



Plan

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PROGRAM SITE IMPLEMENTATION AND CONSTRUCTION MANAGEMENT PLAN

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**Program Site Implementation And
Construction Management Plan**

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Revision Summary

Revision Number	Date	Comments
R000	2013-01-24	Initial issue.

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1.0 VISION

That the Construction Oversight Group's objective is aligned with all the project stakeholders including the Contractors and groups executing the work to which we provide oversight. We are "Enablers" that support the executing groups, we work with them to achieve world class safety, meet quality requirements and achieve the project schedule milestones and budget.

2.0 GENERAL GUIDING PRINCIPLES

1. Our ability to influence a positive outcome and achieve all the project objectives starts before execution in the field. If we stop or delay Work after it has started for things that should have been addressed during earlier phases, we have failed. Accordingly, a significant amount of oversight is provided prior to field implementation ensuring readiness.
2. We work hard at building trust and our relationship with the group executing the Work as we believe openness and trust is the only way to meet all the project objectives.
3. The level of oversight applied will be risk based and be specific to each of the "projects" as detailed in the Project Oversight Plans (POPs)
4. Oversight will be performed in accordance with N-STD-AS-0030 "Project Oversight Standard" and N-MAN-09701-10002" Nuclear Projects Oversight Guide" (to be issued).

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3.0 INTRODUCTION

Construction Management

- Construction management is the responsibility of the individual EPC contractors. As such the OPG Construction Management Organization will be structured to support each of the Major Projects that constitutes the Refurbishment program by providing them each with an experienced Construction Manager. The projects are as follows:
 1. Lay up/ Services
 2. Islanding
 3. Fuel Handling
 4. Retube and Feeder Replacement
 5. Turbines and Generators
 6. Steam Generators
 7. Balance of Plant
- Contracting Strategy
 - The respective Construction Managers will support the identified strategies as laid out by the individual Project teams based on the needs and requirements of the specific EPC contract.
- Field Supervision
 - Field Supervision of the Construction Trades will be provided by the EPC Contractor. The respective OPG Construction Manager will be providing an oversight role to ensure the Contractor(s) are managing their resources per the Contractors' Policies and Procedures and in alignment with the Contract.

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- Construction Islanding Methods/Strategy
 - The Construction Manager will support the methods and strategies that are identified by the Islanding Project and the Ops and Maintenance organization. This will include Strategies for the following:
 1. Work Protection
 2. Safety monitoring and Incident Reporting
 3. Space Allocation
 4. Bulk Material Issuance
 5. Calibration of Tools and Equipment
- Site Transportation
 - Construction Manager will support the Project Team in reviewing the integrated logistics plan.
- Claims Management
 - The Construction Manager will support the Project Teams using the Change Management process identified as part of each contract.
- Quality Assurance
 - Quality Assurance will be reviewed and supported as part of each Project Oversight Plan (P.O.P).

4.0 PROGRAM SITE IMPLEMENTATION AND CONSTRUCTION DESCRIPTION

- The OPG Construction Management Team will be involved in all aspects of the Darlington Nuclear Refurbishment Project. The Overall Project is made up of several major projects identified in Section 1.0. The Construction Manager provides input to each Project through involvement in:

4.1 Walkdowns

- Walking down the work sites and providing feedback regarding accessibility, space, special requirements for contractors and construction activities

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4.2 Project Meetings

- Provide input to Project teams regarding all aspects of Construction trades E.g., Quality, Cost, Schedule and Safety

4.3 Benchmarking

- Perform Benchmarking Studies and input Self Assessments to Document the findings with respect to construction, field execution and EPC vendor oversight.

4.4 Lessons Learned

- Identifying key OPEX findings from other large scale Refurbishments and Projects for use in development of respective POP's.

4.5 COMS Meetings

- Participating in COMS meetings

5.0 PROGRAM SITE IMPLEMENTATION AND CONSTRUCTION MANAGEMENT APPROACH

5.1 Pre-Refurbishment Work Scope

The Pre Refurbishment work scope is defined as Campus Plan and Field Pre-Reqs. The Oversight of this work scope is being provided by Projects and Modifications Group.

5.2 Construction Strategy

Working with the respective OPG's Project Team and in conjunction with the Contracted Vendors, the Construction Manager will:

- Promote Safety as the Core Value of the Project
- Provide oversight to ensure that construction management processes are implemented effectively and efficiently on the project as per the POP
- Promote a "partnering" environment and relationship with our EPC contractors.

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- Provide appropriate oversight and guidance to help ensure the project objectives and approved scopes of work are delivered within budget and schedule as may be defined in the POP.
- Provide appropriate oversight and guidance to help ensure that the project is properly “closed out” within the required time frame as may be required in the POP.
- When necessary will stop work to protect the health and safety of workers, the public or value of the asset.

5.3 Site Implementation and Construction Management Processes

5.3.1 Program Site Implementation and Construction Management Processes

Construction Management Process is previously defined above. The POP requirements are detailed in OPG governance N-STD-AS-0030. Implementation will be detailed based on the level of oversight required by the plan. Under N-STD-AS-0028, the Project Manager is responsible to develop and implement the POP.

5.4 Site Facilities and Services

Due to the increased labour resources required to support the Refurbishment the capacity of many facilities will have to be increased or entirely new facilities constructed. Some of the work to increase this capability will be managed through the Campus Plan under the OPG Projects & modifications Group.

- New Parking areas
- Refurbishment Project Office and Lunchroom
- Refurbishment Annex Building
- etc

Others will be managed by the Shut Down and Layup Project

- Service water
- Service Air
- Breathing air
- etc

and also by OPG Refurb Maintenance.

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- Decontam Facility
- Lay down areas
- etc

5.5 Site Access and Security

Site Access and Security is incorporated in the plan for the Refurbishment Project Office situated at the west end of the Station as part of the Campus Plan.

5.6 Program Site Implementation and Construction Management Interfaces With Projects

OPG will provide Project specific oversight as per governance requirements. The Construction Managers will have input to the oversight plan for the respective projects. Oversight, and hence construction interface will then be guided by the requirements of the POP (project oversight plan). Per governance the respective Project Manager will develop, implement and monitor the POP.

5.6.1 Alignment

OPG Construction Manager

Primary role:

Reporting to the Project Director while functionally reporting to the respective Project Manager, provide Construction Oversight for the specific project assigned as per the POP.

Vendor Construction Manager

Primary Role

Responsible for meeting the project deliverables including safety, quality, cost and schedule as defined in the respective contract.

5.6.2 Requirements

Through the application of the EPC contracted terms and conditions the vendors are required to complete their construction work safely, meeting quality and workmanship requirements, within budget and on schedule.

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5.7 Roles and Responsibilities

Director of Construction

Construction Director

Primary Role:

Reporting to the Vice President Execution, provide leadership, strategic direction and support to the field execution teams. Ensure that Construction Managers are providing the required oversight (per the POP) of contractors employed on the Darlington Refurbishment project. Provide direction to the Construction Managers on oversight of contractor's with regards to performing work safely, effectively and in a manner consistent with the terms of the respective contract and the requirements as laid out in the POP.

Primary Responsibilities:

Promote Safety as the Core Value of the Project

Report construction related POP findings and recommendations to the Vice President execution.

Stops work to protect the health and safety of workers, the public or value of the asset.

Construction Manager

Primary Responsibilities:

Take the lead and support the respective Project Manager with the development, implementation and monitoring of the construction portions of the POP.

5.7.1 Program Plan and Key Deliverables

The plan is to bring onboard knowledgeable and experienced Construction Managers when requested by the respective Project Directors/Managers to support the development, implementation and monitoring of the POP. Deliverables will be as detailed in the POP which is an iterative live document which changes to meet project risks and performance indicators.

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Appendix A: [Title]

Add supporting appendices if required.