ONTARIO POWER GENERATION

Report

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Document Number: D-GUID-01920-10024	Usage Classification: Information
Retention: N/A	Revision: R000

Title:
Darlington Project Management Oversight Committee (PMOC) Terms of Reference

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Darlington Project Management Oversight Committee

D-GUID-01920-10024-R000

2018-01-17

Order Number: N/A
Other Reference Number:

Internal Use Only

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1.0 OBJECTIVE

The Project Management Oversight Committee (PMOC) will fulfill the requirements of the "Governing Body" (Gate Review Board) under OPG-STD-0147 "Project Life Cycle Management" and is accountable to;

- Provide oversight to ensure projects approved by Facility and Nuclear Asset Management Oversight Committees (Facility and Nuclear AMOCs) are executed within the approved timelines
- Manage offsets based on relative priority and business need to stay within the AMOC funding allocations
- Ensure major deviations from plan have lessons learned and corrective actions to prevent recurrence.

This document defines membership and quorum requirements and specifies any requirements unique to Darlington. An overview of the PMOC oversight structure and alignment with major milestones is provided in Appendix A. The primary accountabilities and information flow between the Project Management Oversight Committee and the Asset Management Oversight committee's is provided in Appendix B.

2.0 MEMBERSHIP AND QUORUM

PMOC quorum shall consist of a chairperson (Director Engineering <u>or</u> Controllership) and 4 additional quorum members:

Quorum Members:
- Facility Vice President (SVP/VP)*
- Facility Director, Engineering (Chair) *
- Director, Operations and Maintenance*
- Director, Controllership (Co-Chair)*
- Director, Refurbishment Interface*
- Director, Work Management*
- Director, Facility Projects*
- Director, or Manager, Project Management Office (PMO)*

Additional Members:
- Director Components Engineering or Manager, Components & Equipment
- Manager, Performance Engineering
- Senior Manager, Plant Design
- Director, Reactor Safety or Manager, Reactor Safety
- Senior Manager, Planning and Reporting
- Manager Minor Modifications

Quorum members are designated with an "*". Delegates are acceptable provided they are empowered to vote. Decisions are based on majority voting and SVP/VP concurrence. Note During transition, Director Engineering and Finance will co-chair. Only one is required to meet quorum, the second counts as a site quorum director.

3.0 MEETING FREQUENCY AND CONDUCT

PMOC meetings will be held at a frequency determined by the Chair (usually monthly). Adhoc PMOC meetings may be called as required to support project decision making.

A Pre-PMOC meeting will be used for low impact and low risk material to make PMOC more time effective. The need for Pre-PMOC will be routinely reviewed.

The yearly schedule which includes meeting dates and freeze dates for submission of materials shall be published on a forum visible to all project personnel. The schedule should be made available by mid-December of the preceding year.

Materials shall be submitted by the end of the day on the submission deadline. Refer to published yearly schedule for details. The cut off is end of day. Material submitted after freeze date requires Chair approval granted a minimal of one business day in advance of the submission deadline. Submissions are to be uploaded to the Darlington Master Meeting Schedule Sharepoint site (PMOC/PMOC Drop Box).

- The Nuclear PMO will upload the facility portfolio dashboard and financial metrics.
- Project Managers will upload BCS and CCF's (PCRAFs allowed for first quarter of 2018).
- Project Managers required to present (typically with CPI/SPI <0.9 or, as required by gate review and approval or, at the request of the Chair) must also provide presentation material by the freeze date.

All mandatory requirements must be met prior to submitting gate approval requests, including sign-off of Gate Progression Form (GPF) package indicating readiness to proceed by the Director, PMO and BCS readiness to proceed by Investment Management. The signed off gate submission packages must be submitted with the package to be accepted on the PMOC agenda. The GPF submitted as a separate PDF package. Change Control Forms require executing organization approval prior to submission. Submission requirements are detailed in Appendix F.

For the transition period, a Pre-PMOC meeting will be held prior to PMOC for low impact and low risk material to make PMOC more time effective. As such Pre-PMOC quorum requires Chair and additional quorum members. Items approved at the pre-meeting will be included as reference only in PMOC package.

Packages meeting the following criteria would normally default to PMOC:

- Project new start or restart first BCS for Level A, B and C projects
- Projects at risk and currently on the PMOC radar for recovery plans
- Subsequent BCS's for Level A, B and regulatory projects.
- A Superseding-BCS for scope changes impacting the objective of the project or significantly affect plant operations.

- Any BCS where cost increase; exceeds the Business Plan allotment greater than 10%, greater than 30% in general or it pushes the project into the next level.
- Any BCS or CCF in which schedule changes have a significant impact to plant reliability, performance indicators or regulatory commitments.
- Requests for contingency greater than $200k

Pre-PMOC PMOC shall have the following minimum quorum requirements; the Director Engineering and Director Controllership as well as one additional site director:

- Director, Operations and Maintenance
- Director, Work Management
- Director, Refurbishment Interface

Delegates are acceptable provided they are empowered to vote.

PMOC mandate:

Portfolio Management - manages to the business plan (budget) totals per portfolio
- primary accountability is to ensure that portfolio spending does not exceed available funding
- manage use/releases of contingency
- meet planned AFS/In-Service targets
- complete projects milestones as scheduled and approved

Project management
- also to ensure that individual project spending is consistent with OAR and other process
  - e.g. changes are approved per OAR or other process as required
- review/monitor project performance
- manage use/release of contingency

When conditional approvals are given based on member feedback, the Chair will make it clear who has approval authority to clear the condition.

A PMOC decision and action log will be maintained and issued 2 business days following each meeting.

4.0 DISPUTE RESOLUTION

In situations where projects are stalled awaiting decision and normal escalation has not resolved the issue in a timely matter, the VP of Projects will identify the issue to the

chair of PMOC. This would normally happen off line from a PMOC meeting. The PMOC chair, having reviewed the issue and the RAPID decision criteria in Appendix D, will decide what decision making forum is required to resolve the issue (ODM, EDM, adhoc PMOC or escalate to CNE / CNO level) and will arrange the appropriate forum. The Project Manager / Director must then meet all the requirements of the ultimate decision maker.

5.0 GATE REVIEW REQUIREMENTS

The requirements below are intended to augment the requirements of Project Life Cycle Management OPG-STD-0147 Appendix B, Phase Activities and Gate Submission Documents. Note that it is expected all plant modifications (excluding minor mods) will be graded A, B, C or D per Gated Process Scalability Model.

5.1 Gate 0 Identification.

The AMOCs establishes the multi year project plan and based on complexity and lead time requirements the Asset Management plan will define the project new starts for the year. The project executing organizations will provide PMOC with level 1 schedules for approved new starts indicating when conceptual work has started and when G1 approval is expected. These schedules will also be used for Scope Review Board (SRB) planning. The Project Manager (PM) should also grade the modification complexity, and set initial timelines for the project based on Appendix C. The PM should also establish the project sponsor and stakeholders by name, including Operations, Maintenance, Mod Team Leader (MTL), and Design Team Leader (DLT) and System Engineer. N-GUID-00700-10010 should be used to produce the initial Project Charter.

5.2 Gate 1 Initiation Stage

The following shall be performed prior to progressing to G1:

- Completion of conceptual engineering including completion of scoping COMS
- Operations, Maintenance and Construction input to the conceptual design and the class 5 cost estimate.
- Estimating assumptions have been reviewed and either accepted or there is an action plan to remove the assumption through verification or clearer definition of scope in the next gate.
- The initial schedule conforms to timelines outlined in Appendix C, based on modification complexity. Differences must be rationalized by the PM with concurrence from the design team.
- The initial schedule meets all outage and on-line milestones per N-PROC-MA-13 and N-PROC-MA-22. In particular, for outage work, Detailed Design must be complete for assessing 12 months prior to outage start date (MS11 / Gate 3) and comprehensive work packages must be done 6 months prior to outage start date (MS 21 / Gate 3a). Any exceptions require specific plans, budget and resourcing that can support parallel work activities and the appropriate approvals.

5.3 Gate 2 Development Stage

5.3.1 Scope Review Board

For all projects > $10M, or graded high or mega complexity (A or B), the PMOC will review and approve project scope.

The purpose is to ensure that the project scope meets the expectation of the sponsor and stakeholders and should include a review of the installation strategy and ensure that the interfacing systems and conditions are well understood.

Operations, Maintenance and Construction shall have had input to the scope, and either agree with the scope as written or a dispute resolution (see Section 4.0) process has been followed.

Darlington Technical Screening Committee (TSC) will be used as the Scope Review Board (SRB). Quorum requirements for a TSC with SRB agenda content will be the minimum required for TSC and the following additional quorum members or their delegate:

- Site Controller or Senior Manager Planning & Reporting
- Manager Projects

5.3.2 Gate 2 Approval

The following shall be performed prior to progressing to G2:

- Completion of preliminary engineering.
- Preliminary COMS complete
- All remaining estimating assumptions have been converted to risks in the risk register with a plan on how to manage the risks.
- The schedule meets all outage (or equivalent cycle plan) milestones. In particular, Detailed Design must be done 12 months prior to outage start date (MS11 / Gate 3) and comprehensive work packages must be done 6 months prior to outage start date (MS 21 / Gate 3a). Refer to Appendix A. Any exceptions require specific plans, budget and resourcing that can support parallel work activities and the appropriate approvals.
- Long lead material items are identified, procurement specifications are approved and orders have or will be placed as necessary to support all field work per the schedule.

5.4 Gate 3 Definition Stage

The following shall be performed prior to progressing to G3:

- Detailed engineering is complete and EC's are issued in Asset Suite (AS7). This includes all documentation externally produced be accepted and processed into AS7.
- The remaining schedule meets all outage (or equivalent cycle plan) milestones. At this point, MS21 is done and comprehensive work packages must be done 6 months prior to outage start date (MS 21 / Gate 3a). Any exceptions require specific plans, budget and resourcing that can support parallel work activities and the appropriate approvals.

5.5 Gate 3a

At this gate the project needs to convince the facility the project is "field ready".

The following shall be performed prior to progressing to G3a:

- All CWPs / ITPs and WPs are approved and all AS7 activities complete (WO, MR EC etc.)
- The installation sequence is known, agreed to by Operations and Maintenance and the installation logic is in a state directly transportable to outage or cycle plan schedule requirements.

Once the Facility and Projects agree the project is field ready, every effort will be made to support the project installation sequence and plans as written.

Going forward, project monitoring and readiness will be primarily done at Senior Work Management Project Oversight meeting and through on-line or Outage plans.

5.6 Gate 4

It is not intended that PMOC would review gate 4. Normal integration with facility planning meetings, combined with the commitment agreed to at gate 3a should be sufficient. There may be discovery items in execution that require PMOC review, but typically these would get resolved through normal facility processes such as SIR teams and daily planning meetings.

5.7 Gate 5

PMOC will monitor metrics for outstanding Post Implementation Reports (PIRs) but is not expected to review each PIR unless requested or where warranted for comprehensive PIRs.

6.0 PORTFOLIO REVIEW REQUIREMENTS

A dashboard monitoring all projects at facility will be prepared by the Nuclear PMO and reviewed by PMOC. It is expected the dashboard and supporting metrics will identify any projects off normal performance. Projects not performing as expected (typically SPI / CPI < 0.9) need to either recover performance before the next PMOC, or present recovery plans to PMOC. These presentations must include lessons learned including

behaviour elements which have prevented lower level decision making to not be successful, and documentation of these lessons learned in the corrective action system (they do not require corrective action plans as these are provided by the recovery plans; the intent is to document lessons learned for training purposes only).

A summary of financial variances for each PMOC agenda package will be part of the meeting material to facilitate assessing impacts, balancing the portfolio within guidelines and timing of offsets needed.

7.0 PORTFOLIO FUNDING

Ceilings for each facility will be established during the Business Planning process, and will be approved by the Chief Nuclear Officer via Nuclear AMOC

8.0 TRANSITION PLAN FROM PAC TO PMOC

In order to transition from the current PAC structure to the PMOC structure, a transition plan is required. For PMOC, this is documented in appendix E. During the transition period and until all supporting governance is changed, certain PAC functions need to remain in place. Specific directives issued by Nuclear PMO will provide additional guidance during the transition period.

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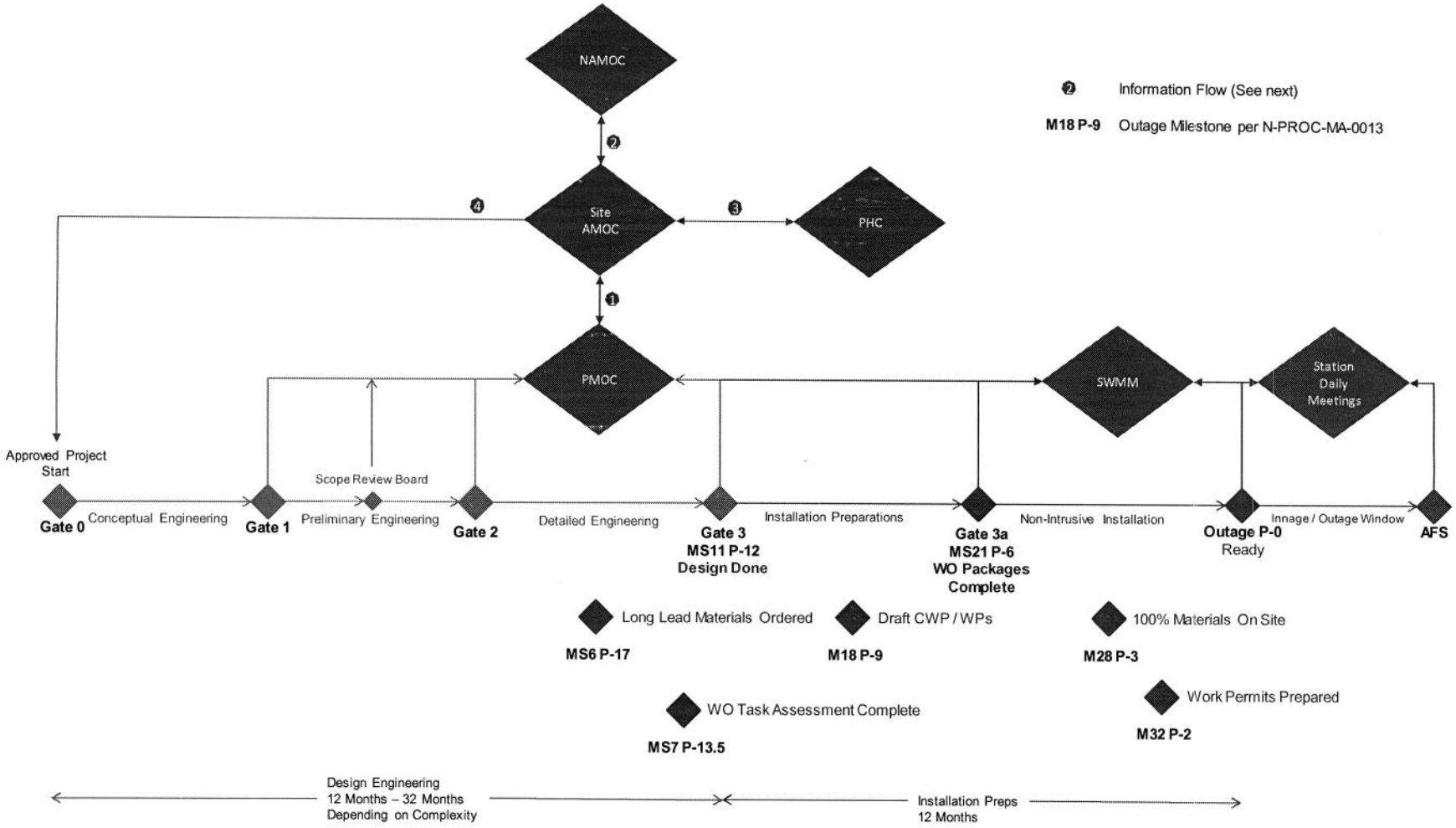
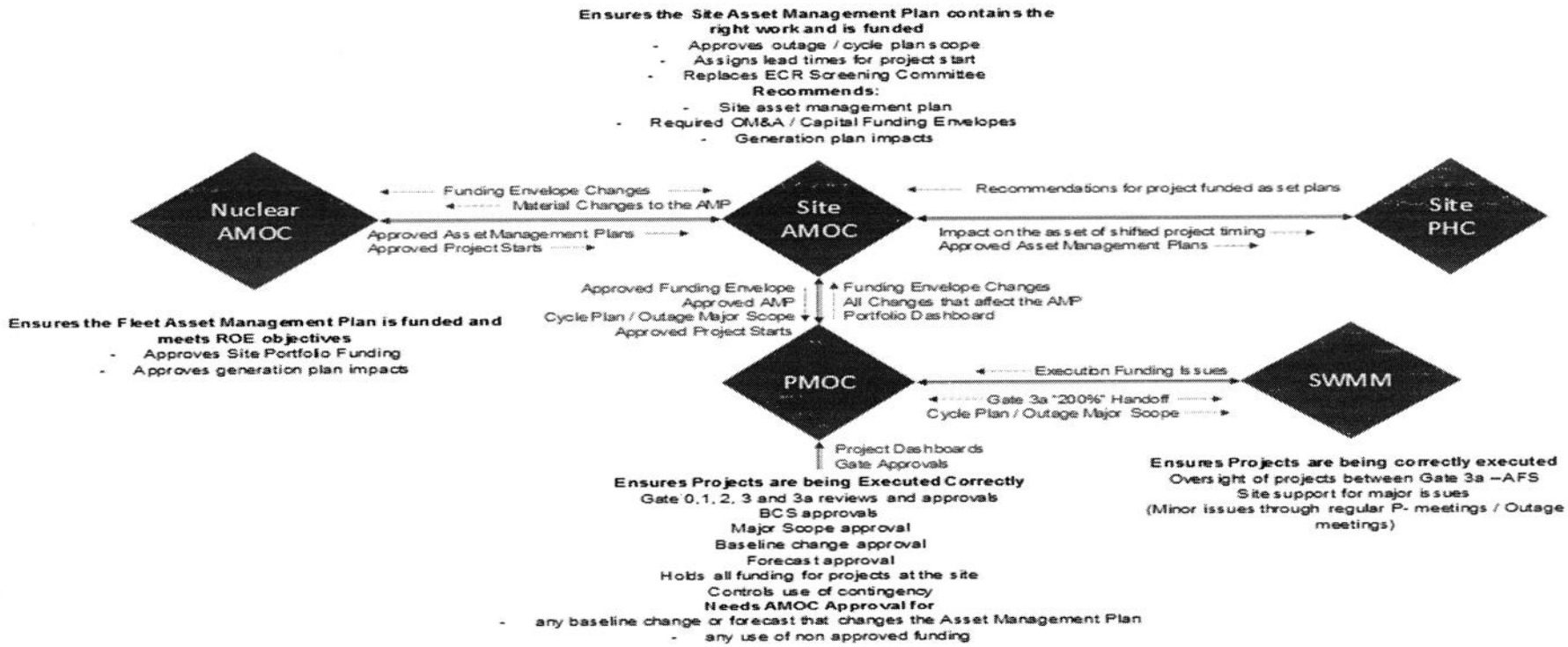
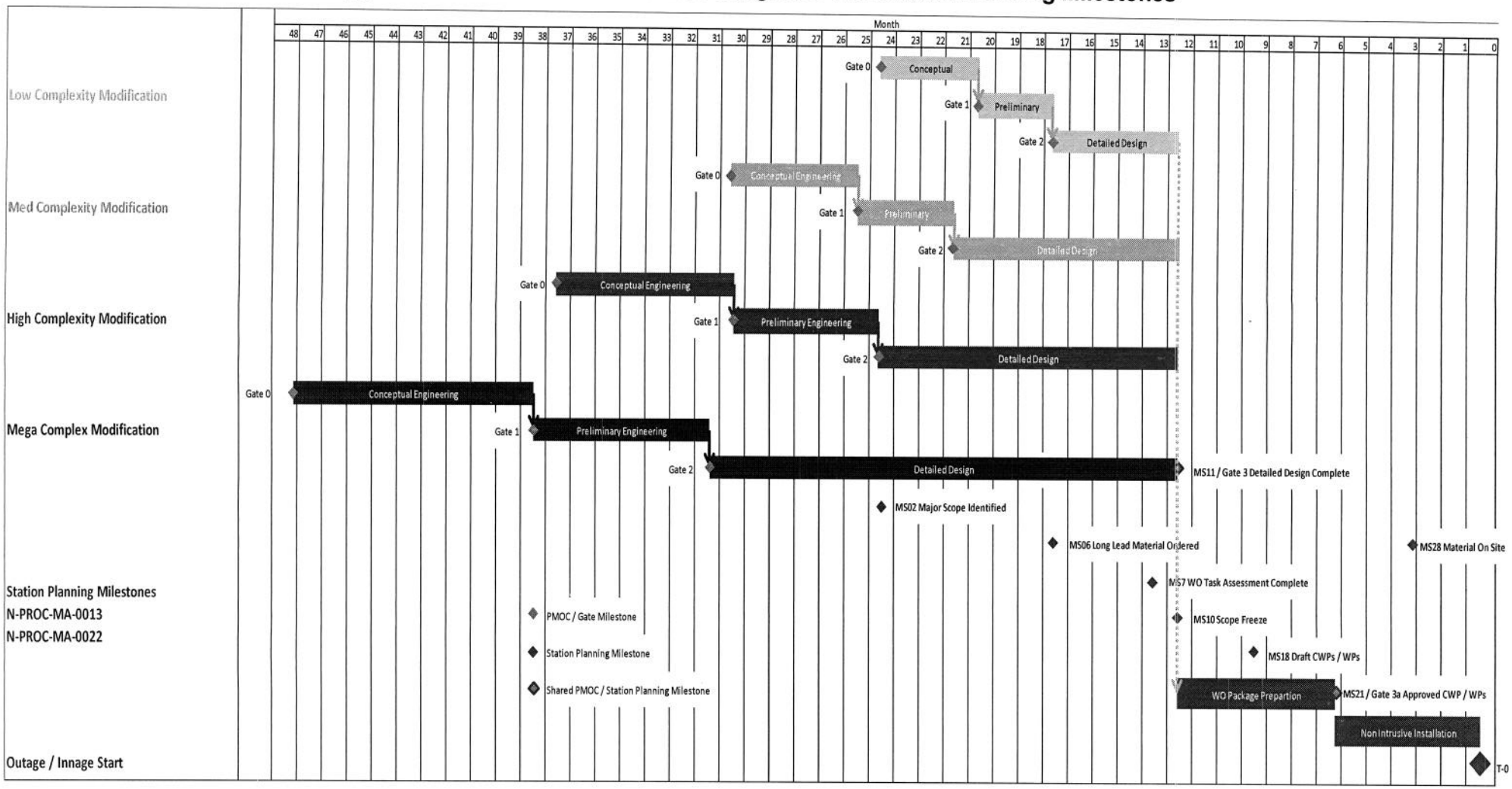
Appendix A: PMOC Overview



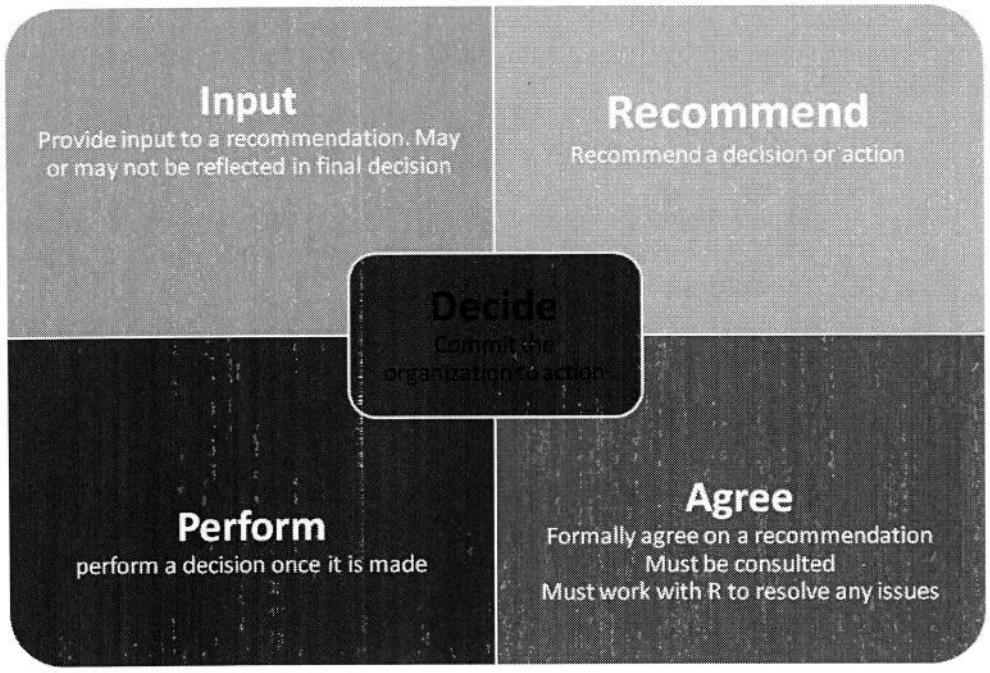
Appendix B : PMOC/AMOC Information Flow



Appendix C: Modification Timelines Integrated with Station Planning Milestones



Appendix D: PMOC Rapid Decision Criteria



- **Recommend**
  - There is only one R
  - R must have credibility with I and D
  - R must have broad knowledge, access to information and high visibility
- **Agree**
  - A's should be limited in numbers
  - A must agree with R, otherwise D splits the baby
- **Perform**
  - May be multiple P's
  - Should be part of I in early stages
- **Input**
  - Usually multiple I's
  - Assign only to those who have relevant knowledge, experience and credibility or,
  - Are heavily impacted by the decision
  - Don't proliferate I or progress will be needlessly slowed
- **Decide**
  - There is only one D

Appendix E: PAC to PMOC Transition

1) All project report out against the following milestones; these will be established in the standard milestone list by the Nuclear PMO and enforced through schedule development.
    a) Detailed Design done; all EC's issued in Asset Suite; must be at least 12 months prior to execution. Anything less does not meet MA-0022 or MA-0013 milestones.
    b) Installation Field ready; All CWPs, ITPs and WPs approved; must be at least 6 months prior to execution. Anything less does not meet MA-0022 or MA-0013 milestones
    c) Make it clear what the consequence will be for not meeting these milestones and enforce it.
    d) When recovery plans are appropriate, make certain that they are fully funded with additional resource that is capable of progressing design and installation work in parallel.
    e) Milestone date for all Gates, including Gate 3a, to allow planning support.
2) When a project is stalled for decision making immediately insist on a "RAPID" decision making framework (ref Appendix D). Insist on names for Input, Recommend, Agree and especially Decide. Make certain the "Decide" authority is one that is empowered to make a decision that support lowest total cost of ownership. (see the document body)
3) Ask when each project will have proper L3 schedules in place, correct baseline established and loaded into ECOSYS. It can be different dates for each project but the idea is to transition to proper dashboard reporting (Appendix D)
4) Formally establish gate 3a. This is critical to ensuring smooth installation and commissioning.
5) Formally implement all other gates for in flight projects (already done for new projects). Establish where each project is in each gate, then make it clear what the expectations will be for next gate and what the consequences are for not meeting expectations.

A period of six months will be required to fully transition PAC to Facility PMOC. There is no change proposed to membership in transition from PAC to PMOC.

Appendix F: Document Submission Requirements

All submissions to be made to the "PMOC Drop Box" in the Darlington Master Meeting Sharepoint folder for PMOC (by year) by end of the day on the submission deadline.

Document	Approval Level	Submission Format
BCS	GPF Signed up to VP Planning and Controls (includes Investment Management sign-off on BCS)	BCS in PDF format. Signed GPF as a separate PDF. If a power point is used for additional information not covered in the BCS it should be included in the pdf of the BCS.
CCF (PCRAF)	Finance Review and Executing Organization approval complete	PDF of CCF (PCRAF). A single PDF to be submitted for each CCF.
Recovery Plans, Project Updates.	Line Review	Single PDF for each agenda item.
Dashboard and Financial Metrics	Line Review	Single PDF for each agenda item. In addition, the excel source file for the current portfolio listing with cash flows is to be submitted.

Note, submissions not in pdf format carry risk of not making the agenda, particularly when agendas are large, due to time constraints.