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Title:

REFURBISHMENT PROGRAM STRUCTURE AND SUMMARY MANAGEMENT PLAN

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Refurbishment Program Structure And Summary Management Plan

NK38-PLAN-09701-10067-0001-R002

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Revision Summary

Revision Number	Date	Comments
R002	2013-01-31	Annual update of content, inclusion of Accountability model.
R001	2012-07-18	Updated to incorporate DCR 118115.
R000	2012-02-27	Initial issue.

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1.0 INTRODUCTION

The **Program Structure and Summary Plan** provides an overview of the entire suite of Program Management Plan (PgMP) documents. It will focus on the decisions regarding the Program structure, the Program Work Breakdown Structure (PWBS), and unique challenges facing the Program. It also points to other documentation that, taken as a complete package, make up the managed system for Darlington Refurbishment.

2.0 DIRECTION

The Darlington Refurbishment Project Charter, D-PCH-09701-10000 R001, documents the purpose of the Darlington Refurbishment Program. The following provides a summary of that document and serves as direction to the overall program.

Nuclear facilities are aging and there is a need to assess and make recommendations with respect to the feasibility of continuing to operate these stations beyond the current nominal end-of-service life dates. The goal of the refurbishment project is to extend the service life of the units by an additional 30 years of post-refurbishment operations. Refurbishment will involve an outage for replacement of life-limiting components, as well as maintenance or replacement of other components which can be most effectively done during the refurbishment outage period.

The Nuclear Refurbishment (NR) organization has been established with the responsibility of assessing, making recommendations to OPG's Senior Management with respect to the feasibility of refurbishing the Darlington units, developing the scope, schedule and estimate for the Refurbishment Program, and providing overall program oversight on the execution of all activities associated with refurbishment. For Darlington, NR will undertake the Darlington Refurbishment Project, in phases per the approved Program Release strategy, to:

- Assess the technical feasibility of refurbishing Darlington and operating it for an additional 30 years of post-refurbishment operations
- Make recommendations as to the lead time required to be prepared to refurbish each unit,
- Fully define refurbishment scope,
- Execute front end planning including developing contract management strategies, cost estimates, schedules, a full risk assessment, and a release quality estimate for the project,
- Manage the refurbishment pre-outage planning and preparation activities,

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- Provision of overall program oversight on all execution and commissioning activities, and
- Project Closeout.

3.0 PROGRAM DESCRIPTION AND BACKGROUND INFORMATION

3.1 Program Description

See D-PCH-09701-10000, R001, Darlington Refurbishment Project Charter and summary as provided in Section 2.0 of this document.

3.2 Program Benefits

The principal objective of the program is to assess the feasibility of refurbishing Darlington NGS reactors, plan and execute the refurbishment in order to enable economically attractive post refurbishment operations for an additional approximately 30 calendar years.

Subsidiary objectives needed to ensure the principal objective is achieved are as follows:

- Obtain the necessary corporate, government and regulatory approvals (e.g., Environmental Assessments, Integrated Safety Review, and Integrated Improvement Plan) for refurbishment in a timely and cost effective manner.
- Establish regulatory certainty, to the degree possible, for the refurbishment project and subsequently bounding the uncertainty prior to submitting the recommendation to the OPG Board.
- Timely and comprehensive completion of technical studies and a plant condition assessment to determine the appropriate project scope.
- Implement appropriate contract and procurement strategies to execute the work .
- Engineering and detailed outage planning in order to finalize the project scope, cost, and schedule and prepare a release quality cost and schedule estimate, and baseline, for the full project.
- Form the project team that will manage and oversee the execution of the DNGS units' refurbishment. that results in meeting the approved project cost and schedule baselines.
- Provide adequate and accurate information to OPG Senior Management, the Board of Directors, the Shareholder, and other external parties as required, in order to facilitate decisions around the project and obtain phase-based funding for the project in accordance with the approved release strategy.

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- Implement appropriate governing procedures for each phase of work.

3.3 Preliminary Program Scope Statement

The scope of the complete Darlington Refurbishment project is being developed during the Definition phase of the project. The complete scope will be based on:

- (a) Scope for the refurbishment outages as documented in NK38-PLAN-09701-10067, Sheet 2, Program Scope Management, and as developed under NK38-PLAN-01060-10003, DNGS Refurbishment Project Reference Plan - Scope Definition, including;
 - (1) Conducting an overall condition assessment of systems, structures, and components and preparing the summary results as a key input to the ISR.
 - (2) Conducting various engineering technical assessments and studies; examples are Fuel Handling (FH), Steam Generator (SG), Turbine Generator (T-G), Fuel Channel and Feeder Replacement study, Tritium Removal Facilities (TRF)/Heavy Water Management, Waste Management, and Construction Island.
 - (3) Developing engineering solutions for nuclear safety, Environmental Assessment (EA) and other gaps, and performing associated Benefit Cost Analyses.
 - (4) An assessment of the on-going work (cyclic and outage) required to support operation of the station for the extended operating life.
 - (5) Review and approval by a Darlington Refurbishment Scope Review Board per NK38-PLAN-09701-10003, Darlington NGS Refurbishment - Scope Review Board - Reference Plan.
- (b) An ISR Program approved by the regulator following N-PROC-LE-0005, NR Integrated Safety Review - Darlington.
- (c) An Integrated Improvement Plan (IIP) approved by the regulator per N-PROC-LE-0007, NR Integrated Implementation Plan - Darlington.
- (d) An EA Program approved by the regulator per N-PROC-RA-0127, Environmental Assessment and Environmental Site Planning, .
- (e) A Managed System Oversight (Quality) plan per NK38-PLAN-09701-10067, Sheet 7, Program Quality Management. The plan will be developed in stages to address quality requirements for each following project phase.
- (f) Project organization and infrastructure estimates based on the contracting and resource and staffing strategies.

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- (g) Risk contingencies and other allowances.

The accountability model, described in Appendix B, has been developed as an aid to understand the general elements of each major scope of work in the Darlington Nuclear Refurbishment project. It is meant to be a representative guide to the responsibilities and accountabilities throughout the life cycle of a scope of work, from the Darlington Scope Request (DSR) to the declaration of Ready for Service (RFS).

3.4 Program Charter

The Program Charter, D-PCH-09701-10000, Darlington Refurbishment Project Charter, is the document used to authorize the Program (not funding release). It includes:

- Program mission statement
- Program vision statement (end state of the organization when Program is complete)
- High level objectives of the program
- Benefits expected from the program
- Planning assumptions

3.5 Priority/Timing

Refurbishment timing will be developed and finalized as part of the Definition Phase of the Program and will be based on the following elements:

- Risk/Uncertainty around Technical Life Limits for major components.
- Lead Time for obtaining regulatory certainty and acquiring tooling and materials necessary for the refurbishment.
- Value of energy and capacity and impact on OPG's revenue, market share, and sustainability.
- Industry capability to execute the refurbishment, given timing of other Refurbishments or New Nuclear projects.
- Shareholder direction.

Currently, the approved reference plan is to refurbish the four units sequentially with overlaps per Figure 1 (aligned with PIMS).

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Figure 1: Darlington Refurbishment Execution Phase Reference Plan

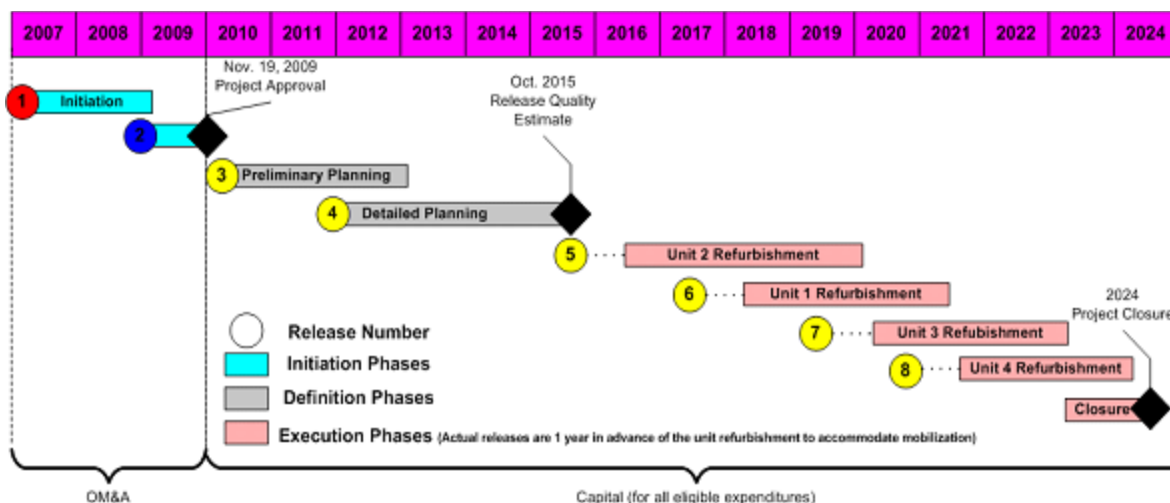
Unit	Start of Refurbishment Outage	Finish of Refurbishment Outage	Duration (months)
2	October, 2016	December, 2019	38
1	May, 2018	June, 2021	36
2	January, 2020	November 2022	34
4	July, 2021	February, 2024	32
Unit Outage Months			144
Refurbishment Window			88

The current reference schedule is as follows:

- Initiation Phase – 2008 - 2009 COMPLETE
- Definition Phase - Preliminary Planning – 2009 - Dec 2011 COMPLETE
- Definition Phase - Engineering and Detailed Outage Planning – 2012 - 2015
- Field Execution and Closeout Phase (four units) – 2015 - 2024
- Operation Phase (Return to Service of Units) - Starting with the first unit in 2019

This reference schedule is also consistent with the approved Program Release Strategy as shown in Figure 2. Details of the scheduling process including Level 1 and 2 Program Milestones can be found in A Managed System Oversight (Quality) plan per NK38-PLAN-09701-10067, Sheet 4, Program Schedule Management.

Figure 2: Program Overview of the Darlington Refurbishment Release Strategy



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The reference plan will continue to be re-evaluated as front-end planning progresses and will be adjusted as the level of information increases.

4.0 MANAGEMENT PLAN STRUCTURE AND MANAGED SYSTEM

4.1 Program Governance

N-PROG-AS-0007, Project Management, sets out the principles and requirements for the planning, organizing, executing, and controlling of resources to ensure the safe and effective execution and completion of projects. Safety and quality shall be the overriding priority and will not be compromised for cost or schedule. This program supports the applicable requirements described in Canadian Standards Association CSA N286-05.

N-PROG-AS-0007 establishes the project management governance framework of associated standards. In addition, non-governance guides, manuals, instructions, or other directions are in place to implement the principles of N-PROG-AS-0007 and the associated standards.

The combination of Governance, Project Charter, Program and Project Management Plans (PgMP and PjMP), and Project Organization comprise a Management System that supports a successful project result.

4.2 Managed System

As a Canadian nuclear operator, OPG follows Canadian Standards Association (CSA) N286-05, Management System Requirements for Nuclear Power Plants, in managing its work.

The Canadian Nuclear Safety Commission's Regulatory Document RD-360, Life Extension of Nuclear Power Plants (February 2008), provides guidance on requirements for refurbishments and states that 'the licensee prepares a Project Execution Plan (PEP) identifying what needs to be done to achieve the desired outcomes for the project' – section 7.1. In addition, N-STD-AS-0028, Project Management Standard, requires a Project Management Plan be prepared.

Darlington Refurbishment has chosen to follow Project Management Institute's (PMI) Program Management format for its Management Plan. For a program, PMI recommends a layered approach to the document suite; a suite of Program Management Plans (PgMP) that lay out the standards for processes, and a series of individual Project Management Plans (PMP) that describe the project and reference the PgMPs for the processes to execute the work. This ensures common processes across the Program while still allowing Project Managers flexibility in managing the work.

To meet the needs of a PEP for the Refurbishment Program, the full suite of PgMP and PMPs need to be considered. To meet the needs of a single Refurbishment project, its PMP and all the applicable PgMPs need to be considered, see Appendix C.

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This document, the related Program and Project Management Plans, and the governing documents referenced in Section 4.1 are part of the Darlington Refurbishment Managed System suite of documents and meet the documentary requirements for a Management system.

4.3 Program Management Plans

The Program Management Plans are part of the NR Management System. Their purpose is to:

- Ensure that all key issues relevant to the successful execution of the Program are identified, defined and understood at the earliest possible stage.
- Provide Program and Project team members, end users, line authority and stakeholders with a common understanding of the Program and the planned method of execution.
- Provide a reference for approved governing documents that comprise the NR Management System.

The level of detail in the Program Management Plans will be consistent with each phase of the Project, based on the time frame. The documents will initially focus on the Definition and Preliminary Planning phases and provide fewer details around the later phases. In addition to the items above, the Program Management Plans provide:

- Direction on project controls.
- Direction on managing risk.
- Direction on document management processes that are not included in Governing Documents.

Program Management Plans are intended to be living documents. They will be reviewed and updated as necessary during the Definition and Execution Phases of the Project, nominally every 6 months.

It is the responsibility of the Director, Program Planning and Controls, to mandate specific project management standards to be used by the Darlington Refurbishment program, including all projects executed within the program, and to ensure these are documented in the Project Management Standard (N-STD-AS-0028). Additionally, the Director, Planning and Control will facilitate development of, and to maintain, the Program Management Plans with the support of, and in consultation with, the project participants. Each Program Management Plan is assigned to a functional owner who will be responsible for collecting updates for that plan for submission to the Director, Program Planning and Controls.

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The Program Management Plan documents describe the high-level processes that will deliver the program benefits (these are business level requirements including strategies for management, oversight, and execution, not technical design requirements) and they take their authority from N-STD-AS-0028, Project Management Standard.

The Program Management Plan includes the following:

- NK38-PLAN-09701-10067 Sheet 1, Program Structure & Summary
- NK38-PLAN-09701-10067 Sheet 2, Program Scope Management
- NK38-PLAN-09701-10067 Sheet 3, Program Cost Management
- NK38-PLAN-09701-10067 Sheet 4, Program Schedule Management
- NK38-PLAN-09701-10067 Sheet 5, Program Controls & Reporting
- NK38-PLAN-09701-10067 Sheet 6, Program Risk Management
- NK38-PLAN-09701-10067 Sheet 7, Program Communications
- NK38-PLAN-09701-10067 Sheet 8, Program Staffing and Resource Management
- NK38-PLAN-09701-10067 Sheet 9, Documentation and Project Closure
- NK38-PLAN-09701-10067 Sheet 10, Engineering Management Plan
- NK38-PLAN-09701-10067 Sheet 12, Environmental Management
- NK38-PLAN-09701-10067 Sheet 13, Quality Management
- NK38-PLAN-09701-10067 Sheet 14, Site Implementation and Construction
- NK38-PLAN-09701-10067 Sheet 15 Licensing
- NK38-PLAN-09701-10067 Sheet 16, Health and Safety Management
- NK38-PLAN-09701-10067 Sheet 18, Return to Service Management
- NK38-PLAN-09701-10010, Darlington Refurbishment Supply Chain Management Plan

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Accountable Owners of these documents are:

Sheet 1-6, 9:	Director, Refurbishment Planning & Control
Sheet 7:	Director, Strategy Oversight and Partnership Management
Sheet 8:	Manager, Human Resources Nuclear Refurbishment
Sheet 10:	Vice President, Refurbishment Engineering
Sheet 13:	Director, Refurbishment Management System Oversight
Sheet 14:	Vice President, Refurbishment Execution
Sheet 15:	Manager, Refurbishment Licensing Support
Sheet 12, 16, 18:	Director, Refurbishment Operations and Maintenance
NK38-PLAN-09701-10010:	Director, Supply Chain

Additional Program Management Plans or related documents (e.g. Commissioning Plan), including those that may be required per the Canadian Nuclear Safety Commission's Regulatory Document – RD360, may be added to the suite of documents during the Detailed Planning phase.

4.4 Project Management Plans

The Project Management Plans describe how a specific Project will develop its work scope and execute the work and how it will operationalize the Program processes to deliver the program benefits (these are business level requirements, not technical design requirements).

Note: Where a project will follow a Program process exactly as written, it is sufficient to confirm and reference the Program document in the Project Management Plan.

Darlington Refurbishment organized identified, approved scope into project 'bundles' for the purposes of initiating the work and providing staff to execute the initial conceptual planning. As planning progressed, bundles were merged and/or shifted into different Projects as documented per N-MAN-00120-10001-SCH-04, Nuclear Refurbishment Program Work Breakdown Structure Guide.

Each project, within the Program, will have a set of Project Management Plans developed as per N-MAN-00120-10001-GRB, Nuclear Projects - Gated Process.

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5.0 MANAGEMENT STRUCTURE

5.1 Program Sponsor

Executive Vice-President, Nuclear Projects is assigned as the Program Sponsor per D-PCH-09701-10000, Darlington Refurbishment Project Charter.

5.2 Program Organization Structure

See Appendix A for the current Program Organizational Structure. All associated Role Documents are documented in the series N-MAN-08131-10000.

5.3 Program Meetings and the Executive Advisory Committee

Darlington Program Team meetings are held monthly per N-PLAN-09701-10003, Darlington Project Meeting Terms of Reference.

The Darlington Refurbishment Executive Advisory Committee - meets quarterly in advance of the Nuclear Operations Committee of the Board per N-PLAN-09701-10002 Darlington Refurbishment Executive Advisory Committee Terms of Reference.

5.4 Authorizing Projects

Authorizing Refurbishment projects is covered under:

- NK38-PLAN-09701-10003, Darlington Refurbishment Program Scope Review Board, Terms of Reference
- NK38-PLAN-01060-10003, Darlington Refurbishment Project Reference Plan – Scope Definition
- N-MAN-00120-10001-GRB, Nuclear Projects - Gated Process

5.5 Authorizing Non-Project Work in the Program

Functional work scope and associated resources are authorized, and funding released, through the OPG Nuclear Business Planning process, N-PROG-AS-0005.

All Project work in the Refurbishment Program will be approved by the Scope Review Board, see Section 4.1.3 Authorizing projects.

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5.6 Design Authority

- (a) Design Authority for the Refurbishment Program resides with the Director of Engineering Nuclear Refurbishment in alignment with N-INS-01100-10000, "Engineering and Design Authority."
- (b) Design Authority for the Darlington Waste Management Facility, where waste from refurbishment may be stored as well as on-going dry storage of used fuel, resides with the Manager, Safety Assessment and Licensing, Nuclear Waste Management Division (NWMD).

5.7 Release Strategy

Funding for the Darlington Program is released by OPG's Board of Directors consistent with the approved Program Release Strategy (See Figure 1 in section 3.5.

Funding for individual projects, within the Darlington Refurbishment program, will be released in phases per N-MAN-00120-10001-GRB Nuclear Projects - Gated Process

5.8 Project Financing

Financing for the project is being established during the Definition phase.

5.9 Cost Recovery

Cost Recovery options and requirements are being reviewed, and will be finalized during the Definition phase.

5.10 Project Closeout

Project closure will follow relevant OPG processes and procedures applicable at the time. Closure document package will include Lessons Learned to provide Operating Experience (OPEX) to the wider nuclear community.

Director, Program Planning and Control - NR will develop the project closure process and requirements during the Definition phase and prepare interim Project Closure packages for each unit with input from the Director, Engineering - NR, Director, Construction - NR, Director, Refurbishment Quality Programs - NR. A final Project Closure package will also be prepared after the site has been returned to Operations.

Director, Planning and Controls Refurbishment will be responsible for the Post Implementation Review (PIR), in accordance with OPG_PROC-0056, Post Implementation Review Procedure, OPG-PROG-0006, Investment Management, and OPG-STD-0076, Developing and Documenting Business Cases.

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6.0 PROGRAM STRUCTURE AND SUMMARY PLAN APPROVAL AND REVISIONS

Approvals for this document are outlined on the cover sheet.

Revisions to the document will be as required. At a minimum, reviews will be carried out during preparation for each funding release.

6.1 References

The following governance and documents have been developed for Refurbishment deliverables and processes that are not explicitly described in Sections 1 - 4:

6.2 Nuclear Safety

Benefit Cost Analysis and Gap Resolution:

- (a) N-INS-00770-10004, NR ISR Gap Resolution Process – Darlington
- (b) N-INS-00770-10005, NR Issue Prioritization Process – Darlington
- (c) N-INS-00770-10006, NR Benefit-Cost Analysis Process – Darlington

6.3 Engineering

Refurbishment Engineering has created a series of guidelines to most effectively comply with OPG engineering governance while recognizing the unique challenges of a mega-project in an EPC environment.

6.4 Business Case Summary

- (a) OPG-PROG-0006, Investment Management Framework
- (b) OPG-STD-0076, Developing and Documenting Business Cases
- (c) OPG_PROC-0056, Post Implementation Review Procedure
- (d) N-PROG-AS-0005, Business Planning Program
- (e) N-REP-00120.3-10000, Economic Feasibility Assessment of Darlington Refurbishment

6.5 Program Management and Controls

- (a) N-MAN-00120-10001-RISK-07, Nuclear Refurbishment Assumptions & Issues Management
- (b) N-MAN-00120-10001-SCH, Nuclear Refurbishment Schedule Management
- (c) N-MAN-00120-10001-PC-01, Nuclear Refurbishment Cost and Schedule Change Control

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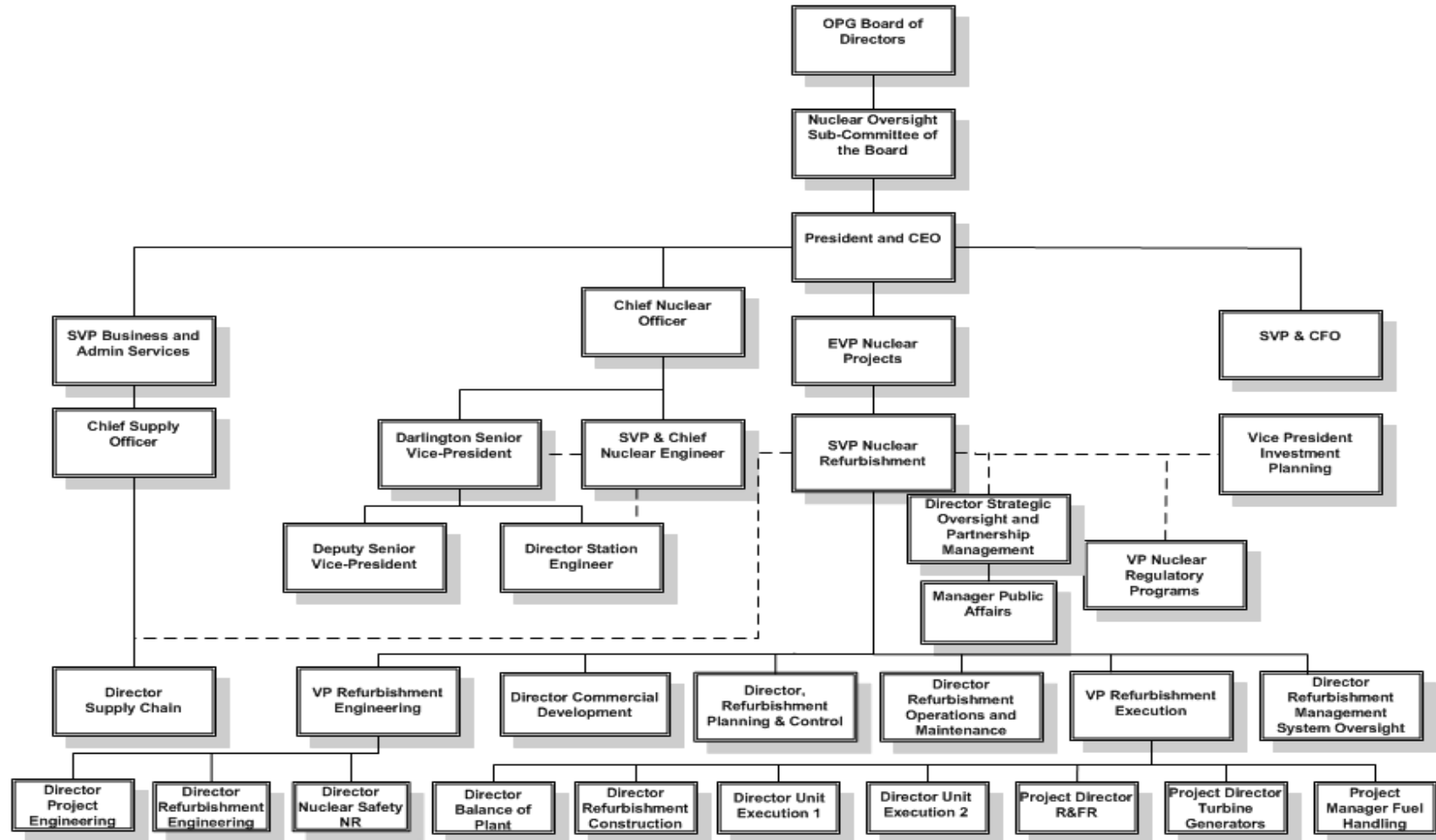
- (d) N-MAN-00120-10001-EST, Nuclear Refurbishment Cost Estimating
- (e) N-MAN-00120-10001-RISK-05, Refurbishment Contingency Management
- (f) N-MAN-00120-10001-RISK, Refurbishment Risk Management

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Appendix A: Program Organization Structure



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Appendix B: Accountability Model

The attached accountability model has been developed as an aid for our employees to understand the general elements of each major scope of work in the Darlington Nuclear Refurbishment project. It is meant to be a representative guide to help our staff understand the responsibilities and accountabilities throughout the life cycle of a scope of work, from the Darlington Scope Request (DSR) to the declaration of Ready for Service (RFS).

The guiding philosophy behind the project revolves around the Project Manager having the ultimate accountability for delivering a successful project. That said, an accountability model showing the Project Manager accountable for each and every element of the project would do little to communicate to our staff the width and breadth of effort required to perform the complete scope of work.

The model is comprised of two elements:

1. A Responsibility Swim Lane chart, with numbered elements representing each of the major blocks of work required to be performed in order to execute a scope of work in the project.
2. A matrix of responsibilities and accountabilities for each numbered element, using the RAPID model as the basis for assignment.

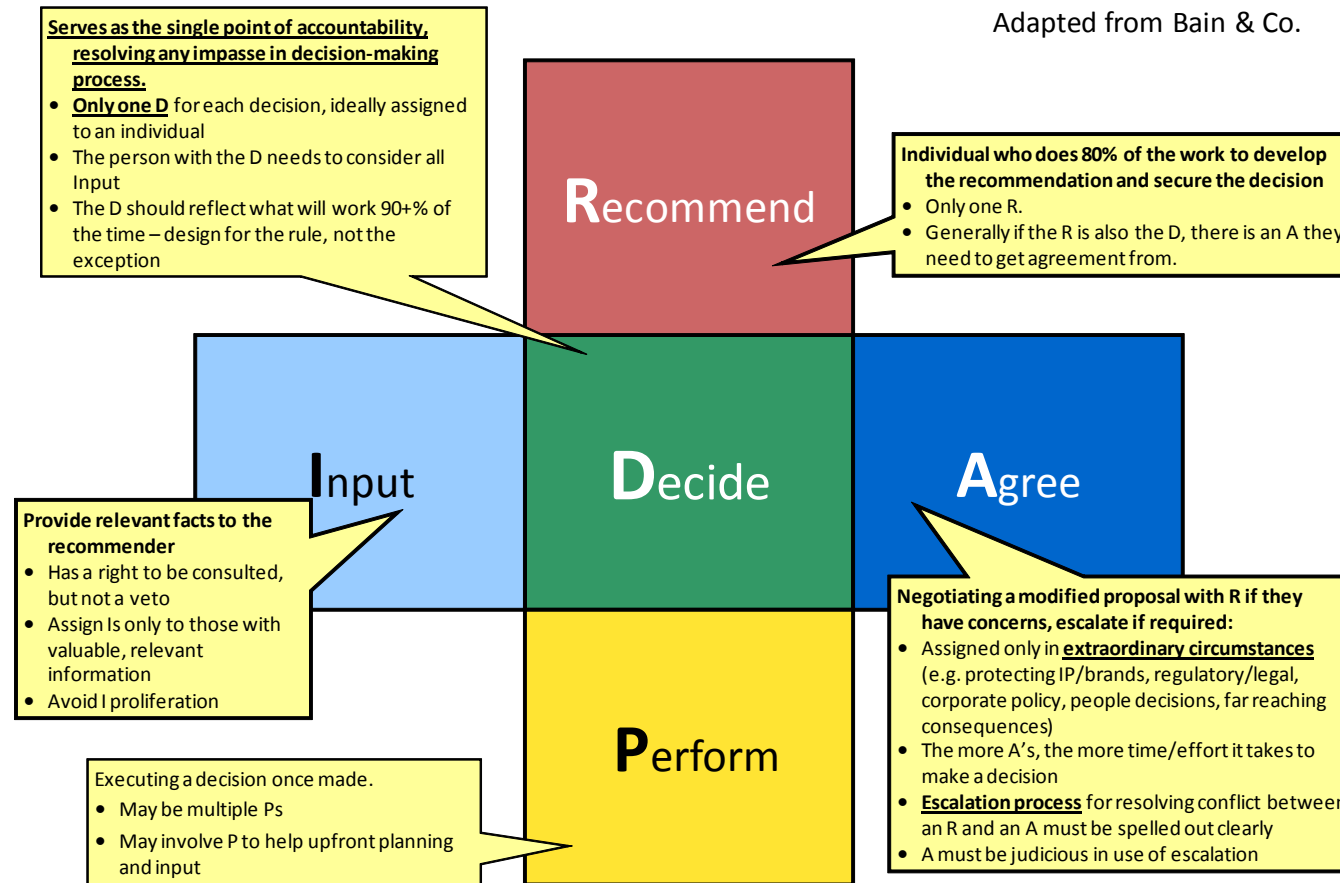
The RAPID model (as shown on the following page) is used to describe who in the organization has the primary role in making **Recommendations**, establishing **Agreement**, **Performing** the work once decided, providing **Input** to the decision, and being accountable to make that **Decision**. It is important to understand that with this model the **Recommender** is the role that is primarily responsible for the element of scope as reflected in the Swim Lane chart and that the primary accountability resides with the role of the **Decider**.

It is also important to note that this model is centred around each of the elements and their associated responsibilities and accountabilities. The model does not abdicate fundamental accountabilities as defined by the Internal Responsibility System, Chain of Command, Governance, and Delegated Authorities.

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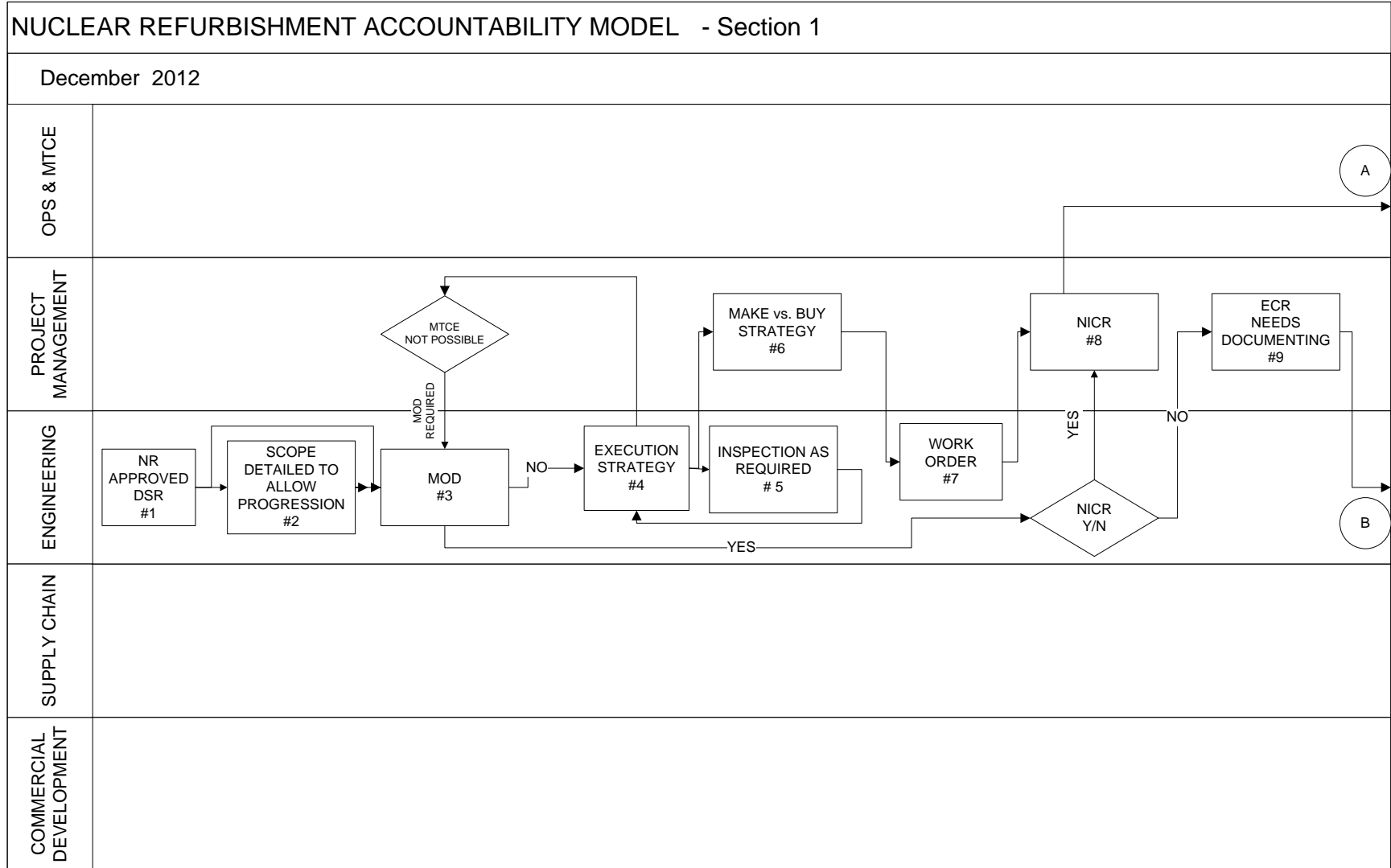
Input: Provide relevant facts to recommender / **Recommend:** Providing data & analysis based on research and stakeholdering,
Agree: Negotiating modified proposal with recommender with ability to Veto and escalate / **Decide:** Single point of accountability; bringing decision to closure; implementing decision / **Perform:** Executing decision promptly & effectively

(Functional support to the Project Manager will be supplied by ENG, Ops & Mtc., MSO, P&C, Nuclear Safety, Finance & Legal as needed)

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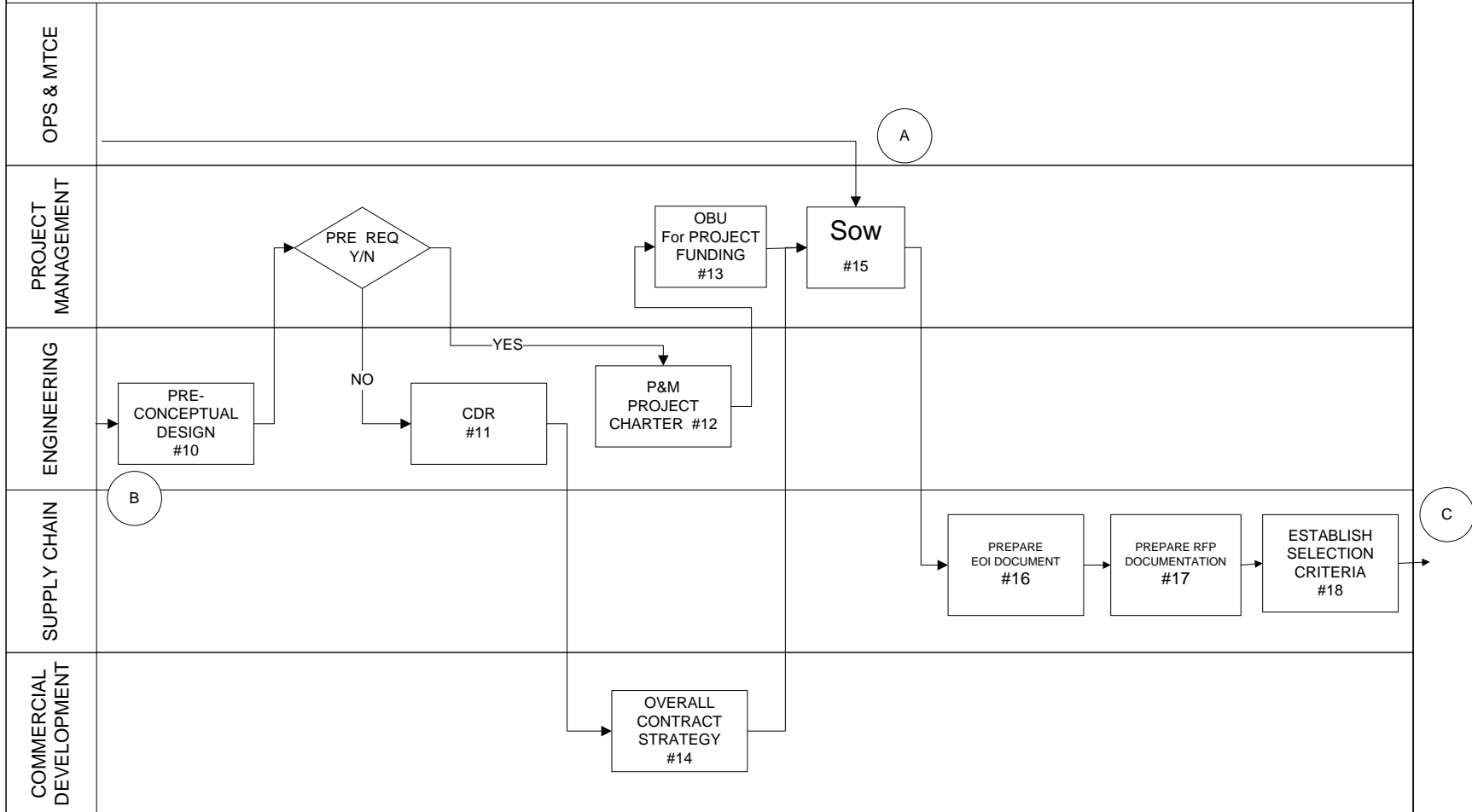
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Nuclear Refurbishment Accountability Model – Section 2

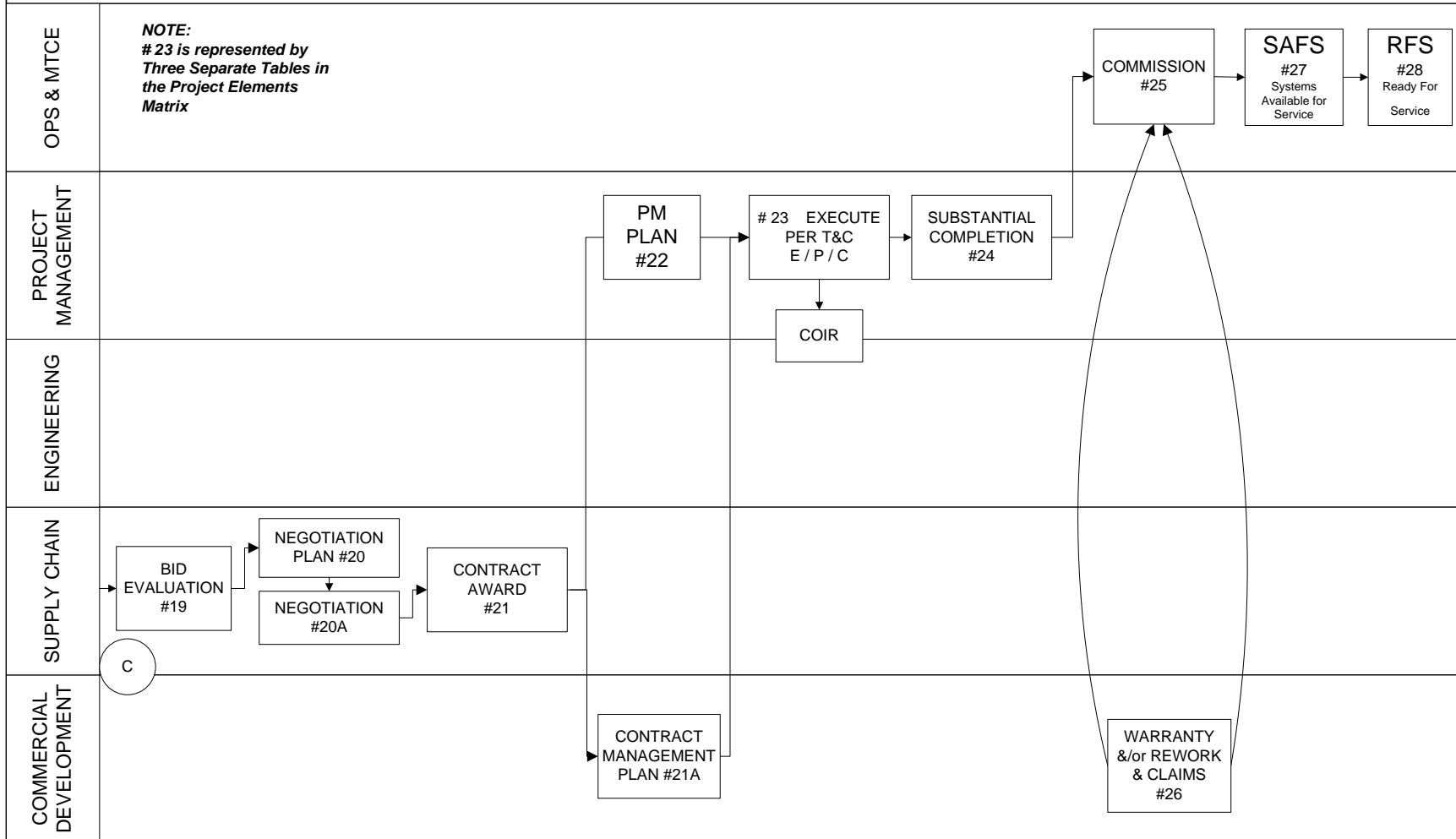


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Nuclear Accountability Model – Section 3



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Project Element:		
(# 1) NR Approved DSR		
Description: Darlington Scope Request (DSR) - scope basis for the project. NR Approved excludes ~600 DSR's that exist in the data base since CCA conversion. The excluded work may be scheduled before , during, post or not at all. DN is responsible for planning and therefore no PM assigned.		
Responsibility	Who	Comment
Input	Ops & Mtc ENG P&C	Director, Planning & Controls chairs the PSRB , Technical Screening & Funding Committees
Recommend	ENG	DSR's generated from CCA's (Station Eng)
Agree	SVP (DNCS) CNE	PSRB: SVP Darlington, SVP Nuclear refurbishment, SVP Nuclear Eng / CNE - consensus required. All additions and deletions of Major Scope
Decide	SVP(NR)	PSRB: SVP Darlington, SVP Nuclear refurbishment, SVP Nuclear Eng / CNE - consensus required. All additions and deletions of Major Scope
Perform	PM	
Key Deliverable	Scope - DSR is basis of scope - DSR line items per data base have attributes assigned such as scope type, funding, gate, HOS etc.	
Governance	NK38-INS-09701-10001 Darlington Refurbishment Program - Scope Review Instruction NK38-PLAN-09701-10003 Program Scope Review Board - Terms of Reference NK38-PLAN-01060-10003 Refurbishment Project Reference Plan - Scope Definition D-PCH-09701-10000 Darlington Refurbishment Program Charter	

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Project Element : <div style="text-align: center;">(#2) Scope Detailed to Allow Progression</div>		
Description: Activities leading to ECR Package.		
Responsibility	Who	Comment
Input	Ops & Mtc PM	Scoping input to allow progression
Recommend	ENG	System Engineering
Agree	PM	
Decide	ENG	Strat IV System Engineering Manager for ECR
Perform	ENG	System Engineering and/or Embedded engineers
Key Deliverable	Lead by System Engineering Person and/or Embedded engineers	
Governance	N-GUID-00700-10001 Guide to ECR and Local Needs Document Expectations guideline by Design	

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Project Element :		
(#3) MOD		
Description: Decision (Y/N) on MOD required.		
Responsibility	Who	Comment
Input	PM	
Recommend	ENG	
Agree		
Decide	ENG (DA)	
Perform	ENG	
Key Deliverable	Decision on Modification flag as documented in DSR Database.	
Governance	N-PROC-MP-0090, N-PROG-MP-0001	

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Project Element : <div style="text-align: center;">(#4) Execution Strategy</div>		
Description: This is the point where the decision is made regarding inspect / repair / replace / modify at the system / component level. Note; not all DSR are equal, some explicitly provide a strategy and may have been refined in the DSR data base during Scope Reconciliation Q3 2011.		
Responsibility	Who	Comment
Input	SC Ops & Mtc	NR source of expertise
Recommend	ENG	
Agree	Ops & Mtc	For Maintenance Only
Decide	PM	
Perform	PM	Perform Mtce Strategy = documenting the strategy at a level higher than an assessor. (Maintenance Planning will come later with O&M / Field Eng or Vendor - post WO and contract award in the case of a vendor)
Key Deliverable	Documents a decision to inspect / repair / replace / modify at the system / component level. A DRAS shall be used to document where the DSR is unclear or DSR strategy is being altered.	
Governance		

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Project Element : <div style="text-align: center;">(#5) Inspection Required</div>		
Description : Development of inspection criteria Work Order Notes to support pre refurbishment/ work defining inspection field activities		
Responsibility	Who	Comment
Input	PM Ops & Mtc	
Recommend	ENG	System Engineering
Agree	ENG	IMS/MCED
Decide	ENG	System Engineering if go, Design Dispositions or supports resolution plan if No Go
Perform	PM	Through various agencies assigns performer
Key Deliverable	Inspection Report recommending use "as is" or remediate, document via DRAS	
Governance	N-PROG-MA-0026 Equipment Reliability and N-PROG-MP-0008 Integrated Aging Management	

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Project Element : <div style="text-align: center;">(#6) Make vs. Buy Strategy</div>		
Description : Project decision to self-perform or utilize EPC/OSS model		
Responsibility	Who	Comment
Input	P&M Ops& Mtc Com Dev	The parties that will be integral with the selected strategy may inform / comment. Commercial Development will have direct involvement
Recommend	PM	
Agree	ENG	
Decide	PM	PM selects strategy as part of the initiation phase. GRB concurrence required.
Perform	PM	Execute the strategy.
Key Deliverable	Execution Strategy documented.	
Governance		

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Project Element :
(#7) Work Order

Description:
Asset Suite Work Order is the base unit of currency and scope control point from RO-24 (Oct 2014 for U2) until Breaker close / project closeout for U2 refurbishment. Work Order is the currency that supersedes Darlington Scope Request (DSR). Work Orders are required to maintain plant configuration for each unique piece of equipment as defined by the plant Master Equipment List (MEL). Exceptions will exist and be documented for work programs such as R&FR; pressure tube and calandria tube replacement.

Responsibility	Who	Comment
Input	P&C SC	Support process including OMS scope control
Recommend	ENG	
Agree		
Decide	PM	
Perform	PM	
Key Deliverable	Work Order generation (Health of Scope 4) for each DSR line item. Note: a DSR approved line item may result in 0, 1 or > 1 WO's. Some DSR line items may result in 100's of WO's e.g. replacing 100 valves on 4 units would result in 400 WO's.	
Governance	N-PROC-MA-0008 Work Initiation, Approval & Prioritization	

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Project Element : <div style="text-align: center;">(# 8) NICR</div>		
Description : Determination of applicability and preparation of applicable EC's to implement direct replacements of components that result in a change to plant configuration as a result of 'fit' or 'form' impacts.		
Responsibility	Who	Comment
Input	Ops & Mtc PM	Stakeholders
Recommend	PM	Through scope definition - includes embedded 'matrix' engineers
Agree		
Decide	ENG	Approval of EC's - as per MP-0090
Perform	ENG	through qualified vendors and/or in house
Key Deliverable	NICR Packages	
Governance	N-PROC-MP-0090	

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Project Element : <div style="text-align: center;">(#9) ECR/ Needs Document</div>		
Description : Engineering/ECR Needs Document contains the problem statement and all background information associated with an issue that will require a modification.		
Responsibility	Who	Comment
Input	ENG Ops & Mtc	
Recommend	ENG/PM	
Agree	ENG	System Engineering approve ECR
Decide	ENG	
Perform	PM	
Key Deliverable	MDR - Ensuring all applicable background information is available such that Engineering can produce a quality Modification Design Requirement per the schedule. Approved ECR/Needs Document	
Governance	N-PROC-MP-0090 (ECR) D-GUIDE-0700-10001 Desktop Guide for Preparation of Modification Needs Statement	

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Project Element :		
(#10) Pre- Conceptual Design		
Description : Preparation verification, approval and authorization of a sufficiently detailed set of modification design requirements to allow ECC process to proceed.		
Responsibility	Who	Comment
Input	Various PM	MDR Challenge process ensures that OPS/MTCE/HFE/DLA/Safety etc input is integrated into MDR
Recommend	ENG	
Agree	Ops &Mtc (Dir)	PM must ensure that MDR reflects and is aligned to Project SOW/Charter and or Needs Statement
Decide	ENG	The DA is final signatory
Perform	ENG	Either Design Engineering in house or through leverage with OSS/ES-MSA or other qualified supplier
Key Deliverable	MDR - modification design requirement	
Governance	As per N-INS-00700-10007	

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Project Element : (#11) CDR		
Description : Conceptual Design Report		
Responsibility	Who	Comment
Input	Ops & Mtc	
Recommend	ENG	For instances where CDR performed internally by OPG Design staff, or contracted out to OSS with oversight from OPG, NR Design would recommend preferred option. For case where CDR is included in EPC scope, EPC vendor design engineer will recommend preferred alternative.
Agree	Eng Ops& Mtc	Engineering concurrence that preferred option meets bounding design requirements (including nuclear safety). O&M concurrence that preferred option addresses operability, maintainability and safety requirements to extent possible at CDR phase.
Decide	PM	PM selects based on eng input and other key considerations including schedule and cost. Note: Projects & Mods required PMOC approval (<i>information only</i>)
Perform	PM	CDR can be performed internally by OPG Design staff, or contracted out to OSS with oversight from OPG, or can be included in EPC scope with option selection to be done by OPG
Key Deliverable	Preferred option selected by OPG from options presented in Conceptual Design Report	
Governance	N-SOW-03030-10000 Conceptual Design Phase (not governance, guidance on CDRs from P&M) N-GUID-00120-10005 Value Engineering Guide N-PROC-AS-0039 Projects & Portfolio Management	

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Project Element : <p style="text-align: center;">(#12) P&M Project Charter / Needs Statement</p>		
Description : Standardized document that outlines the problem statement and key business drivers associated with a required modification. Any schedule, cost or funding constraints may also be identified. Charter or Needs Statement is used by Projects and Modifications to start a project.		
Responsibility	Who	Comment
Input	Ops & Mtc FIN	FYI: potential Process Gap - Refurb doesn't have a Site Screening committee as part of prior reviews. Finance confirm business driver and funding recommendation properly documented
Recommend	ENG	Engineering confirm technical drivers are accurately stated.
Agree	Exec. Org	P&M / CCD is typically the executing organization but this can also include other groups such as CCD
Decide	PM	Decision to start the project is previously decided at the Asset Investment Screening Committee (AISC) which is preceded by acceptance from the Project Approval and Site Screening Committees.
Perform	PM	Sponsoring organization can come from various areas such as Eng, Ops or Maintenance. P&M do not write project charters.
Key Deliverable	New Project Start-Charter has to be accepted by the P&M Oversight Committee prior to sign-off by the P&M VP (as executing organization). Charter usually should not provide a directive solution to the problem statement.	
Governance	N-PROC-AS-0039 Project and Portfolio Management N-MAN-00120-10001 Sheet: Scope -06	

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Project Element :		
(#13) OBU for Project Funding		
Description : Other Business Unit, OBU Funding Request N-FORM-11454 is submitted by the NR PM for funding requirements for another Business Unit (ie P&M) to do work treated as a Sub-project of a NR Project Bundle (i.e. work transferred via Sub-project Need Statement).		
Responsibility	Who	Comment
Input	P&C	OBU request is reviewed by NR Program Controls.
Recommend	PM	(R-1) OAR, depending on amount requested (ie NR PM Str III).
Agree	Requesting Org	OBU (ie P&M PM) signs to denote Requesting Org concurrence.
Decide	PM	OAR, depending amount of funding requested (ie NR PM Str IV or V).
Perform	PM	Per Refurb N-MAN-00120-10001 section 5.1 b) NR PM submits on behalf of Other Business Unit an OBU Funding Request N-FORM-11454 for approval. Note, Other Business Unit maybe asked to prepare OBU form for the NR PM to submit.
Key Deliverable	PM (P&M) -BCS/PEP/PAP/PMP per P&M processes (AS-0039) in support of E-phase & or P-phases & or C-phase work per MP-0090, COIR, MA-0022 & MA0013.	
Governance	Refurb Transfer Of Work Process N-MAN-00120-10001 (supersedes N-GUID-09701-10014) which supports Refurb Gated Process N-INS-09701-10005.	

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Project Element :		
(#14) Overall Contract Strategy		
Description : The Contracting Strategy is a document which establishes the form of procurement, the type of contract and pricing model, and the style and type of management to be adopted for the subsequent service delivery, supplier relationship management and contract administration. The selection of a contracting and sourcing strategy is supported by adequate inputs and analysis taking into consideration a set of defined “commercial principles” established for relationships with third parties. The depth of analysis and documentation required for each contracting strategy is based on a graded, risk-based approach taking into consideration project value and any political or regulatory considerations. This is a Gate 2 deliverable.		
Responsibility	Who	Comment
Input	PM SC Com Dev	All three groups are involved in the analysis to provide input to determine the recommended contracting strategy. Key stakeholders (e.g. ENG/Ops & Mtc) will be included as designated by the PM.
Recommend	Com Dev	The Project Team, Supply Chain and Nuclear Commercial Development are involved in performing the analysis to determine the recommended contracting strategy. NCD is responsible for developing the contracting strategy document.
Agree	PM	The Project Manager agrees and recommends the strategy on the formal document.
Decide	Com Dev (VP)	Note: Graded per OAR & Sub-Contracting Strategies in terms of reviews
Perform	PM SC Com Dev	All three groups are involved in executing the procurement activities based on the recommended contracting strategy.
Key Deliverable	<i>Contracting Strategy Document</i>	
Governance	N-INS-09701-10005 Gated Process NK38-REP-00150-10001 Darlington Refurbishment Commercial Strategy N-STD-AS-0029 Contract Management Standard N-MAN-09701-10003 Nuclear Contract Management Guide	

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Project Element :		
(#15) Scope of Work		
Description : Document included in the RFP that outlines the contract scope, proposed schedule, requested estimate accuracy etc. and may include cross references to attached Technical Specifications.		
Responsibility	Who	Comment
Input	SC ENG Ops & Mtc Com Dev	
Recommend	PM	Writes SOW and routes to various stakeholders for review depending on nature of work
Agree	Ops & Mtc	
Decide	PM	Approval level of SOW dependent on estimated dollar amount of downstream Purchase Order (PO)
Perform	PM	
Key Deliverable	Purchase Order-Scope of work has to identify the required deliverables as succinctly as possible to minimize assumptions by either OPG or the Vendor. This will ensure a quality PO is issued	
Governance	N-PROC-MM-0001 Requisition of Services	

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Project Element : (#16) Prepare EOI Document		
Description : Expression of Interest: This is a process by which supply chain working with the Requisitioner shall assemble a list of potential suppliers to approach for RFQ/RFP.		
Responsibility	Who	Comment
Input	PM Com Dev	
Recommend	SC	Supply Chain incorporates feedback from supporting functions and projects to arrive at the list of potential suppliers and to complete the EOI process
Agree	PM/Com Dev	
Decide	SC	Based on all input and feedback Supply Chain finalizes the EOI process
Perform	SC	Supply Chain creates all the required documents and forms for EOI
Key Deliverable	EOI	
Governance	N-PROC-MM-0016 - Nuclear Procurement Activities OPG-PROC-0058 - Procurement Activities	

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Project Element : <p style="text-align: center;">(#17) Prepare <i>RFP Documentation</i></p>		
Description : Request for Proposal: It is a procurement document that requests suppliers to supply solutions for the delivery of items and/or services or to provide alternate options or solutions. It is a process that uses predefined criteria in which price is not the only factor. A RFP is used where the estimated value of the requirement is \$100,000 or greater. Following chart does not apply to selection criteria which is also part of RFP package		
Responsibility	Who	Comment
Input	PM Com Dev	
Recommend	SC	Supply Chain incorporates feedback from other supporting functions like CFST (Cross Functional Sourcing Team) for major projects (>5m) and other departments, as appropriate.
Agree	PM/Com Dev	
Decide	SC	Based on all input and feedback Supply Chain finalizes the RFP process
Perform	SC	Supply Chain creates all the required documents and paper work.
Key Deliverable	RFP	
Governance	N-PROC-MM-0016 - Nuclear Procurement Activities OPG-PROC-0058 - Procurement Activities	

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Project Element :	(#18) Establish Selection Criteria
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Description :
Criteria required to be documented in the RFP that will provide guidance to the vendor as to what key areas will be used to evaluate the proposals. This typically includes areas such as Technical Expertise, Cost, Schedule, Risk, Compliance to Terms & Conditions and Proposed Staff.

Responsibility	Who	Comment
Input	ENG SC Com Dev PM	
Recommend	SC	
Agree		
Decide	PM	PO value may drive approval level for selection criteria.
Perform	SC	SC must ensure that weighting of various criteria reflects the risks associated with the work. Obtains stakeholder input based on the types of risks for the project.
Key Deliverable	RFP - If a Master Service Agreement already exists then T&C's are not required as part of the selection criteria and the commercial component usually defaults to price.	
Governance	N-PROC-MM-001 Requisition of Services OPG-PROC-0058 - Procurement Activities	

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Project Element :		
(#19) Bid Evaluation		
Description : A document used to score the proposals from various companies based on criteria established in the RFP (although the criteria weighting may not be documented in the RFP). Required to be approved before proceeding to a purchase order when the RFP requires competitive bidding. Evaluation is completed in two phases - technical first then commercial second. For large contracts two separate teams are assigned to complete the evaluations independently.		
Responsibility	Who	Comment
Input	ENG Op &Mtc PM Com Dev	
Recommend	SC	Cross functional team may be established for large contracts or if MSA doesn't exist.
Agree	SC Com Dev	Supply Chain & Commercial Development extensively involved in commercial aspects of bid evaluation.
Decide	PM	PO value will drive approval level for bid evaluation approval. Scores must be backed up with documented reasons to ensure due diligence
Perform	SC	
Key Deliverable	<i>Recommendation Report</i>	
Governance	N-PROC-MM-0001 Requisition of Services <i>OPG-PROC-0058 - Procurement Activities</i>	

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Project Element :	(#20) Develop Negotiation Plan
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Description :
The Negotiation Plan is a document which includes information, considerations and other items that will be part of the negotiations process to support OPG in achieving a successful outcome in negotiation activities. The document identifies information such as OPG's negotiation objectives, strategy and tactics, negotiation timelines and schedule, negotiation team, resources and their roles and accountabilities and negotiation issues.

Responsibility	Who	Comment
Input	FIN Com Dev PM	Key stakeholders (e.g. ENG/Ops & Mtc) will be included as designated by the PM.
Recommend	SC	Recommendations have been made at the management level to have Supply Chain support NCD & the Project Manager draft the Negotiation Plans.
Agree	PM	
Decide	SVP	There may be a Negotiation Steering Committee set up with key senior management from across OPG for negotiations of major contracts.
Perform	SC	A Team of representatives from OPG are usually involved in contract negotiations (which may include Finance, Legal, Com Dev, Project, NCD, etc.). SC leads negotiations.
Key Deliverable	Negotiation Plan	
Governance	N/A	

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Project Element :	(#20A) Negotiation
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Description :
Negotiation is an activity in which OPG engages with a Supplier to discuss points of a potential business arrangement. The goal is for an agreement to be made that is beneficial to all involved parties. Discussions may go back and forth between parties until all points have been agreed upon that will form the basis of the terms & agreements in a contract.

Responsibility	Who	Comment
Input	PM Com Dev	
Recommend	SC	The Negotiation Team agrees to contract terms during negotiations with recommendation of contract for approval by PM and VP-NCD.
Agree	SVP	There is a Negotiation Steering Committee established for major contracts which the SVP and other key stakeholders across OPG are members.
Decide	PM	
Perform	PM SC Com Dev	A Team of representatives from OPG are usually involved in contract negotiations (which may include Finance, Legal, Com Dev, Project, NCD, etc.). SC leads negotiations.
Key Deliverable	Confirmed contract ready for contract award	
Governance	OPG-PROC-0058 Procurement Activities	

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Project Element :		
(#21) Contract Award		
Description : Contract is an agreement between two or more competent persons or companies to provide items and/or services. A Purchase Order (PO), including contract standard, technical specifications, scope of work etc. becomes a contract when accepted by a supplier. Acceptance may be in writing or by performance, unless the PO requires acceptance in writing. An agreement based on a template agreement becomes a contract when agreed to and executed by a supplier and OPG.		
Responsibility	Who	Comment
Input	PM Com Dev	As requisitioner, Project Manager provides the required pre-requisites to award contract, like funding approvals, task request forms etc. Also, Project Manager provides input for any additional requirements that need to be imposed in the contract or to the terms and conditions of the contract. Input also includes other stakeholders like Finance, Legal, Insurance, etc.
Recommend	SC	
Agree		
Decide		
Perform	PM	Supply Chain completes all paper work and processing of activities in Passport (Asset Suite 7), as required. Execution of Contract
Key Deliverable	Purchase Order	
Governance	N-PROC-MM-0016-Nuclear Procurement Activities OPG-PROC-0058-Procurement Activities OPG-STD-0017 - Organization Authority Register	

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Project Element : <p style="text-align: center;">(#21A) Contract Management Plan</p>		
Description : <p>The CMP is an internal OPG document which should not be distributed to the Supplier, as it contains all the key information about how and who in OPG will manage the contract. It identifies systems and processes to ensure that the Supplier complies with the terms and conditions during the performance of the contract.</p> <p>The CMP is unique to each contract based on the nature of the work and the negotiated terms and condition and is developed using a risk-based graded approach appropriate to the type of contract in order to facilitate effective execution of the contract.</p>		
Responsibility	Who	Comment
Input	SC PM	Inputs may include other stakeholders such as P&C, Supply Chain and Law.
Recommend	Com Dev	For significant EPC contracts and Master Agreements, the role of the Contract Manager is usually assigned from Com Dev. For other contracts, the PM has this accountability.
Agree	Com Dev	NCD organization must agree to management plan for the commercial terms of the contract.
Decide	PM	
Perform	Com Dev	Include Contract Manager, Supply Chain and P&C representative's matrixed to the Project. (Note: Contract Manager working on behalf of PM.)
Key Deliverable	CMP for Execution	
Governance	N-MAN-09701-10003 Nuclear Contract Management Manual	

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Project Element : <div style="text-align: right;">(#22) PM Plan</div>		
Description : An over-arching document that provides an exhaustive summary of the project from a cost, schedule, quality, risk & safety standpoint.		
Responsibility	Who	Comment
Input	ENG P&C Ops & Mtc SC Com Dev	
Recommend	PM	Submits as part of Gate package for GRB approval
Agree		
Decide	PM	
Perform	PM	
Key Deliverable	Has to be a living document that reflects current state of the project (not a point in time)	
Governance	N-INS-09701-10005 Nuclear Project - Gated Process	

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Project Element :		
(#23) EXECUTE PER T&C (E)		
Description :		
Responsibility	Who	Comment
Input	PM Ops & Mtc Com Dev SC	per Agreement and COIR
Recommend	PM	per Agreement and COIR
Agree	Ops & Mtc (Dir) ENG(DA)	per Agreement and COIR
Decide	PM	per Agreement and COIR
Perform	EPC	per Agreement and COIR
Key Deliverable	per COIR, ultimate deliverable is engineering design package approved for installation in the field by DA (and Ops & Maintenance Director as per Mod Outline).	
Governance	Contract, MP-0090, MP-0009, COIR	

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Project Element : <div></div> (#23) EXECUTE PER T&C (P)		
Description :		
Responsibility	Who	Comment
Input	ENG SC Com Dev PM	per Agreement and COIR
Recommend	PM	per Agreement and COIR
Agree		per Agreement and COIR
Decide	PM	per Agreement and COIR
Perform	EPC	per Agreement and COIR
Key Deliverable	per COIR, ultimate deliverable is all materials procured to OPG requirements such that they can be installed in the plant, and spares either put into stores or procured from marketplace using ASS information	
Governance	Contract, MP-0090, MP-0009, COIR, (intent of PROC-0058 should be embedded in contract language)	

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Project Element :		
(#23) EXECUTE PER T&C (C)		
Description :		
Responsibility	Who	Comment
Input	ENG Com Dev	per Agreement and COIR
Recommend	PM	per Agreement and COIR
Agree	Ops & Mtc	per Agreement and COIR
Decide	PM	per Agreement and COIR
Perform	EPC	per Agreement and COIR
Key Deliverable	per COIR, ultimate deliverable is modification package that has been assessed, installed, commissioned and design package information package updated and closed out with AFS approved by DA (and DOM as per Mod Outline).	
Governance	Contract, MP-0090, MP-0009, NK38-GUID-01900-10002, Darlington Refurbishment Non-Intent Design Deviation Notice, NK38-GUID-01900-10001, Darlington Refurbishment Design Completion Assurance, NK38-INS-09701-10003 Check and Test Requirements, NK38-INS-09701-10007 Construction Completion Assurance, COIR, NR work protection, NR RP	

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Project Element :

(#24) Substantial Completion

Description :
 As defined by the Terms and Conditions of the contract, it is the point at which the work is substantially complete to the satisfaction of OPG to allow commissioning & operations of the system.

Responsibility	Who	Comment
Input	Com Dev ENG SC	
Recommend	PM	
Agree	Ops & Mtc ENG (DA)	Acceptance on behalf of the project.
Decide	PM	Accountable to accept substantial completion
Perform	PM	Preparation of Acceptance Letter.
Key Deliverable	Letter of substantial completion acceptance.	
Governance	FIN-PROG-CM-001	

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Project Element :	(#25) Commission
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Description : System, structures and components are tested and checked to prove their modification meets the design requirements as documented in Detailed Commissioning Specifications. (Nk38-INS-09701-10004).
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Responsibility	Who	Comment
Input	PM ENG	PM is informed of the commissioning results; unsatisfactory results will lead to rework/warranty work. There may be some cases where the CNSC may need to be informed of the commissioning result.
Recommend	Ops&Mtc	The Commissioning and Return to Service Manager reviews the documents and processes demonstrating the detailed commissioning specifications were met and recommends to the DOM to accept the commissioning or AFS result.
Agree	ENG (DA) Ops & Mtc	O&M, Design and Nuclear Safety Engineering review the detailed commissioning specification results and determine if specifications are met, if they are not met, they can veto COMM's desire to recommend to the DOM to accept the results by withholding their signature on the commissioning results.
Decide	Ops & Mtc (Dir)	DOM has the ultimate decision accountability for accepting the commissioning result and declaring the device available for service.
Perform	Ops & Mtc	Design Engineering develops all of the Commissioning specification documents. O&M perform the commissioning; there may be assistance or direct involvement with the PM's staff or the contractors.
Key Deliverable	MAFS - Modification Available For Service	
Governance	Detailed Commissioning Specifications. (Nk38-INS-09701-10004).	

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Project Element : <div style="text-align: center;">(#26) Warranty &/or Rework, and Claims</div>		
Description: Per the Terms & Conditions of the appropriate contract invoke warranty/rework requirements.		
Responsibility	Who	Comment
Input	Ops & Mtc Com Dev ENG SC	Provide input & guidance on requirements to invoke warranty or rework provisions.
Recommend	Com Dev	Based on Terms & Conditions.
Agree	EXEC (VP)	Only as required.
Decide	PM	Liaise with contractor to perform work as required.
Perform	PM	
Key Deliverable	DRAS to document requirement for warranty/rework.	
Governance		

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Project Element : (#27) SAFS		
Description : Systems will be placed in service and monitored and tested against Detailed Restart Specifications to ensure they meet requirements.		
Responsibility	Who	Comment
Input	PM SC	PM is informed; CNSC may be informed in special circumstances. Supply Chain for Spares
Recommend	Ops & Mtc	The Commissioning and Return to Service Manager reviews the documents and processes demonstrating the system available for service specifications were met and recommends to the DOM to accept the result.
Agree	Ops & Mtc ENG(DA)	Operations, Maintenance, Nuclear Safety, Systems Engineering review the System Available for Service results and determine if specifications are met, if they are not met, they can veto COMM's desire to recommend to the DOM to accept the results by withholding their signature on the system testing reports.
Decide	Ops & Mtc(Dir)	DOM has the ultimate decision accountability for accepting the System Available for Service result and declaring the it available for service.
Perform	ENG(Systems) Ops & Mtc	NR Systems Engineering is responsible for preparing all of the success criteria documents for ensuring systems available for service, O&M are responsible for performing all of the field work to execute the tests.
Key Deliverable	SAFS- System Available For Service Declaration	
Governance	System Available For Service Process NK38-INS-09701-10005	

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Project Element : (#28) RFS		
Description : All systems will be placed in service and Phase A/B/C/D testing will be conducted to demonstrate performance meets requirements.		
Responsibility	Who	Comment
Input	PM	PM is informed.
Recommend	Ops & Mtc	The NR Operations Manager reviews the documents and processes demonstrating the unit ready for service specifications were met and recommends to the DOM to accept the result.
Agree	Ops & Mtc ENG	Operations, Maintenance, Engineering(Nuclear Safety, Design and System) review the RFS results and determine if specifications are met, if they are not met, they can veto COMM's desire to recommend to the DOM to accept the results by withholding their signature on the unit testing reports.
Decide	Ops & Mtc(Dir)	DOM has the ultimate decision accountability for accepting the Unit Ready for Service results and declaring the it available for service.
Perform	Ops & Mtc	Operations and Maintenance perform the return to service testing.
Key Deliverable	RFS Declaration Unit Available for Service Declaration	
Governance	Unit Readiness for Service NK38-INS-09701-10006	

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Accountability Model - Abbreviations			
DEPARTMENT		Sub-Dept.	
Refurbishment Execution	EXEC		
Refurbishment Engineering	ENG	Nuclear Safety	NS
		Design Authority	DA
Refurbishment Operations & Maintenance	Ops & Mtc		
Refurbishment Planning & Control	P&C		
Commercial Development	Com Dev		
Supply Chain	SC		
Finance	FIN		
Projects & Modifications	P&M		
Management Systems Oversight	MSO		
INDIVIDUALS / GROUPS			
Senior Vice President	SVP		
Vice President	VP		
Director	DIR		
Project Manager	PM		
Contract Manager	CM		
Owners Support Services - Contractor	OSS		
(EPC)Engineering, Procurement, Construction - Vendor	EPC		
Approval Authority per OAR	AA		
Refurbishment Project Executive Team	RPET		
Requesting Organization	Requesting Org		
Chief Nuclear Engineer	CNE		

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Appendix C: Alignment of NR Program & Project Management Plans, RD-360 and Existing OPG PEP

Alignment of NR Program & Project Management Plans,
 RD-360 Documents, and Existing OPG PEP

