

UNDERTAKING J8.3

Undertaking

To provide the cost estimate at the project approval stage versus the quality estimate, and then the actual.

Response

This undertaking refers to the P2/P3 Safe Storage Project, and the recent Vacuum Building Outages (VBOs) for Darlington and Pickering.

P2/P3 Safe Storage Project:

For the P2/P3 Safe Storage Project, the OPG Board of Directors approved two partial releases, based on a preliminary estimate and budget quality estimate, respectively and the initial full release based on a release quality estimate. These estimates are presented below. This approach is consistent with OPG’s project governance and industry best practices. For each approval stage, the project estimate range percentages were explicitly provided.

P2/P3 Safe Storage and Isolation Projects (\$M)			Estimate	Estimate
Approval Stage	Date	Estimate	Range (%)	Range (\$M)
Preliminary Estimate	May-06	201.5	-50% to +100%	\$101M - \$403M
Budget Quality Estimate	Jul-06	292.1	-15% to +30%	\$248M - \$380M
Release Quality Estimate	May-08	348.8	-10% to +15%	\$314M - \$401M
Actual Cost	Sep-10	332.0		332.0

The project actual cost was less than the approved release quality estimate, and fell within the specified estimate range for all approval stages. In addition, the project met its schedule milestones.

Note that the response to Ex. L-02-001 (b) provided forecast amounts for the provision-funded projects only, which are a subset of the total project values presented here.

Vacuum Building Outages:

The Vacuum Building Outages are very complex undertakings with demanding schedule requirements. However, OPG’s outage budgeting governance does not involve the preparation of the preliminary, budget and release quality estimates that are associated with formal Nuclear projects. Instead, the individual outage budgets are approved as part of the annual Nuclear Base and Outage OM&A business plan approval process, as part of the ongoing Operations work programs. Therefore it is not possible to provide “approval stage” estimates and ranges in the manner of the P2/P3 Safe Storage Project.

1 As with the P2/P3 Safe Storage Project, the Darlington VBO met its schedule milestones
2 while the Pickering VBO achieved better than planned schedule and budget
3 performance.
4

5 The 2009 budget for Darlington VBO execution was approved in the 2009-2013
6 business plan and the 2010 Pickering VBO budget was approved in the 2010-2014
7 business plan. Since the vast majority of VBO costs are in the execution year, actual
8 cost versus approved budget for the year of VBO execution is presented here.
9

Incremental Outage OM&A (\$M)	Actual	Budget	Variance
Darlington VBO (2009)	35.2	24.9	10.3
Pickering VBO (2010)	28.0	34.1	(6.1)

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11 Unlike the approach used for both the Refurbishment and P2/P3 Safe Storage Projects,
12 there was only a nominal project level cost contingency assigned to the Darlington VBO.
13 As a result of approved scope additions, and cost pressures during execution (as
14 discussed in Ex. F2-T4-S2 Section 5.0), the Darlington VBO exceeded its original budget
15 by \$10.3M. The Pickering VBO came in under budget, reflecting, in part, lessons learned
16 from the Darlington VBO.
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