1.0 PURPOSE
This evidence presents period-over-period comparisons of base OM&A costs for the nuclear facilities, as well as comparison of actual to budget for 2005 and 2006.

2.0 OVERVIEW
As indicated in Ex. F2-T2-S1, labour escalation has a significant impact on year-over-year changes in costs.

To identify variances requiring written explanation (ten percent or greater, subject to a minimum materiality limit of $1M), standard variance tables (Ex. F2-T2-S2 Tables 1, 3, 5, 7, 8, and 10) are used, with variance amounts and percentage provided for each operational function.

To facilitate analysis of cost changes, escalation-adjusted variance tables (Ex. F2-T2-S2 Tables 2, 4, 6, and 9) use the information provided in Ex. F2-T2-S1 Table 4, to provide the net “work-driven” cost changes.

3.0 PERIOD-OVER-PERIOD CHANGES – TEST PERIOD

2009 Plan versus 2008 Plan
Exhibit F2-T2-S2 Table 1 presents a 2009 base OM&A increase of $7.2M (one percent) from 2008 plan, and indicates those operational functions with variances greater than or equal to ten percent.

As outlined above, this $7.2M increase includes labour cost escalation of $46.5M (Ex. F2-T2-S1 Table 4), resulting in an escalation-adjusted work program reduction (-$39.3M) as shown in Ex. F2-T2-S2 Table 2. Variance references below are to F2-T2-S2 Table 2.

Within the stations, the reportable escalation-adjusted variances are:
• Tritium Removal Facility ($1.5M) reflecting primarily the planned increase in effort for the Tritium Removal Facility improvement plan as outlined in Ex. F2-T2-S1 Appendix E.

Within the support divisions, the reportable escalation-adjusted variances are:
• Security ($8.4M) reflecting primarily the transition from contracted to OPG security forces and increased CNSC requirements.
• Nuclear Level Common (as described in Ex. F2-T2-S1 Section 2.2.2) decrease (-$2.1M) reflects primarily a reduction in planned nuclear level consulting contracts.

Within Nuclear Generation Development and Services, the reportable escalation-adjusted variances are:
• New Nuclear Build (-$8.8M) reflecting expected completion of significant project deliverables, as described in Ex. D2-T1-S3.

2008 Plan versus 2007 Actual
Exhibit F2-T2-S2 Table 3 presents a 2008 base OM&A increase of $144.2M (12 percent) from 2007 actual, and indicates those operational functions with variances greater than ten percent.

As outlined above, this $144.2M increase includes labour cost escalation of $15.9M (Ex. F2-T2-S1 Table 4), resulting in an escalation-adjusted work program increase ($128.4M) as shown in Ex. F2-T2-S2 Table 4. Variance references below are to Ex. F2-T2-S2 Table 4.

Within the stations, the reportable escalation-adjusted variances are:
• Operations ($22.9M) primarily due to:
  o Darlington ($10.5M) reflecting primarily increased staffing as per the approved operations staffing model, the impact of delayed spending on the certification program originally planned for early 2007 and overtime to backfill for staff assigned to certification training ($8.2M total), and addressing issues such as condenser cooling water debris filters and boilerhouse condition assessments ($1.5M).
Pickering A ($11.1M) reflecting filling of regular staff vacancies ($3.0M primarily common services and operations), impact of improvement initiative delays in 2007 ($2.9M for waste management reduction and procedures improvement initiatives), operating costs for the recently-completed auxiliary power supply ($1.8M), hiring additional entry-level staff to address anticipated attrition ($1.8M for nuclear operators in training and co-op students), and other increases to reach planned resource levels for Pickering common services ($1.5M).

- Work Management ($4.4M) reflecting:
  - Pickering A ($4.0M) primarily for increased effort to support improved outage planning (forced outage team, and support for 2010 vacuum building outage).
  - Darlington ($1.6M) reflecting the full-year impact of filling vacancies from 2007 (budget under spent in 2007) and resourcing for the 2009 vacuum building outage.
  - Pickering B (-$1.3M) reflecting planned staff reductions associated with the Equipment Performance Improvement Initiative (Appendix B).

- Support Services ($6.3M) reflecting:
  - Pickering A ($2.3M) improvement initiatives deferred from 2007 due to forced outage support, and the impact of 2007 low level radioactive waste credit.
  - Pickering B ($2.5M) for additional consulting services for process efficiency reviews and improvements, and the impact of 2007 low level radioactive waste credit.
  - Darlington ($1.4M) reflecting filling of vacancies and WANO-related initiatives.

- Tritium Removal Facility ($3.6M) reflecting primarily the impact of 2007 underspend with Tritium Removal Facility Improvement Initiative (-$1.6M), and the filling of TRF operational vacancies ($1.6M) to improve its operations in response to audit findings.

Within the support divisions, the reportable escalation-adjusted variances are:

- Nuclear Programs and Training ($7.2M) reflecting primarily filling of pre-existing training vacancies ($4.7M), work program increases ($1.9M e.g., initial operations training, continuing leadership training), and timing of workforce development program hiring ($1.6M). These increases are partly offset by planned reductions associated with the programs and training infrastructure improvements (Appendix F).

- Security ($7.0M) reflecting primarily the first year of a transition from contracted to OPG security forces.
• Nuclear level common ($3.1M) reflecting primarily an increase in planned nuclear level consulting contracts and staff for nuclear-wide maintenance strategy improvement initiatives, partly offset by a reduction in expected labour price variance.

Within Nuclear Generation Development and Services, the reportable escalation-adjusted variances are:

• SVP Office ($4.2M) reflecting primarily a planned increase in management consultant contracts ($3.0M), increased indirect costs associated with additional staff working on planned Pickering B refurbishment projects and the impact of CNSC refurbishment-related licensing services fee credit received in 2007.

• Inspection and Maintenance Services ($8.0M) reflecting the impact of planned staff increases to reduce reliance on augmented staff and improve the quality of work standards (as discussed in Ex. G2-T2-S1), and the associated indirect costs.

• New Nuclear Build ($64.1M) reflecting planned increase in effort for this major work program, as discussed in Ex. D2-T1-S3.

• Commercial Activities ($2.2M) reflecting increased Bruce lease management support ($1.6M), and full annual impact of additional staff associated with Bruce lease management office and isotopes and heavy water programming.

4.0 PERIOD-OVER-PERIOD CHANGES – BRIDGE YEAR

2007 Actual versus 2007 Budget

Exhibit F2-T2-S2 Table 5 presents 2007 actual base OM&A under budget by $39.5M (-3 percent) for the year, and indicates those operational functions with variances greater than or equal to ten percent.

With the stations, the reportable variances are:

• Support Services under budget (-$6.5M) reflecting primarily:
  • Pickering A (-$3.8M) due to unbudgeted low level waste management credits, and lower than planned expenditures on common services programs due to focus on forced outages.
• Darlington (-$1.6M) reflecting primarily staff vacancies and budget funding allocated to greater than planned outage work in other divisions.

• Tritium Removal Facility under budget (-$3.1M) reflecting delays in tritium removal facility improvement plan (Ex. F2-T2-S1, Appendix E) and unfilled staff vacancies.

Within the support divisions, the reportable variance is:

• Nuclear Level Common under budget (-$3.0M) reflecting lower than planned spending on nuclear level consulting contracts.

Within Nuclear Generation Development and Services, reportable variances are:

• New Nuclear Build is over budget ($1.2M) reflecting actual work program requirements versus the preliminary $10M budget for this start-up year, as discussed in Ex. D2-T1-S3.

2007 Actual versus 2006 Actual

Exhibit F2-T2-S2 Table 6 presents a 2007 base OM&A growth of $82.8M (7 percent) over 2006 actual costs, and indicates those operational functions with variances greater than ten percent.

As outlined above, this $82.8M increase includes labour cost escalation of $52.7M and cost impact of a 53rd fiscal week in 2006 of $16.9M (Ex. F2-T2-S1 Table 4), resulting in an escalation-adjusted work program increase ($47.0M) as shown in Ex. F2-T2-S2 Table 7. The variance explanations below refer to values in Ex. F2-T2-S2 Table 7.

Within the stations, the only reportable escalation-adjusted change is Maintenance ($16.7M), reflecting primarily:

• Darlington ($8.6M) primarily due to unbudgeted outage incentive program ($5.3M), and increased overtime and materials associated with the Equipment Performance Improvement Initiative (Ex. F2-T2-S1, Appendix B).

• Pickering A ($4.5M) due to higher than planned labour and material costs associated with forced outages and emergent work.
• Pickering B ($3.6M) due to effort on and materials associated with equipment performance improvement initiative (Ex. F2-T2-S1, Appendix B), partly offset by lower than planned laundry costs.

Within the support divisions, the reportable escalation-adjusted changes are:

• Facilities, Records and Administration ($7.4M), reflecting primarily higher utility costs following historically under-recorded consumption ($4.0M), increased facility infrastructure costs associated with fire protection and support facility code compliance work programs ($2.5M).

• Nuclear Programs and Training ($8.0M), reflecting primarily increased effort on programs and training infrastructure improvements ($2.8M, Ex. F2-T2-S1, Appendix F), impact of changes to minor fixed assets materiality limit ($2.4M), implementation of radiation protection project crew ($1.0M), and timing of hiring for staff on workforce development program (Ex. F2-T2-S1, Appendix D).

• Supply Chain increases ($4.7M), reflecting primarily increased obsolescence provision expense in 2007 ($8M) and net labour increases in Supply Chain site support departments ($1.8M) to implement improved processes and sustain program benefits (part of Supply Chain improvement initiative, Ex. F2-T2-S1, Appendix C); partly offset by savings due to efficiency and effectiveness improvements (-$4.1M) resulting from the Supply Chain improvement initiative.

• Nuclear Level Common decreases (-$7.0M), reflecting primarily lower than planned nuclear level consulting contracts (-$2.0M), and lower labour price variance in 2007 (-$5.4M), as follows. While labour is charged to work packages at standard rates, there is a need to reconcile these cost allocations with actual payroll which can be affected by a variety of factors during the year, such as grievance settlements. This reconciliation is done in Nuclear Level Common, and any discrepancy between payroll and cost allocation to work is charged there. The decrease from 2006 - 2007 reflects a difference in the amount of true-up required.

Within Nuclear Generation Development and Services, the reportable escalation-adjusted changes are:
• Inspection and Maintenance Services ($3.2M) reflecting primarily impact of the change in minor fixed assets materiality limit as discussed in Ex. F2-T2-S1 Section 2.0, ($1.8M), and increased indirect costs associated with additional new hires.

• Refurbishment programs increases ($12.4M) reflecting increased effort on Pickering B refurbishment phase 1, leading to a recommendation to the Board of Directors. For further information, see Ex. F2-T3-S1 and Ex. D2-T1-S3.

• New Nuclear Build increases ($11.0M) reflecting continuation of work programs started in late 2006. Primary focus was on preparation of the site preparation application and technology selection, as outlined in Ex. F2-T3-S1 Section 3.0 and Ex. D2-T1-S3.

PERIOD-OVER-PERIOD CHANGES – HISTORICAL YEARS

The decision by the Board of Directors in August 2005, to place Pickering A Units 2 and 3 in safe storage as opposed to returning them to service, impacted actual costs in 2005 and 2006. This decision had two major impacts:

• Pickering A Return to Service (“PARTS”) Project (regulated asset): The Board decision led to demobilization of the PARTS project, with cancellation of contracts, leases, insurance, and completion of the conditions to the environmental assessment (see Ex. J1-T1-S1). In support of this, a team was established to redeploy OPG regular staff that had been working on the PARTS project. Costs of PARTS staff awaiting deployment were charged to the PARTS demobilization project (regulated asset) as discussed at Ex. J1-T1-S1 and Ex. J1-T3-S1. There was no direct impact on base OM&A.

• Base OM&A: The 2005 Pickering A base OM&A budget allowed for ramping up staff levels to operate a four unit station, with a target of having operations and maintenance staff in place approximately 18 months in advance of start-up to ensure adequate training. Following the mid-year Pickering Unit 2 and 3 safe storage decision, there were 2005 base OM&A cost savings of approximately $10M due to hiring freezes resulting in unfilled vacancies (-$6.1M), and deployment of over-complement operations and maintenance staff to Pickering Unit 2 and 3 safe storage project (-$3.8M, funded by the decommissioning provision). To the extent possible, staff were also assigned to support Pickering B and Darlington outages to further mitigate the base OM&A impact.
Redeployment activities continued into 2006, resulting in a Pickering A Operations and Maintenance base OM&A 2006 budget push of approximately $5M.

2006 Actual versus 2006 Budget

Exhibit F2-T2-S2 Table 8 presents 2006 actual base OM&A under budget by $36.6M (-3 percent) for the year, and indicates those operational functions with variances greater than or equal to ten percent.

Within the stations, Tritium Removal Facility is over budget ($1.8M) reflecting catch-up of Tritium Removal Facility improvement plan delays from 2005.

Within the support divisions (-$40.8M, 10 percent under budget), Nuclear Level Common is under budget (-$33.9M) reflecting unspent contingency (-$30.5M) and lower than planned spending primarily on housing assistance for staff moves to new Nuclear Headquarters, and lower than planned management hires.

Within Nuclear Generation Development and Services ($4.5M, 10.5 percent over budget), reflecting primarily:

- Refurbishment programs is over budget ($2.4M) reflecting revised work program estimate which was approved in May 2006, to correct preliminary budget estimates of work required.
- New Build programs is over budget ($0.3M) reflecting nominal expenditures for start-up activity, as discussed in Ex. D2-T1-S3

Within Waste and Transportation Services (-$0.8M, 15 percent under budget), variance reflects primarily rescheduling of planned boiler cleaning support work to 2007.

2006 Actual versus 2005 Actual

Exhibit F2-T2-S2 Table 9 shows actual base OM&A growth of $97.4M (9 percent) from 2005 - 2006, and indicates those operational functions with variances greater than or equal to ten percent.
As outlined in Ex. F2-T2-S2 Table 10 and in Ex. F2-T2-S1 Table 4, labour cost escalation ($49.1M) and cost impact of a 53rd fiscal week in 2006 ($16.9M) account for $66.0M of this increase, leaving $31.5M of work program growth – the significant contributors to which are described below.

Acknowledging the significant impact of labour escalation on year-over-year growth, the analysis presented here addresses the other drivers of work program growth (net of labour cost escalation and fiscal year cost impacts) as presented in Ex. F2-T2-S2 Table 10.

Within the stations ($3.5M, Ex. F2-T2-S2 Table 10):

- Operations increases ($3.5M), reflecting primarily Pickering A ($3.1M), due to planned increase in station improvement initiatives (e.g., chemical waste management, waste reduction management and facility upgrades programs).
- Fuel Handling increases ($2.7M), reflecting primarily Darlington ($2.2M) due to the Fuel Handling Operations Recovery Program, requiring hiring/training of additional qualified fuel handling panel operators, and materials for fuel handling system repairs.
- Radiation Protection, Chemistry and Environment increases by $3.6M, reflecting primarily:
  - Pickering B ($1.8M), due to increased resources to provide radiation protection support in the longer planned outages in 2006 (primarily SLAR [spacer location and relocation] activities).
  - Darlington ($1.1M), due to increased outage support requirements (“green man services”) associated with the more extensive outages planned for 2006 (the first year of moving to the three year outage cycle).
- Support Services decreases by $9.6M, reflecting:
  - Darlington (-$3.9M) primarily due to transfer of accountability for the Contracts Office to Maintenance in 2006 (-$5M), partially offset by transfer of controllership staff to Nuclear from Corporate Finance (+$1.2M).
  - Pickering A (-$3.2M) primarily due to lower staff benefit costs due completion of Unit 1 Return to Service and Demobilization Projects in 2005. Sickness-Vacation-Health-
Other ("SVHO") costs for PARTS regular staff were charged to Base OM&A in 2005 (the final year of the project), in accordance with corporate policy. Impact is partially offset by transfer of controllership staff to Nuclear (+$1.3M).

- Pickering B (-$2.4M) primarily due to completion of equipment performance improvement initiatives in 2005 (-$1.3M) and incentive credit received (-$1.3M) due to lower than planned radioactive waste produced. Impact is partially offset by transfer of controllership to Nuclear (+$1.3M).

- Tritium Removal Facility increases by $2.1M, reflecting increase in Tritium Removal Facility improvement plan work; and, filling of vacancies.

Within the support divisions ($12.3M, Ex. F2-T2-S2 Table 10):

- Engineering and Modifications increases ($3.0M) reflecting filling of previous vacancies
- Facilities, Records and Administration increases ($4.7M) to address the increased scope of the facilities work program (e.g., servicing new security buildings and vehicles), additional office space requirements and office equipment and supplies to implement the electronic document management strategy.
- Security increases ($2.4M), reflecting planned staff increases in line with CNSC expectations.
- Supply Chain increases ($8.2M), reflecting top-up of the inventory valuation provision ($1M) as described in Ex. F2-T2-S1, and planned increases in Supply Chain improvement initiatives ($11.6M); partly offset by underspending on other purchased services (-$4.1M).

Increases are offset by:

- Nuclear Level Common decreases (-$4.6M), reflecting primarily lower labour price variance in 2006. The decrease from 2005 - 2006 reflects a difference in the amount of true-up required.

Within Nuclear Generation Development and Services ($15.8M, Ex. F2-T2-S2 Table 10), increase is driven primarily by two functions:
• Inspection and Maintenance Services ($5.5M), reflecting increased indirect costs due to implementation of a divisional work management system, and indirect costs associated with additional staffing to achieve growing work program requirements.

• Refurbishment programs ($9.8M) reflecting planned increases primarily associated with phase 1 activities of the Pickering refurbishment project, as discussed at Ex. D2-T1-S3.

• New Nuclear Build programs ($0.3M) reflecting nominal expenditures for start-up activity, as discussed in Ex. D2-T1-S3.

• Commercial Activities ($0.2M) reflecting primarily increased heating costs for the heavy water management building.

Within Waste and Transportation Services, escalation-adjusted decrease in 2006 (-$0.2M, Ex. F2-T2-S2 Table 10) reflects minor work program variations.

2005 Actual versus 2005 Budget
Exhibit F2-T2-S2 Table 11 shows 2005 actual base OM&A is $37.5M (-3 percent) under budget for the year, and indicates those operational functions with variances greater than or equal to ten percent.

Within the stations (-$6.1M), reportable variances are:

• Work Management is under budget (-$4.6M) primarily due to Pickering B (-$4.1M) reflecting deferral of planned Inspection and Maintenance Services effort (on-power inspections and equipment upgrades) from late 2005 to early 2006 to mitigate budget pressures.

• Tritium Removal Facility is under budget (-$1.3M) reflecting delays in implementing Tritium Removal Facility improvement plan, and staff vacancies.

Within the support divisions (-$31.7M), reportable variances are:

• Supply Chain is over budget ($7.6M) reflecting primarily greater than planned labour, overtime and staff augmentation for start-up of Supply Chain improvement initiatives ($7.5M).

• Nuclear Level Common is under budget (-$37.7M) reflecting:
Avoiding use of contingency (-$28M).

Lower than planned housing assistance related to Nuclear Headquarters relocation (more commuting versus relocation) (-$5.1M).

Lower than planned management search/hires, which were planned to proactively increase management capability given the upcoming demographic challenge (-$2.3M).

Lower than planned CNSC license fees (-$1.9M). Consistent with CNSC cost-recovery regulations, fees are estimated in advance based on OPG description of upcoming work activities, with billing based on actual level of services used.

With Nuclear Generation Development and Services ($0.5M), reportable variances are:

- Inspection and Maintenance Services ($2.2M) reflecting earlier than planned commencement of hiring program to increase staff levels (causing higher than planned SVHO and indirect costs), and physical consolidation of distributed office facilities (three locations into one).
- Refurbishment programs (-$1.7M) reflecting delays in staffing and engaging contracted services for start-up work.

Within Waste and Transportation Services, the underspend (-$0.2M, 4 percent under budget) reflects primarily less than planned requirement for detritiated heavy water transportation.