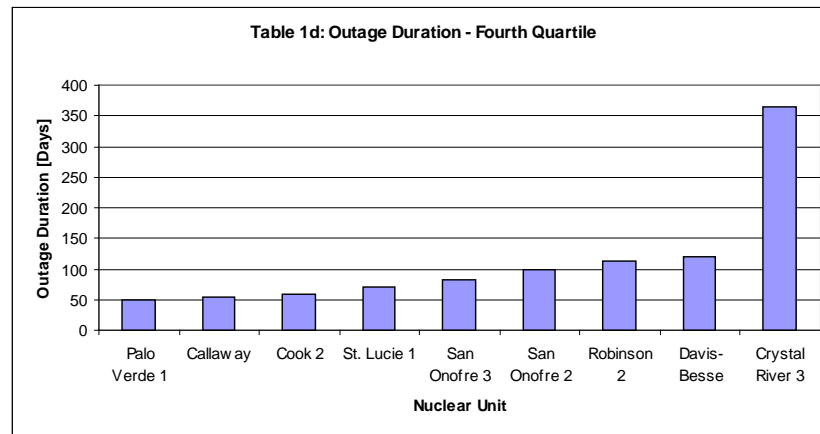
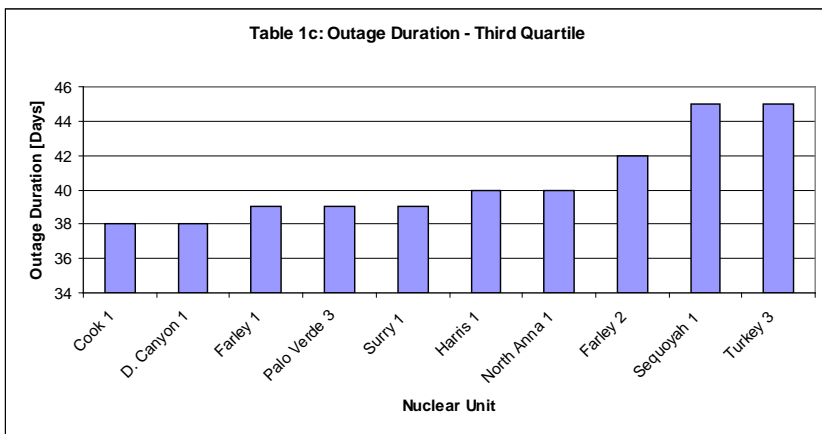
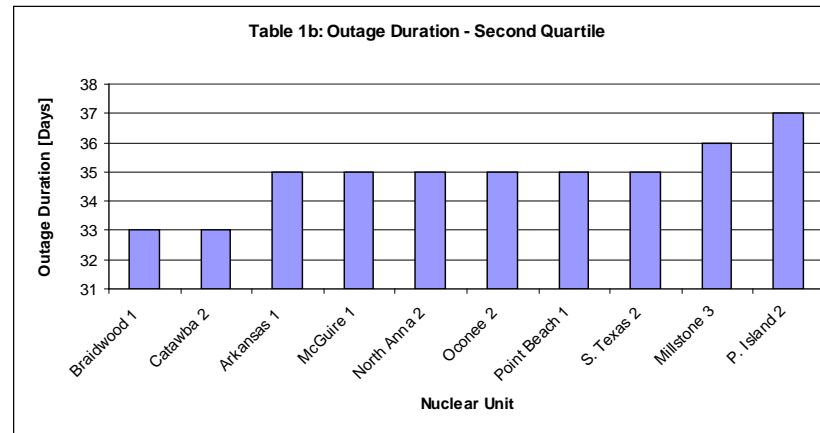
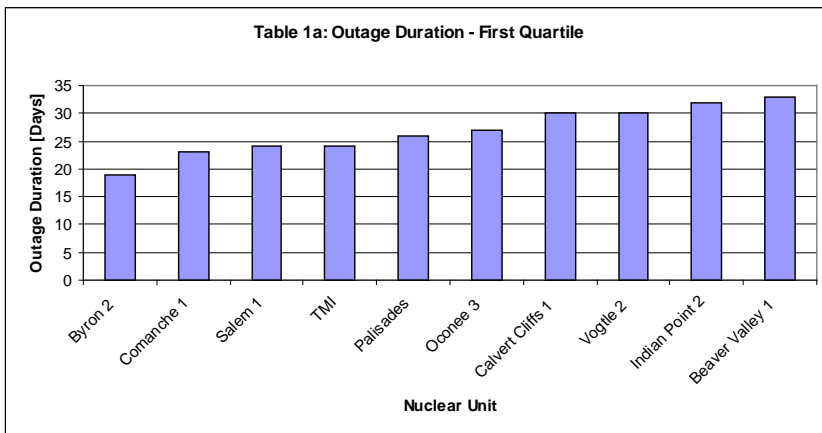
Table 3a-d : Normal Operation Dose Quartiles

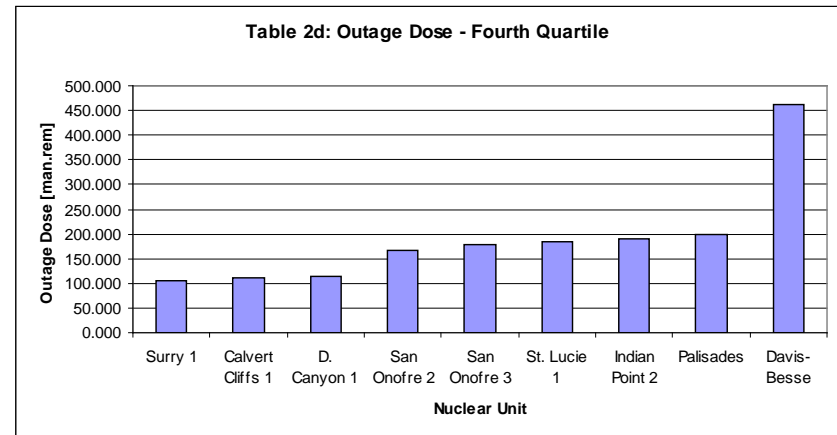
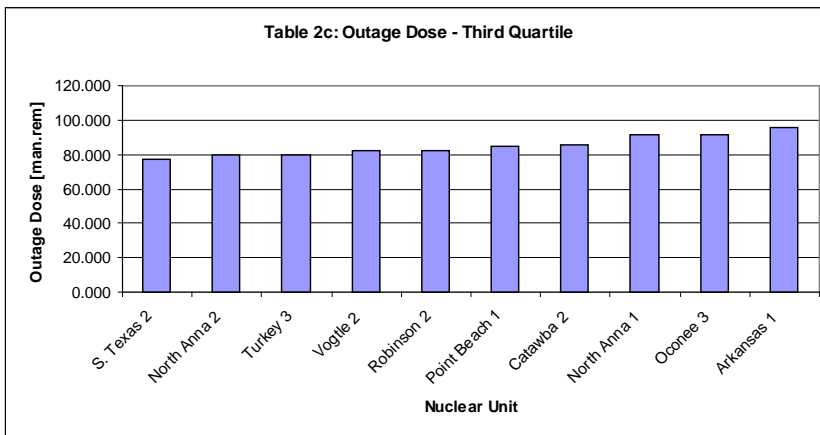
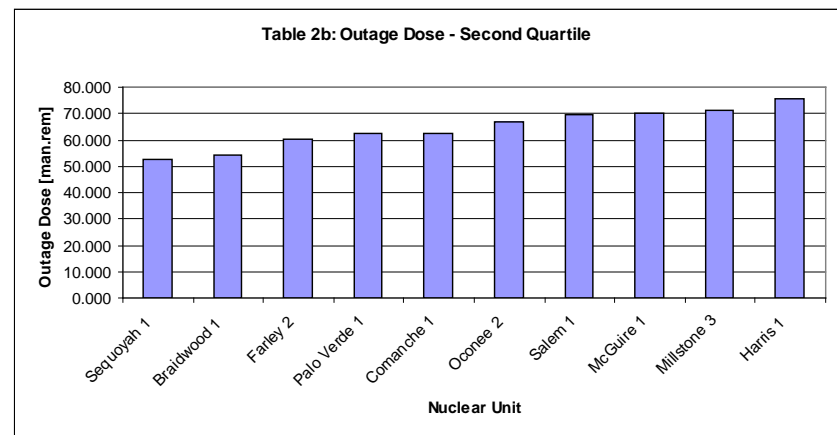
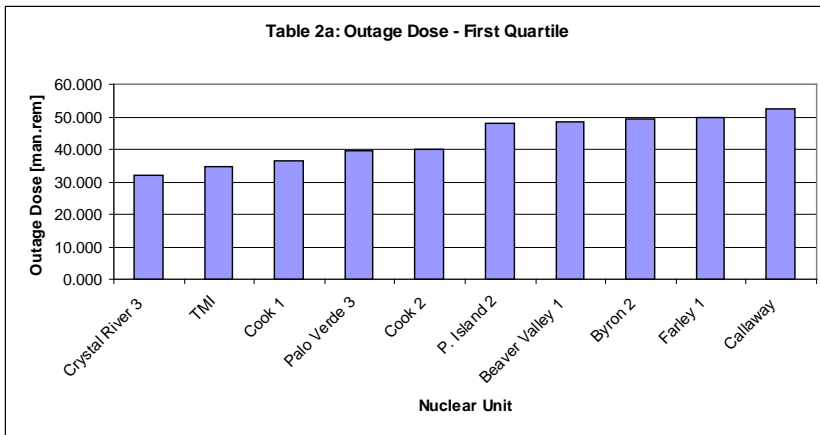
Table 4a-d : Total Dose Quartiles

Table 5: 2010 PWR Occupation Dose Data

For reference, selected data for 2010 PWR collective dose per reactor unit is provided in the table below:

Country	Collective Dose per Reactor (man.Sv)
United States	0.58
France	0.62
Japan	1.51





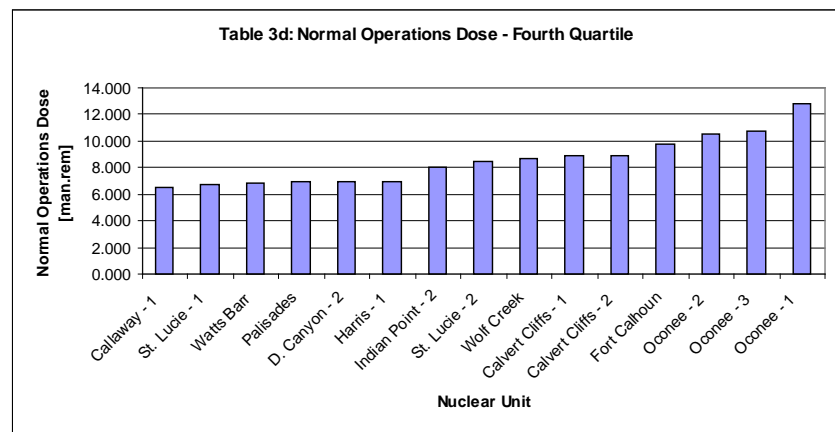
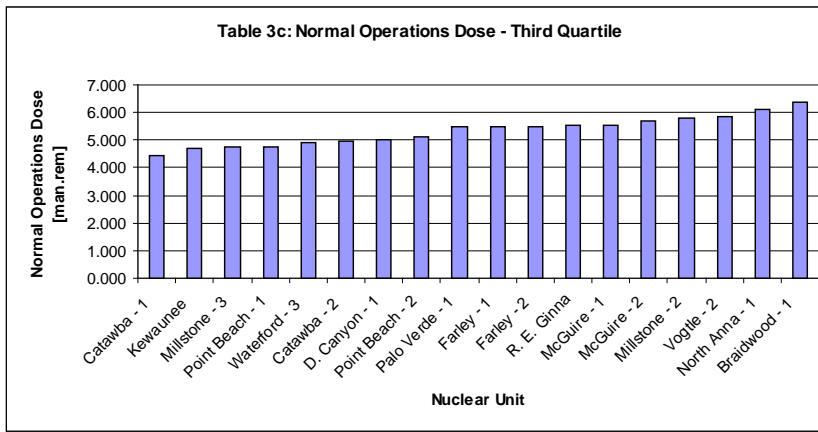
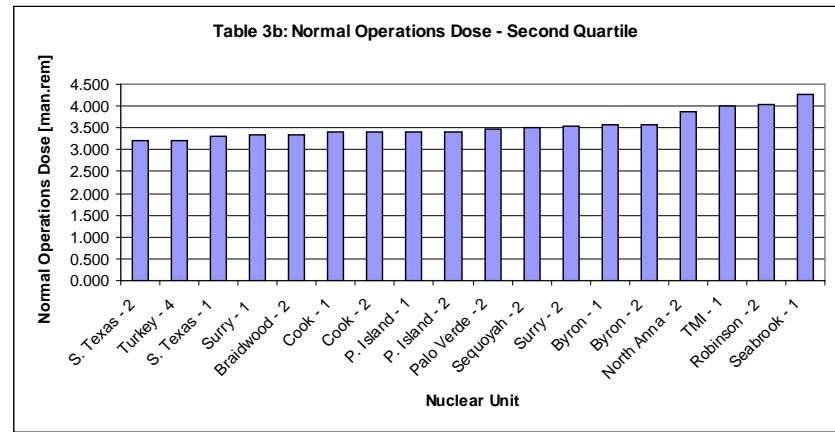
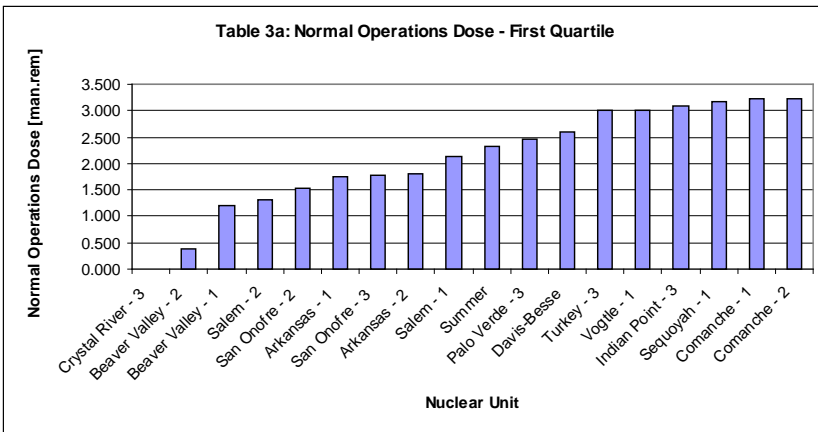


Table 4a: Total Dose - First Quartile

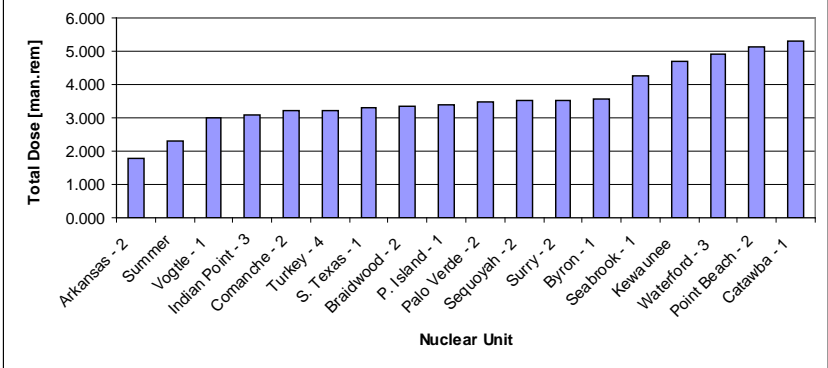


Table 4b: Total Dose - Second Quartile

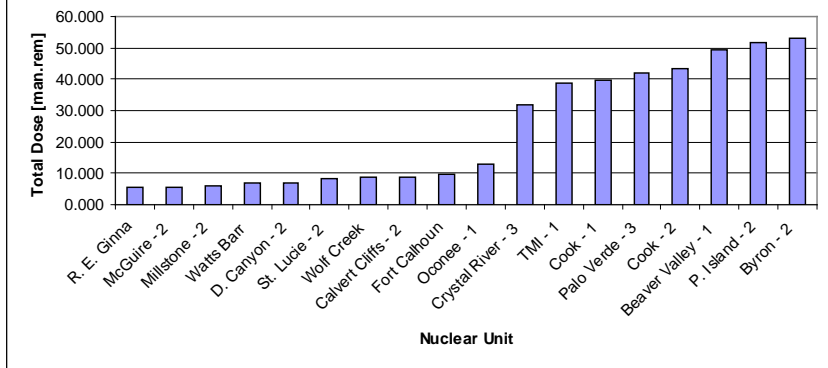


Table 4c: Total Dose - Third Quartile

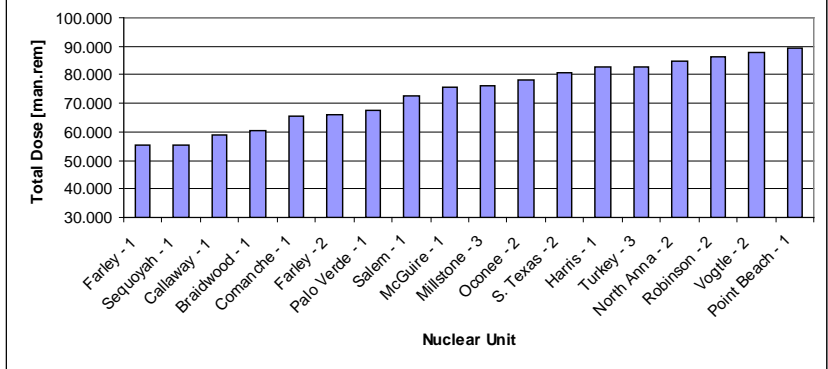


Table 4d: Total Dose - Fourth Quartile

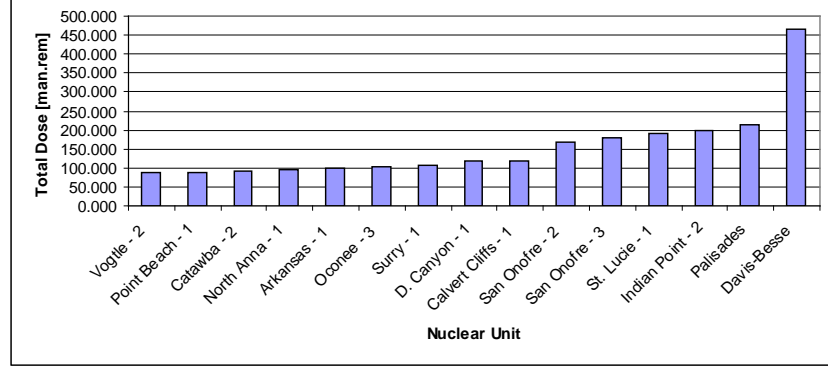


Table 5: 2010 PWR Occupation Dose Data

Nuclear Unit	Outage Start Date	Outage End Date	Outage Duration (Days)	Outage Dose	Normal Operation	Other Shutdowns	Total Dose	Total Site Dose	TLD Values
Arkansas - 1	3/21/2010	4/25/2010	35	95.822	1.756		97.578		
Arkansas - 2					1.798		1.798	99.376	99.376
Beaver Valley - 1	10/2/2010	11/3/2010	33	48.406	1.200		49.606		
Beaver Valley - 2					0.377		0.377	49.983	49.983
Braidwood - 1	10/4/2010	11/5/2010	33	54.146	6.367		60.513		
Braidwood - 2					3.343		3.343	63.856	63.856
Byron - 1					3.565		3.565		
Byron - 2	4/19/2010	5/7/2010	19	49.295	3.565		52.860	56.425	56.425
Callaway - 1	4/18/2010	6/11/2010	55	52.267	6.468	0.000	58.735	58.735	58.735
Calvert Cliffs - 1	2/18/2010	3/14/2010	30	110.760	8.910		119.670		
Calvert Cliffs - 2					8.911		8.911	128.581	128.581
Catawba - 1					4.420	0.880	5.300		
Catawba - 2	9/18/2010	10/20/2010	33	85.699	4.969	1.042	91.710	97.010	97.01
Comanche - 1	4/4/2010	4/26/2010	23	62.509	3.213	0.035	65.757		
Comanche - 2					3.213		3.213	68.970	70.807
Cook - 1	3/3/2010	4/9/2010	38	36.335	3.411		39.746		
Cook - 2	10/6/2010	12/4/2010	60	40.119	3.411		43.530	83.276	83.276
Crystal River - 3	1/1/2010	12/31/2010	365	31.922	0.000		31.922	31.922	31.922
D. Canyon - 1	10/3/2010	11/10/2010	38	113.457	5.000		118.457		
D. Canyon - 2					7.000		7.000	125.457	125.457
Davis-Besse	2/28/2010	6/28/2010	121	461.500	2.595		464.095	464.095	464.095
Farley - 1	10/11/2010	11/18/2010	39	50.000	5.500		55.500		
Farley - 2	4/5/2010	5/16/2010	42	60.313	5.500		65.813	121.313	121.313
Fort Calhoun					9.763		9.763	9.763	9.763

Nuclear Unit	Outage Start Date	Outage End Date	Outage Duration (Days)	Outage Dose	Normal Operation	Other Shutdowns	Total Dose	Total Site Dose	TLD Values
Harris - 1	10/2/2010	11/10/2010	40	75.578	7.000		82.578	82.578	82.578
Indian Point - 2	3/10/2010	4/10/2010	32	189.279	8.000		197.279	197.279	
Indian Point - 3					3.103		3.103	3.103	3.103
Kewaunee					4.690		4.690	4.690	4.69
McGuire - 1	3/14/2010	4/17/2010	35	69.919	5.553	0.143	75.615		
McGuire - 2					5.706		5.706	81.321	81.321
Millstone - 2					5.800		5.800		
Millstone - 3	4/11/2010	5/16/2010	36	71.200	4.769		75.969	81.769	81.589
North Anna - 1	9/12/2010	10/21/2010	40	91.200	6.100		97.300		
North Anna - 2	3/21/2010	4/24/2010	35	79.600	3.866	1.523	84.989	182.289	182.289
Oconee - 1					12.812		12.812		
Oconee - 2	4/25/2010	5/29/2010	35	66.946	10.493	0.743	78.182		
Oconee - 3	10/23/2010	11/18/2010	27	91.370	10.724		102.094	193.088	193.088
P. Island - 1					3.411		3.411		
P. Island - 2	4/17/2010	5/23/2010	37	48.111	3.411		51.522	54.933	54.933
Palisades	10/4/2010	10/29/2010	26	199.130	6.908	7.580	213.618	213.618	219.372
Palo Verde - 1	4/3/2010	5/22/2010	50	62.260	5.471		67.731		
Palo Verde - 2					3.488		3.488		
Palo Verde - 3	10/2/2010	11/9/2010	39	39.350	2.469		41.819	113.038	112.612
Point Beach - 1	3/1/2010	4/4/2010	35	84.830	4.770		89.600		
Point Beach - 2					5.136		5.136	94.736	95.695
R. E. Ginna					5.550		5.550	5.550	3.168
Robinson - 2	3/29/2010	7/18/2010	112	82.210	4.052		86.262	86.262	85.917
S. Texas - 1					3.297		3.297		
S. Texas - 2	3/28/2010	5/1/2010	35	77.340	3.216		80.556	83.853	79.159
Salem - 1	4/4/2010	4/27/2010	24	69.797	2.131	0.726	72.654		
Salem - 2					1.309	0.046	1.355	74.009	77.828
San Onofre - 2	1/1/2010	4/9/2010	99	166.580	1.538		168.118		

Nuclear Unit	Outage Start Date	Outage End Date	Outage Duration (Days)	Outage Dose	Normal Operation	Other Shutdowns	Total Dose	Total Site Dose	TLD Values
San Onofre - 3	10/10/2010	12/31/2010	83	177.700	1.771		179.471	347.589	199.399
Seabrook - 1					4.268		4.268	4.268	4.488
Sequoyah - 1	10/2/2010	11/15/2010	45	52.380	3.163		55.543		
Sequoyah - 2					3.510		3.510	59.053	56.956
St. Lucie - 1	4/5/2010	6/13/2010	70	184.160	6.685		190.845		
St. Lucie - 2					8.431		8.431	199.276	197.359
Summer					2.314		2.314	2.314	2.129
Surry - 1	10/24/2010	12/1/2010	39	104.200	3.341		107.541		
Surry - 2					3.525		3.525	111.066	111.129
TMI - 1	1/1/2010	1/24/2010	24	34.837	4.003		38.840	38.840	38.994
Turkey - 3	9/24/2010	11/7/2010	45	79.870	2.997		82.867		
Turkey - 4					3.225		3.225	86.092	86.749
Vogtle - 1					3.021	0.000	3.021		
Vogtle - 2	3/8/2010	4/6/2010	30	81.844	5.857	0.000	87.701	90.722	89.182
Waterford - 3					4.913		4.913	4.913	4.913
Watts Barr					6.885		6.885	6.885	6.193
Wolf Creek					8.700		8.700	8.700	10.516