UNDERTAKING J1.7

Undertaking

TO PROVIDE DETAILS OF DURATIONS FOR THE STAGES OF WATER DRAINAGE FROM UNIT 2, INCLUDING THE TRANSITION POINT, AND THE VOLUMES OF ASSOCIATED WATER; AND TO PROVIDE THE EQUIVALENT NUMBERS FOR UNIT 3

Response

The actual volumes and durations for the Unit 2 and Unit 3 PHT and moderator drains through to the D2O Storage Project facility are provided in Chart 1 and Chart 2, respectively. Piping connections from each unit to the Heavy Water Management Building existed prior to the D2O Storage Project. The D2O Storage Project extended the connections from the Heavy Water Management Building to the D2O Storage Project facility.

Chart 1: Actual Volumes for PHT and Moderator Bulk Drain and Vacuum Dry

Volumes (Mg)

Unit	PHT		Moderator	
	Bulk Drain	Vacuum Dry	Bulk Drain	Vacuum Dry
2	240.4	114.5	310	4.4
3	260	128.2	317	3.2

Note 1: Actual Unit 2 volumes in Chart 1 differ slightly from the approximated volumes provided in Ex. L-D2-02-AMPCO-126 (a) and Ex. D2-2-10, Attachment 5.
Note 2: Unit 2 and Unit 3 volumes in Chart 1 differ from the theoretical volumes provided in Ex. L-D2-02-AMPCO-088 (b). Differences between theoretical and actual volumes are expected based on temperature, pressure factors and order of operations impacting volume.

Chart 2: Actual Durations for PHT and Moderator Bulk Drain and Vacuum Dry

Duration (Days)

Unit	PHT		Moderator	
	Bulk Drain	Vacuum Dry	Bulk Drain	Bulk Drain
2	5	78	5	17
3	7	62	7	22

See Attachment 1 (this document is marked commercially sensitive, but OPG has determined it is non-confidential in its entirety) for a copy of OPG's Darlington Refurbishment: D2O Management Strategy dated September 2012. This report describes OPG's approach to managing heavy water throughout the refurbishment program and at p. 15, Table 3, provides forecasted drain/fill timelines as forecasted in 2012.

For clarity, in Attachment 2 OPG has restated the drain/fill schedule in Ex. K1.6 to reflect the refurbishment schedule as planned in 2012 at the time of OPG's initial D2O Storage Project Full Release Definition BCS (Ex. D2-2-10, Attachment 2m).