PWU Interrogatory #13

Interrogatory

Reference:

Exhibit F2, Tab 1, Schedule 1, Attachment 2, Page 6 of 101 (Excerpt of Safety Metrics from Table 1)

Table 1: Plant Level Performance Summary

Metric	NPI Max	2019 Actuals			
		Best Quartile	Median	Pickering	Darlington
Safety					
Total Recordable Injury Frequency (#/200k hours worked) [3]		0.81	N/A	0.11	0.00
Rolling Average[2] Industrial Safety Accident Rate (#/200k hours worked)[1]	0.20	0.00	0.01	0.02	0.04
Rolling Average[2] Collective Radiation Exposure (Person-rem per unit)[1]	80.00	38.54	70.32	70.32	83.23
Airborne Tritium Emissions (Curies) per Unit [3]		982	2,772	2,517	1,213
Fuel Reliability (microcuries per gram)[1]	0.000500	0.000001	0.000007	0.000187	0.000295
2-Year Reactor Trip Rate (# per 7,000 hours)[1]	0.50	0.00	0.00	0.24	0.00
3-Year Auxiliary Feedwater System Unavailability (#)[1]	0.0200	0.0000	0.0000	0.0039	0.0000
3-Year Emergency AC Power Unavailability (#)[1]	0.0250	0.0008	0.0016	0.0003	0.0026
3-Year High Pressure Safety Injection Unavailability (#)[1]	0.0200	0.000000	0.000000	0.00013	0.00000

4th Quartile Performance	3rd Quartile Performance	2nd Quartile Performance	Maximum NPI points achieved or Best Quartile

Reference 2: Exhibit F2, Tab 1, Schedule 1, Attachment 2, Page 6 of 101 (excerpt)

> The Total Recordable Injury Frequency (TRIF) was calculated using data from the Canadian Electricity Association (CEA). Median information and individual company information are not available for this metric. Therefore, only trend and best quartile information have been presented. The peer group for this metric is limited to Group I members of CEA (Section 7.0, Table 10).

Questions

a) Why is the median not available for Total Recordable Injury Frequency?

b) The majority of Pickering and Darlington performance metrics are shaded green reflecting “Maximum NPI points achieved or Best Quartile”. However, performance for many of these metrics is below median. Does OPG target to be at least median

for these metrics or does it view its performance as adequate? If the latter, please explain.

c) Please explain why Pickering and Darlington are worse than median for the Rolling Average Industrial Safety Accident Rate metric.

Response

a) The Canadian Electricity Association ("CEA") only provides the best quartile to CEA members. The CEA does not provide members with the median or individual company information. As a result, the Nuclear Benchmarking Report has only shown the best quartile for Total Recordable Injury Frequency ("TRIF") (since 2018 when the industry adopted the TRIF indicator) and the All Injury Rate, which preceded TRIF as a key safety indicator.

b) As shown in Chart 3 and Chart 4 at Ex. F2-1-1, pp. 16-17, Pickering and Darlington consistently target maximum Nuclear Performance Index ("NPI") points for applicable metrics or best quartile performance. Achieving maximum NPI points reflects favourable performance in respect of the NPI metric, which is administered by the World Association of Nuclear Operators.

Pickering's ability to achieve maximum NPI points for Collective Radiation Exposure ("CRE") or best quartile performance for CRE and Airborne Tritium Emissions is significantly impacted by the number of planned outage days needed to extend the life of the station.

c) The Industrial Safety Accident Rate ("ISAR") measures the number of accidents resulting in lost time injuries ("LTI"), restricted work injuries ("RWI") and fatalities (Ex. F2-1-1, Attachment 2, p. 90). The ISAR is measured on a two-year rolling average basis for Pickering and a three-year rolling average basis for Darlington. In 2019, Pickering's ISAR of 0.02 and Darlington's ISAR of 0.04 were below median as both Pickering and Darlington experienced LTIs over the corresponding rolling average period (1 at Pickering in 2018 and 1 in 2017 and 2 in 2018 at Darlington) and Darlington experienced one RWI over the rolling average period. No new ISAR events were recorded in 2019 or in 2020.

OPG continues to monitor performance trends in the area of conventional safety and implements timely and specific action plans to support continuous improvement. These action plans incorporate Human Performance based objectives, which are aimed at positively improving employees risk based decision making processes (Ex. F2-1-1, Attachment 2, p. 14).