



General Distribution

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ISOE INFORMATION SHEET

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

**3-YEAR ROLLING AVERAGE ANNUAL DOSE COMPARISONS
Canada Reactors (CANDU)
2013-2015 Occupational Dose Benchmarking Charts**

NATC ISOE Information Sheet No. 2016-15

NATC ISOE Information Sheet No. 2016-15 presents the Canadian reactor annual occupational exposure results for multiple years (2005-2015). 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 2013, 2014 and 2015. 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	82 (820)
Pickering	86 (860)
Darlington	77 (770)
Point Lepreau	33 (330)
Bruce B	112 (1120)

Table 1: Canadian Three-Year Rolling Average, 2013-2015.

Table 1: CANADIAN REACTORS: COLLECTIVE DOSE PER UNIT**THREE YEAR ROLLING AVERAGE***2013 – 2015 Actual Values*

SITE NAME	No. of Units	CTY	Collective Radiation Exposure Per Site (Person-Rem)											Three Year Rolling Average
			2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Per Unit
Darlington	4	Ca	283.99	320	410	173.6	313.54	368.1	166.6	179.2	444.9	220.4	264.1	77
Pickering	6*	Ca	1132	766.4	587.2	473.18	774	1678.9	608.9	841.9	444.6	540.62	554.73	86
Bruce A	4	Ca	234.17	335.53	468.42	744.4	733.9	766.5	1031.9	1325.58	128.8	375.2	476.81	82
Bruce B	4	Ca	634.11	380.41	421.16	665.08	510.81	361.3	710.2	140.44	566.3	517.9	265.5	112
Point Lepreau	1	Ca	157.69	90.08	66.43	599.75	408.22	137.5	195.3	94.7	22.5	54.5	22	33
19*			2591.81	2030.42	2006.31	2771.21	2808.12	3386.9	2783.1	2604.72	1607.1	1708.62	1583.14	
Total of Canadian Units Included			22	22	22	22	22	22	22	20	20	19	19	
Annual CANDU Average			117.81	92.29	91.20	125.96	127.64	153.95	139.16	130.24	84.58	89.93	83.32	

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