



INFORMATION SYSTEM ON OCCUPATIONAL EXPOSURE

General Distribution

June 2012

ISOE INFORMATION SHEET

North American Technical Center
Information System on Occupational Exposure

3-YEAR ROLLING AVERAGE ANNUAL DOSE COMPARISONS
Canada Reactors (CANDU)
2009-2011 Occupational Dose Benchmarking Charts

NATC ISOE Information Sheet No. 2012-15

NATC ISOE Information Sheet No. 2012-15 presents the Canadian reactor annual occupational exposure results for multiple years (2001-2011). The 3-Year Rolling Average Occupational Dose Comparisons provide a means to evaluate site occupational dose performance over multiple years. The data shows the higher outage doses during years of extensive maintenance/refurbishment work at Bruce A 1,2 & Pt. Lepreau performed to achieve future dose reduction due to installation of new plant components.

For this report, annual site doses were used for 2009, 2010 and 2011. Annual site doses were divided by the number of operating units per site. The 3-Year

Rolling Average results for this period are provided in the following table.

Site Name	Three Year Rolling Average Person-Rem (Person-mSv)
Bruce A	211 (2110)
Pickering	408 (4080)
Darlington	71 (710)
Point Lepreau	247 (2470)
Bruce B	132 (1320)
Gentilly	71 (710)

Table 1: Canadian Three-Year Rolling Average, 2009-2011.

Table 1: CANADIAN REACTORS: COLLECTIVE DOSE PER UNIT**THREE YEAR ROLLING AVERAGE***2009 – 2011 Actual Values*

SITE NAME	No. of Units	CTY	Collective Radiation Exposure Per Site (Person-Rem)											Three Year Rolling Average
			2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Per Unit
Darlington	4	Ca	235.2	210	284.4	262.54	283.99	320	410	173.6	313.54	368.1	166.6	71
Pickering	6*	Ca	520.8	509.2	434.68	807.6	1132	766.4	587.2	473.18	774	1678.9	608.9	408
Bruce A	4	Ca	43.6	243.49	218	147.56	234.17	335.53	468.42	744.4	733.9	766.5	1031.9	211
Bruce B	4	Ca	419.34	491	424	270.28	634.11	380.41	421.16	665.08	510.81	361.3	710.2	132
Point Lepreau	1	Ca	72.4	135.35	114.6	91.9	157.69	90.08	66.43	599.75	408.22	137.5	195.3	247
Gentilly	1	Ca	118.89	151.86	287.27	30.52	149.86	138	53.1	115.2	67.66	74.6	70.2	71
20*			1410.22	1740.90	1762.95	1610.39	2591.81	2030.42	2006.31	2771.21	2808.12	3386.9	2783.1	
Total of Canadian Units Included			22	22	22	22	22	22	22	22	22	22	20	
Annual CANDU Average			64.10	79.13	80.13	73.20	117.81	92.29	91.20	125.96	127.64	153.95	139.16	

*Pickering 2 and 3 went into long-term safe storage in 2011.