

Ontario Power Generation

OPG Darlington Nuclear Refurbishment Program

Organizational Strategy Study Plan

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Prepared for
Ontario Power Generation

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Synopsis

Faithful+Gould (hereinafter 'F+G') has been requested by Ontario Power Generation (hereinafter 'OPG') to provide support on the development of an organizational model and resource management plan for the proposed Darlington Refurbishment Program in Ontario, Canada.

F+G scope associated with the preparation of this Study Plan includes the following:

- Review initial data/information supplied by OPG (Desktop Review).
- In partnership with OPG, develop a Study Plan incorporating the Desktop Review findings and provide recommendations and propose a way-forward for the remainder of the Study, based on OPG input and requirements, F+G previous experience and Industry Best Practices.
- Issue Study Plan for approval by OPG.

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This document and its contents have been prepared and are intended solely for the client's information and use in relation to OPG Darlington Refurbishment Program – Organizational Strategy Study Plan.

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Project ID: C3202-11							
REV.	DESCRIPTION	ORIGINATOR	REVIEWER	F+G APPROVAL	DATE	CLIENT APPROVAL	DATE
0	Initial Outline Draft	[REDACTED]					
1	Initial Draft for Review				08-30-10		
1b	Draft for Review				09-06-10		
2	Final Issue to OPG				09-07-10		
2a	Final w/OPG comments				09-27-10	G. Rose	09-27-10

Organizational Strategy Study Plan

1 STUDY DEFINITION

1.1 Introduction

1.1.1 Overview

As part of the investment strategy announced by OPG on February 16, 2010 for its nuclear assets in the Durham Region in Ontario, Canada, OPG has proceeded with the definition phase for the mid-life refurbishment of the Darlington Nuclear Generating Station (DNFS) located on the shore of Lake Ontario in the Municipality of Clarington, Ontario, Canada.

The Darlington Refurbishment Program will consist of a number of large and small projects and OPG is in the early stages (Definition Phase – Preliminary Planning) of defining the scope, cost and schedule to refurbish the Darlington facility in order to operate the facility for an additional 30 years.

In support of the Darlington Refurbishment Program, OPG is in the process of developing a Program Organization Model and Resourcing Strategy. This is referred to jointly as the Program Organization Strategy. This will include the preparation of a 'model' project organization and Resource Management Plan from program inception (2010) to program completion (approximately 2024). The organization will be a matrix of the following:

- Owner's project team staff
- Owner staff from other organizations including Central Engineering, Station Operations, Training, etc.
- Multiple contractors.

F+G has been selected by OPG to prepare an initial Study Plan for the development of the Program Organization Strategy.

The initial deliverable is to submit a Study Plan (this document) that incorporates the initial work already done by OPG and outlines the way forward for completing the Program Organization Strategy.

1.1.2 Study Basis

The Basis of the Study centers on gathering information from internal OPG resources in order to develop an understanding of the Program particulars, the existing OPG organizational structure, available resources, resource skill sets/competencies and other factors that may impact any organizational re-structuring, such as labor agreements, market conditions and any OPG constraints/governance.

In addition, the Study will also be based on Benchmarking information gathered from previous similar programs/projects and industry best practices, together with OPG Corporate objectives and OPG Management perspectives.

The resultant aforementioned information will be used to arrive at a new recommended organizational structure for the Program, by means of a gap analysis, and the final Study outputs will result in a comprehensive Report, including Organizational Models, Matrix Charts, Resource Plans, Histograms and the like, as described below in this Study Plan, which will be subsequently rolled-out to all the Stakeholders.

1.2 Study Plan Purpose

The purpose of this Study Plan is to outline the strategy and methodology to be used to complete the development of a proposed Program Organizational Model and Resource Management Plan for the Darlington Nuclear Refurbishment Project, together with roles and responsibilities, recommendations and associated estimated costs and schedule.

The Study Plan will be used to communicate the overall strategy to each of the Team Members and Stakeholders, together with their particular roles and responsibilities. In addition, it will also be the basis for approval to commence to the detailed assessment stage and form the baseline against which performance will be measured.

1.3 Study Charter Overview, Objectives & Deliverables

1.3.1 Study Charter Overview

To develop a clear and consistent Program Organization Strategy (for OPG resources only) for the life of the OPG Darlington Refurbishment Program, that underpins the overall Program Objectives and Project (Program) Charter. This will be done through research based analysis and by facilitating communication among, and develop strategies with Stakeholders, that will ultimately result in a Resource Strategy that will enhance OPG's excellence in conceiving, designing and constructing world-class projects.

1.3.2 Study Objectives

The principle objective of the Study is to develop an OPG organizational model and labour resource strategy for the Darlington Refurbishment Program.

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

- Through using a Stage Gate process, get Steering team and OPG Stakeholder approvals, prior to commencing each stage, in a timely manner.
- Engage and work closely with OPG personnel to determine the Program particulars and current state of the OPG organization.
- Timely and comprehensive assessment and analysis of Industry Best Practices and previous similar projects/programs.
- Engage and work closely with OPG personnel and solicit input into the desired state of the proposed new resource plan.
- Develop and recommend an OPG organizational model and labour resource strategy, together with associated plans and charts, in a comprehensive report.
- Provide status reports to and attend progress meetings with OPG Management on a regular basis.

1.3.3 Study Deliverables

A comprehensive organization and labour strategy report and presentation, including

- A recommended organizational model and chart for the Darlington Refurbishment project,
- A robust roles and responsibility matrix for the project, including the project organization, contractors, and integration with station, Nuclear Engineering, Projects and Modifications, and other nuclear support organizations,
- A staffing plan and profile for each organization, and by project oversight and major work package, showing staffing numbers by project phase,

- A Resource Management Plan for on-ramping/off-ramping Darlington station, or other OPG staff, to the project,
- An Organizational Change Control plan and record for implementation of the Nuclear Refurbishment organization for the Definition phase of the project,
- Identifications of any potential resource issues (shortfalls or risks), considering the contracting strategy, and
- A labour strategy and recommendations for the project.

The Study team will also consider work done on the Corporate Business Transformation Strategy and other initiatives and incorporate the findings into the development of the strategy, where appropriate and integrate results of this team with the Corporate Resourcing Strategy team and identify opportunities for organizational transformation (post-refurbishment).

1.4 Study Scope

The scope of the Study is confined to identifying the OPG resource requirements associated with the Darlington Nuclear Refurbishment Program, for the following periods:

- 2010 through 2011 (for Business Planning purposes)
- 2010 through mid 2014 (through end of Definition Phase)
- 2010 through 2024 (for Planning and Estimating purposes)

The scope also includes the following:

- Provide support for Business Planning purposes.
- Review current organizational models in place at OPG; review current organizational plan and project execution plan for the Darlington Refurbishment Program.
- Review and/or compile industry lessons learned on large mega-projects, including organizational design and resourcing strategies.
- Dovetail resources from other OPG facilities and identifying the availability of these resources.
- Develop a comprehensive report which provides the following, by phase of the program life-cycle:
 - An organizational model and staffing baseline as input into business planning and corporate resource strategy team,
 - A robust roles and responsibilities matrix,
 - A strategy for on-ramping/off-ramping staff to the program,
 - Identifies any potential resource issues (shortfalls and/or risks),
 - Identifies strategies and recommendations with respect to the project organizational model.
 - Identifies labour relations issues and mitigation opportunities or strategies.
- Coordination of team meetings, collection of information and data, in order to prepare presentations and reports.
- Prepare executive level presentations based on the recommendations.

The following does not form part of the Study Scope:

- Development of an organizational strategy for OPG Darlington and Pickering operating facilities both during and after refurbishment. However, there will be co-ordination between the Study Team and these facilities with respect to resourcing the refurbishment program.
- Determining Resource suitability and skills assessment.
- Resolution of associated HR issues.
- Scope development.
- Roll-out to OPG personnel and Training of OPG personnel (F+G will support the development of the Roll-out Plan, together with the Communication and Training Plans).
- Detailed assessment of the impact that the Proposed New Organization will have on existing OPG processes, systems and infrastructure. A high-level assessment will be provided by F+G.

1.5 Study Timing & Priorities

A detailed Level 3 schedule will be developed after the Stage 2 Kick-Off meeting, however based on the Level 2 schedule and the schedule basis provided in Section 5.0 of this Study Plan, the current critical milestones for the Study are as follows:

- Issue Final Study Plan (Stage 1) to OPG – Sept 07, 2010
- OPG Approval (& P.O.) to move to Stage 2 – Sept 13, 2010
- Kick-off Meeting w/Study Team – Sept 22/23, 2010
- Stage 2a: Current State Interview Window – Sept 28, 2010 to Oct 15, 2010
- Stage 2a: Review Current State Report w/OPG – Nov 01/02, 2010
- Stage 2b: Review Desired State Report w/OPG – Nov 01/02, 2010
- OPG Approval to move to Stage 3 – Nov 05, 2010
- Interim Report for Board Review and Strategy Approval – Nov 05, 2010
- Stage 3: Issue Draft Interim Report – Dec 06, 2010
- Stage 3: Complete Review of Draft Interim Report w/Peers – Dec 10, 2010
- Stage 3: Final Draft Report & Presentation to Steering Team by – Dec 31, 2010
- Stage 3: OPG Executive Management Approval by – Jan 14, 2011
- Stage 3: OPG Nuclear Projects Committee Approval by – Jan 21, 2011
- Stage 3: Final OPG Approval – Jan 28, 2011
- OPG Approval to move to Stage 4 – Jan 28, 2011
- Stage 4: Roll-Out Plans complete – Feb 11, 2011
- Study Completion Date – Feb 18, 2011

These key milestones will be updated once the Level 3 schedule has been completed.

It is understood that certain information with respect to OPG resource requirements will be required for OPG Business Planning purposes on an ongoing basis and ultimately before the final study report has been approved. F+G will provide that support through the SPOC and/or Project Manager Coordinator.

1.6 OPG Progress on Study To-Date

Appendix A (Document Register) provides details of all the information provided by OPG as of 08-12-10 and this information has been used in determining the remaining work to be done by the Study Team to complete the Study deliverables.

An initial assessment of the OPG provided information indicates that, in addition to some useful scoping and background information, the majority of the work done to-date, with respect to the organizational strategy, has focused on business planning efforts.

OPG Department managers were asked to provide their initial assessment/estimate of resource requirements for the program life-cycle and although this is a good start, there is still some follow-up work to be done.

Therefore, it is anticipated that a series of workshops will be required to provide information to OPG Department managers, on such things as the goals of the organizational study, industry best practices, rules and guidelines for estimating resources, etc. In addition it is imperative that all the resource estimates are developed using the same basis and critical that all department managers have the same understanding with respect to such things as the scope of the program, contracting strategy, program and project timelines, opportunities for sharing resources, etc.

Based on this initial assessment the following estimate and schedule assumptions have been made:

- 2#, 1 day Workshops will be held with all OPG Department managers.
- F+G will provide one-on-one support to all Department managers during the development of their resource estimates, to provide challenge as well as assistance.
- A set of rules/guidelines will be developed by F+G and OPG Study Team members and circulated to all department managers, to ensure the same basis is used throughout OPG.
- It has been assumed that the final OPG Department manager's estimates of resources will be completed by October 22nd, 2010.

2 STUDY ORGANIZATION, ROLES & RESPONSIBILITIES

2.1 Introduction

The Organizational Strategy Study exercise is going to be a collaborative effort between OPG and F+G and will utilize existing OPG and F+G resources, as well as subject-matter experts, in the development of the deliverables.

The organization has been grouped into the following categories:

- **Steering Team:**
Responsible for providing guidance on the overall strategic direction of the Study, as well as advising on key issues, such as OPG company policy and objectives.
- **Core Team:**
Responsible for the coordination and management of the whole Study, ensuring a successful delivery of the assignment and liaising with other team members, as well as supporting the Extended Team activities.
- **Extended Team:**
Responsible for data gathering and analysis, providing advice and developing the models and plans required for the final Study report.
- **Stakeholders:**
Are the executives, end-users and experts who will not only provide input to the Study, with respect to commercial objectives and company expertise, but who will be the end-users of the Study deliverables.

The tables below identify the Key Personnel within each team together with their roles and responsibilities.

2.2 Steering Team:

Role	Company	Name	Responsibilities
Senior Vice President Nuclear Refurbishment	OPG	Dietmar Reiner	Providing guidance on the overall strategic direction of the Study, as well as advising on key issues, such as OPG company policy and objectives.
Senior Vice President Direct Reports	OPG	Mark Arnone Neil Mitchell Gary Rose Robert Vitalis Kath Hammond Jennifer Noronha	

2.3 Core Team

Role	Company	Name	Responsibilities
Director, Managed Systems Oversight, Nuclear Refurbishment	OPG	Bob Goodman	Responsible for providing detailed direction to the Study Team and direct interface with OPG. Acts as the accountable OPG Executive with direct authority and responsibility for the design of the Organizational Strategy for the Darlington Refurbishment.
SPOC (Single Point of Accountability)	F+G		Overall F+G accountability for the deliverables of the study and will be the main point of interface with OPG. Main duties will include facilitating/expediting benchmark information and interviews, providing input into workshops and sub-studies, overseeing the development of reports and presentations and supporting OPG business planning efforts.
Project Manager Coordinator	F+G		Responsible for the development of the Study Plan, coordinating and driving the whole study, collecting and collating data from the sub-studies, management of and providing input into kick-off meetings, the interview process, questionnaires, requests for information, workshops and recommendation development, managing other Study Team members to the Study Plan and interfaces with OPG personnel, production of all draft reports and presentations and updating as necessary, providing weekly and bi-weekly status reports to OPG (including updating Study schedule and Cost Reports) and attending progress meetings.

2.4 Extended Team

Role	Company	Name	Responsibilities
It is understood that additional OPG personnel may be assigned to the Extended Team and their roles and responsibilities will be communicated to the Study Team at that time.			
OPG Subject Matter Expert & Labor Resource Planner	F+G		Facilitate the assessment of the current OPG organization and capabilities utilizing desktop reviews and interviews. Developing a Level 3 schedule for the Study Plan, setting up the program Resource Plan and integrating with the Program OBS.
Organization & HR Consultant	Atkins		Lead and Facilitate workshops with both the Steering Team and Extended Team to support the identification of risks and challenges and obtain recommendations for solutions and a plan forward. Responsible for the provision of HR Best Practice and the development of the necessary plans to support the roll-out of the Organizational Model and Resourcing Strategy. Also responsible for liaising with OPG HR and providing guidance on how Labor Agreements & Market Conditions will impact the Organizational Resource Plan.

Mega-Project & OPG Consultant	F+G	[REDACTED]	Responsible for the provision of Organizational and Resourcing Best Practices from both the recognized institutions, such as PMI and CII and his wealth of mega-project experience. He will also incorporate the above into the Benchmarking Report and support the development of the Organizational and Resource Plan.
Risk Consultant	F+G	[REDACTED]	Responsible for the identification and registering of risks in the Study and developing and expediting a risk management plan. Maintenance of the risk management process and register. Identification of issues and risks for transfer to Program issues and risk plan.
Project Support Consultant	F+G	[REDACTED]	Support to Desktop Reviews and Preparation of interview questionnaires and request for information templates. Support the development of deliverables with particular responsibility for Organization Models.
Project Coordinator & Deliverable Support	F+G	[REDACTED]	Responsible for the coordination of major program meetings, such as Kick-Off meetings and Workshops. Assisting with the preparation of Reports, Presentations and Executive Management deliverables.
Business Analyst	F+G	[REDACTED]	Support in attending and recording interviews, collecting and collating data from studies/ benchmarking and the development of the Organizational Model graphics.
Business Analyst	F+G	[REDACTED]	Support in attending and recording interviews, collecting and collating data from studies/ benchmarking.
Licensing & Operations Consultant	Atkins	[REDACTED]	Responsible for the review of current licensing, engineering and commissioning organizations and processes. This will include the development of questionnaires and attendance at relevant interviews and the provision of best practice benchmarks and will include findings from reviews into relevant reports.
Licensing & Operations Consultant Support	Local Resource	[REDACTED]	On the advice of OPG Management F+G will engage a local Canadian resource who is familiar with the OPG licensing and operating processes and procedures and who will support Ian Blanch.
Canada Nuclear & Labor Relations Consultant	Local Resource	[REDACTED]	Provide advice on Canadian Nuclear Best Practices and Labor Relations Management for the development of the Organizational Model and Resourcing Plan. Support the discovery efforts, inputting into desktop reviews, interviews and facilitated workshops and assisting in the development of Program Resource Plan.

2.5 Stakeholders

Role	Company	Name	Responsibilities
Director of Human Resources & Employee Safety	OPG	Cathy Treacy	Providing Study input with respect to commercial objectives and company expertise and will be the end-users of the Study deliverables.
VP Nuclear Finance	OPG	Randy Leavitt	Providing Study input with respect to commercial objectives and company expertise and will be the end-users of the Study deliverables.
EVP Nuclear Refurbishment	OPG	Bill Robinson	Providing Study input with respect to commercial objectives and company expertise and will be the end-users of the Study deliverables.
VP Nuclear Engineering & Chief Nuclear Engineer	OPG	Bob Morrison	Providing Study input with respect to commercial objectives and company expertise and will be the end-users of the Study deliverables.
SVP Darlington	OPG	Stu Seedhouse	Providing Study input with respect to commercial objectives and company expertise and will be the end-users of the Study deliverables.

2.6 Other OPG Responsibilities

2.6.1 General Support

It is anticipated that the Study Team will require the following Infrastructure and Personnel Support from OPG:

- Office accommodation within close proximity of the OPG team members, including a confidential/private office or conference room.
- Printing capabilities for reports, presentations and the like.
- OPG network and e-mail access for ease of communication and information transfer.
- Initial heavy attendance by OPG Project Manager or designated representative for:
 - Mobilization into OPG program offices
 - Obtaining relevant/requested documentation
 - Facilitating meetings with Program/Project Team
 - Expediting arrangements of required interviews with relevant Departmental/ Company managers and Company Representatives.
- Continuing assessment status reviews and attendance of Team at progress meetings.
- Administrative Support in working with Study Team to arrange meetings and reserve facilities.

2.6.2 Information/Documentation Required by Study Team

The following information is required by the Study Team at the outset of the Study, however other additional information may be required as the Study progresses, so a Request for Information log and Document Register will be maintained by the Study Team and issued and reviewed on a regular basis.

- Program/Project Charter
- Stakeholder Requirements
- OPG Governance for Refurbishment Program
- Strategies and Execution Plan for the Program and Projects
- Summary Scope of Program by Phase and Individual Project
- Key Milestone and Activity List by Phase and Individual Project
- Overall Detailed Schedule for the Program
- Existing Organization Structure
- Existing Departmental Roles & Responsibilities and Capabilities
- Resource and Skill Set Availability
- Estimated Resources for Program and Projects
- Labor Relations/Society Agreements/Requirements

3 APPROACH AND METHODOLOGY

3.1 Introduction

This section describes the approach and methodology to be used in gathering and compiling the data and information necessary to provide OPG with an Organizational Strategy for the Darlington Nuclear Refurbishment Project, together with associated deliverables such as Organizational Models, Matrix Charts, Resource Plans, Histograms and the like.

3.2 Organization Study Stages

The Study will be carried out in the following 4 Stages with OPG approval being required at the end of each stage prior to progressing into the next stage:

• **Stage 1: Study Plan (this document)**

• **Stage 2:** {
Stage 2a: Discovery Phase – Current State
Stage 2a: Discovery Phase – Desired State
Stage 2c: Support to Business Planning

• **Stage 3: Gap Analysis/Proposed Organization**

• **Stage 4: Roll-Out (Including Mentoring & Training)**

• **Study Complete**

3.3 Stage 1: Study Plan

This Stage comprises the development and approval of this Study Plan document.

Deliverable(s): Study Plan

Methodology:

- 1) Desktop Review of OPG Progressed Data/Information (completed).
- 2) In partnership with OPG, develop a Study Plan incorporating the Desktop Review findings and provide recommendations and a proposed way-forward for the remainder of the Study based on OPG input and requirements, F+G previous experience and Industry Best Practices (this document).
- 3) Approval by Steering Team.

3.4 Stage 2: General

Prior to commencing the Discovery Phase it is proposed that a Workshop is held with the Study Team (Core Team and Extended Team) and Other Stakeholders as deemed necessary to confirm deliverables, roles and responsibilities and timeline.

On completion of the aforementioned workshop a resource-loaded Level 3 schedule will be developed and will be used for resource leveling and progress and performance measurement.

3.5 Stage 2a: Discovery Phase – Current State

This Stage comprises the gathering of information and data with respect to the following:

- Program Scope of Work (including identification of Individual Projects, Program Phases and Activity Lists)
- Program Contracting Strategy
- Program Timeline/Schedule (including Key Milestones)
- Existing OPG Organizational Structure & Culture
- Existing Resources & Resource Availability
- Existing Skill Sets/Competencies
- Existing Labor Agreements/Relations
- Market Conditions
- OPG Constraints/Governance

Deliverable(s): Current State Report

Methodology:

- 1) Review information already provided by OPG (See item 1.6).
- 2) Identify the appropriate resources within OPG departments to be interviewed and/or approached with questionnaires and/or requests for information.
- 3) Develop Questionnaires and issue.
- 4) Develop a Request for Information template and issue.
- 5) Set-up Interviews with OPG personnel identified in 2) above.
- 6) The interviews, questionnaires and requests for information will be directed to, but not limited to, the following organizations/departments:

Organization	Departments	Organization	Departments	
Senior Vice President	SVP Office	Quality Management	All	
	EA/Licensing			
	Public Affairs		Operations & Maintenance	Management
	Finance			Fuel Handling
Planning & Controls	All		Operations	
			Maintenance	
Supply Chain	All		Programs	
			Commissioning	
Engineering	All	Infrastructure	All	
Nuclear Safety	All	Refurbishment Execution	All	

- 7) Review all information provided and develop a Current State report.
- 8) Review Current State report with OPG.

3.6 Stage 2b: Discovery Phase – Desired State

This Stage will be done in parallel with Stage 2a and comprises the development of a 'desired state' organization based on the following:

- OPG Corporate Objectives
- OPG Management Perspectives
- Benchmarking Inputs – Previous Experience with mega-projects/programs
- Benchmarking Inputs – Industry Best Practices

Deliverable(s): Desired State Report

Methodology:

- 1) Identification and Selection of Projects/Programs representative of scale & complexity for review of organization & resourcing strategies employed.
- 2) Review Projects/Programs and summarize findings.
- 3) Assessment and Analyzes of Industry Best Practices from, but not limited to:
 - Project Management Institute (PMI)
 - Construction Industry Institute (CII)
 - AACE International
 - Independent Project Analysis (IPA)
- 4) Summarize Best Practice findings.
- 5) Identify the appropriate OPG resources to be interviewed/approached regarding OPG Management perspectives on resource requirements (ongoing).
- 6) Convene a series of workshops (2# assumed) with OPG Department manager's to provide information and guidance on developing resource plans.
- 7) Develop rules/guidelines for OPG Department manager's to follow when developing resource plans (ongoing).
- 8) Follow-up one-on-one discussions with OPG Department manager's during the development of their resource estimates, to provide challenge as well as assistance.
- 9) Review all information provided and develop a Desired State report.

3.7 Stage 2c: Support to Business Planning

It is anticipated that from time to time OPG will require input from the Study Team with respect to Business Planning, such as, but not limited to:

- Reviewing Departmental resource requirements and challenging as necessary.
- Providing guidance on resource planning.
- Attending clarification meetings with OPG Management.

3.8 Stage 3: Gap Analysis/Proposed Organization

This Stage will comprise comparing the Current State with the Desired State and identifying the Gaps and making recommendations regarding a Proposed Organization, which may or may not be the same as the Desired State.

Deliverable(s):

- Gap Analysis Report
- Proposed Organization & Resourcing Strategy
- Organization Model
- Matrix Chart (RASCI)
- Responsibility & Authority Statements
- Staff/Labor Resource Management Plan
- Primavera Schedule and Resource Plan (including Histograms)
- Risk Identification & Mitigation Plans
- Recommendations and Reports encompassing all of the above (Draft and Final)

Methodology:

- 1) Summarize and Compare Current State and Desired State reports as required and identify Gaps.
- 2) Identification and assessment of Risks and Impacts arising from Gaps.
- 3) Develop a Proposed Organizational & Resourcing Strategy based on the output of the Gap analysis and risk/impact assessments.
- 4) Develop an Organizational Model using a layered hierarchal chart.
- 5) Develop a Matrix Chart, using RACSI charting and analysis and including departmental roles and responsibilities.
- 6) Develop Responsibility and Authority Statements based on aforementioned information.
- 7) Develop Staff/Labor Resource Management Plan, including resource leveling and on/off ramping.
- 8) Develop a Primavera P6 Resource Loaded schedule which will reflect the agreed Organization Breakdown Structure and the Program schedule, with outputs that include Organizational Sub-Schedules, Departmental Resource Levels and Resource Histograms for each Department.
- 9) Develop Risk Identification & Mitigation Plans, using data from the ongoing risk assessments of the Study.
- 10) Prepare and issue a DRAFT Interim Report and review with Peers.
- 11) Update and issue Final DRAFT Report to and prepare Presentation for the Steering Team.
- 12) Update, prepare and issue Final Report and Presentation for Executive Management Approval.
- 13) Update, prepare and issue Final Report and Presentation for Nuclear Projects Committee Approval.
- 14) Prepare and issue Final Report.

3.9 Stage 4: Roll-Out

This final Stage comprises the development of a number of Plans that will facilitate the Roll-Out of the final Study deliverables and ensure:

- There is smooth and seamless transition into the new Program organization.
- There are clear, unambiguous and regular communications throughout OPG.
- That robust Training and Mentoring Plans are implemented.
- Synergy with the overall Darlington Refurbishment Communications Plan.

Deliverable(s):

- Roll-Out Plan
- Communications Plan
- Training Plan
- Mentoring Plan

Methodology:

- 1) It is envisioned that F+G and OPG will have to work very closely in the development of the above deliverables and the methodology will have to be developed together, therefore the following is provided as illustration only of areas to be considered.
- 2) Liaise with OPG Corporate and ensure alignment of overall goals and objectives.
- 3) Develop a Roll-Out Plan that describes the roll-out philosophy and identifies the following:
 - Goals and objectives
 - Roll-Out Team structure, roles and responsibilities
 - Roll-Out audience
 - Roll-Out schedule
- 4) Develop a Communications Plan that is aligned with the overall Darlington Refurbishment Communications Plan and includes, but is not limited to:
 - Goals and objectives
 - Communication schedule and vehicles
 - Roles and Responsibilities
- 5) Develop a Training Plan that includes, but is not limited to the following:
 - Goals and objectives
 - A transition plan for each department
 - New training requirements
 - Internal and external training requirements
- 6) Develop a Mentoring Plan that describes the mentoring philosophy with respect to the following:
 - Identifying personnel
 - Career planning
 - Mentoring techniques

3.10 Approvals Process

All of the Faithful+Gould process Stage Gates and Report deliverables will be subject to OPG approval and review, prior to moving into the next Stage or formally issuing any report/documentation for Senior Management/Stakeholder review.

The current critical milestones for OPG Approvals and Reviews are as follows:

- OPG Approval (& P.O.) to move to Stage 2 – Sept 13, 2010
- Stage 2a: Review Current State Report w/OPG –Nov 01/02, 2010
- Stage 2b: Review Desired State Report w/OPG – Nov 01/02, 2010
- OPG Approval to move to Stage 3 –Nov 05, 2010
- Stage 3: Final Draft Report, OPG Steering Team Approval – Dec 31, 2010
- Stage 3: Final Report, OPG Executive Management Approval – Jan 14, 2011
- Stage 3: Final Report, OPG Nuclear Projects Committee Approval – Jan 21, 2011
- Stage 3: Final OPG Approval – Jan 28, 2011
- OPG Approval to move to Stage 4 – Jan 28, 2011

4 Estimated Cost/Budget

4.1 Introduction

The cost of developing this Study Plan is covered by OPG Purchase Order Number 00197022.

It is anticipated that the remaining activities to complete the Organizational Strategy will be reimbursed at the rates submitted by F+G in response to the clarification meetings on Tuesday July 13th, 2010 and Monday July 19th, 2010 and a separate Purchase Order will be issued by OPG after approval of the Study Plan.

The estimated cost below is for F+G personnel only and will become the F+G Budget for this exercise and will be the basis of F+G bi-weekly cost updates.

4.2 Estimated Cost

Refer to **Appendix B** for the Estimated Cost for F+G Resources for the Organizational Strategy Study.

4.3 Estimate Basis

The above estimate is based on the following assumptions, exclusions, qualifications and limitations:

- It has been assumed that the Study Plan will be approved and approval to proceed to Stage 2 will be given by OPG by Sept 13, 2010.
- The estimate has been based on the schedule and schedule basis provided in Section 5 below.
- An allowance of 40 hours for the SPOC and 40 hours for the Project Manager Coordinator has been included for supporting OPG Business Planning activities.
- Living Expenses for the F+G SPOC and F+G Project Manager Coordinator has been based on the flat daily rate of [REDACTED] with an allowance for monthly air travel.
- Expenses for the F+G SPOC are based on the assumption that the expenses will be shared with other OPG projects.
- Per the outcome of the RFP clarification meetings on July 13, 2010 and July 19, 2010, it has been assumed that travel for consultants/subject-matter experts will be restricted to visits only and there will be emphasis on remote support for delivery production.
- Excludes the lump sum associated with the development of this Study Report.
- Excludes OPG costs.
- All costs are in Canadian dollars.
- Excludes Harmonized Sales Tax (HST).
- All rates are valid through to the completion of the Study.

5 SCHEDULE/TIMELINE

5.1 Introduction

A Level 2 schedule has been developed and includes the required activities and schedule logic in sufficient detail to establish a critical path.

A Level 3 schedule will be developed in conjunction with OPG after the Stage 2 Kick-Off meeting and will accommodate or show the following:

- Activities developed at a level that will facilitate the full use of critical path method (CPM) techniques to establish or confirm the schedule duration.
- The start and finish dates for each grouping of deliverables confirmed within each stage of the Study.
- Agreed review cycles for each deliverable.
- The planned sequence to perform the work.
- Work by responsibility and interfaces between key work-groups.
- OPG resources
- Progress and Performance measurement.

It should be noted that on completion of the Level 3 schedule, any major deviations from the Level 2 schedule and/or impact on the estimated cost will be communicated to OPG in a timely manner.

The schedule below includes F+G resources only and will become the F+G Baseline schedule for this exercise and will be the basis of F+G bi-weekly schedule updates.

5.2 Level 2 Schedule

Refer to **Appendix C** for a Level 2 Schedule for the Organizational Strategy Study.

5.3 Schedule Basis

The above schedule is based on the following assumptions, exclusions, qualifications and limitations:

- It has been assumed that the Study Plan will be approved and approval to proceed to Stage 2 will be given by OPG by Sept 13, 2010.
- It has been assumed that OPG Interview attendees will be available during the specified window namely Sept 28 through October 15, 2010.
- It has been assumed that OPG will be moving offices the week commencing Sept 13, 2010, and that F+G resources can be mobilized and/or orientated that week.
- It has been assumed that OPG approvals to proceed to each Stage will be given in a timely manner and in accordance with the schedule.
- It has been assumed that OPG approval of reports will be given in a timely manner and within durations indicated in the schedule.
- It has been assumed that OPG personnel will be responsible for the final Roll-out of the Study and all necessary Training of OPG personnel (F+G will provide input into the Roll-out, Communication and Training plans).
- The schedule is based on a 5 day/40hr working week with minimal overtime.

6 ISSUES AND RISK MANAGEMENT PLAN

6.1 Introduction

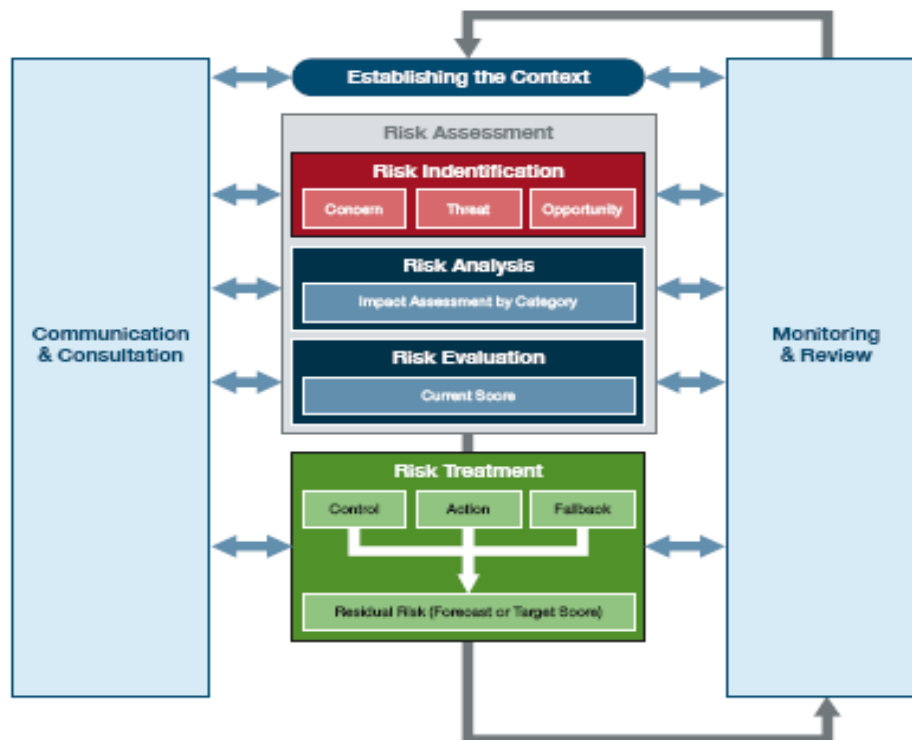
Undertakings such as the Darlington Refurbishment Program generally face significant technical and other challenges during the planning, design, construction, commissioning and operational phases. Systematic identification, analysis, remediation and effective management of the myriad of risks associated with the Program are critical to its successful outcome. In support of the overall Program Risk Assessment and Management Plan, the Study Team will document all risks and issues associated with the Program Organization Strategy Study.

6.2 Study Risk Assessment and Management

Risks, including major assumptions, issues and decisions, will be documented by the Study Team and F+G has incorporated a qualified and experienced Risk manager in the Team who will maintain a register of Issues and Risks. This register will be maintained throughout the Study and will form part of the final deliverables as a Risk Identification & Mitigation Plan.

Due to the confidential nature of the Study it is proposed that a separate risk register and mitigation plan be adopted by the Study Team, rather than use or incorporate the risks into the Program Issues and Risk Register.

The overall Risk Management Process, as viewed by F+G, is highlighted below:



6.3 Initial Risk Assessment

During the development of this Study Plan, some example issues which have been considered in an early assessment, which may carry some potential risk to the successful delivery of the project deliverables include:

- Risk #1 – The schedule includes a short window for interviews with and receipt of information from OPG personnel.
- Risk #2 – Availability of OPG resources during the discovery period.
- Risk #3 – The schedule does not include for any disruption that maybe caused by the relocation of OPG personnel to new office accommodation.
- Risk #4 – Contracting Strategy for the whole Program has still to be finalized – this will directly impact the level of OPG resources required/proposed.
- Risk #5 – Existing high level of OPG compliance and approvals required, may impact the timely decision making required during the Study period and ultimately the execution of the Program.

These will be included in the overall Risk Register for the Study and the associated probabilities of occurrence, impacts and mitigation plans will be documented at that time.

6.4 The ISO 31000:2009 Standard

F+G's risk management service provision to OPG, will focus on not only our risk management procedures, but also on driving Best Practice throughout the organization.

The scope of the ISO Standard's approach to risk management is to enable all strategic, management and operational tasks of an organisation throughout projects, functions and processes to be aligned to a common set of risk management objectives. F+G will consider what we believe to be two critical elements relative to the successful management of OPG's risk, throughout the life of the program:

- Risk management principles, policy, framework and process information
- The risk culture of OPG

F+G will endeavour to ensure these elements are addressed and combined together, in order to develop a living risk management process which will meet OPG's requirements, in line with the principles of the ISO 31000 Standard.

ISO represents the encapsulation of many sound principles and steps for an effective risk management process; however it is not within its scope to outline a practical implementation strategy. Due to our awareness of these limitations of the ISO standard, we will also provide both the system and implementation capabilities required to make the risk management standard's theory a practical reality by tailoring our comprehensive Risk software to suit the needs of OPG.

7 STUDY COMMUNICATIONS PLAN

7.1 Introduction

The success of this Study is dependent on all individuals who participate in the Study being committed to being part of an integrated team, having open and honest discussions and maximizing the use and benefits of the final Study deliverables. The completion of the Study is also not without its risks, so communication is an important element of the Study and emphasis will be placed on:

- Internal Progress Monitoring and Reporting
- Regular Meetings
- Change Control

7.2 General Communication Rules

The following high-level communication rules will be adopted by the Study Team:

- All external facing communications will be routed through the F+G SPOC and the OPG Team Lead.
- All Team communications will be open and all views will be respected/considered.
- Efficient meeting rules will be developed e.g. timing, agenda, meeting minutes, action list, no interruptions, etc.
- All electronic Study information will be housed in a document library.

7.3 Progress Monitoring and Reporting

Throughout the Study period F+G will issue Status Report to ensure all parties are kept informed of progress. The content and timing of the status updates will be agreed with OPG and coordinated so that reports are issued in advance for review prior to meetings.

It is anticipated that Bi-weekly status reports will be issued by F+G and will include the following information:

- Budget Performance
- Schedule Performance
- Activity Progress
- Achievements in the Period
- Goals for Next Period
- Issues & Concerns
- RFI (Request for Information) Status

An example of a Status Report is provided in **Appendix D**.

General weekly updates will also be provided using the attached report template, which is being used to report on the status of all OPG projects that F+G are supporting (**See Appendix E**).

7.4 Regular Meetings

Throughout the Study period F+G will attend regular update meetings with OPG to ensure all parties are kept informed of progress and any concerns or issues can be resolved in a timely manner.

The timing of the status meetings will be agreed with OPG and coordinated so that reports are issued in advance for review prior to meetings. An appropriate meeting agenda will also be developed with OPG.

In addition to meetings with OPG, the Study Team will also be having regular internal meetings (either face-to-face and/or by telephone) to ensure good progress is maintained, issues/concerns are identified and resolved in a timely manner and all team members are informed.

7.5 Change Control Process

F+G and OPG will jointly develop a Change Control Process that will ensure that all changes are identified and processed in a timely manner and will also define, among other things:

- What is a Change
- Who needs to be informed
- How they will be informed
- When they will be informed
- Approvals process

In addition, Changes will also be an agenda item and discussed in the progress meetings together with their financial and schedule impacts.

7.6 Electronic Project Information

It has been assumed that all electronic Study information will be located in an OPG Shared Folder, with the ability to restrict access to appointed OPG and F+G personnel. A document library will be established for all Study information.

7.7 Key Personnel Contact Details

Name	Company	Title	Contact Details	
Gary Rose	OPG	Director, Planning and Controls, Nuclear Refurbishment	OPG Tel. #:	[REDACTED]
			Cell Phone #:	[REDACTED]
			E-Mail Address:	[REDACTED]
Bob Goodman	OPG	Director, Managed Systems Oversight, Nuclear Refurbishment	OPG Tel. #:	[REDACTED]
			Cell Phone #:	[REDACTED]
			E-Mail Address:	[REDACTED]
[REDACTED]	F+G	Single Point of Accountability (SPOC)	OPG Tel. #:	[REDACTED]
			Cell Phone #:	[REDACTED]
			E-Mail Address:	[REDACTED]
[REDACTED]	F+G	Project Manager Coordinator	OPG Tel. #:	[REDACTED]
			Cell Phone #:	[REDACTED]
			E-Mail Address:	[REDACTED]

	F+G	OPG Subject Matter Expert and Labour Resourcing Planner	F+G Tel. #:
			Cell Phone #:
			E-Mail Address:
	Atkins	Organization and HR Consultant	Atkins Tel. #:
			Cell Phone #:
			E-Mail Address:
	F+G	Mega-Project and OPG Consultant	F+G Tel. #:
			Cell Phone #:
			E-Mail Address:
	Atkins	Licensing and Operations Consultant	Atkins Tel. #:
			Cell Phone #:
			E-Mail Address:
	F+G	Risk Consultant	F+G Tel. #:
			Cell Phone #:
			E-Mail Address:

8 CONSTRAINTS, ASSUMPTIONS AND EXCLUSIONS

8.1 Introduction

During the development of this Study Plan a number of constraints, assumptions and exclusions have been identified, which may impact the Study deliverable dates.

8.2 Constraints

- Finalizing the Program Contracting Strategy.
- OPG and F+G Team Availability.
- Labor Relations impacts.
- Demand from existing OPG facilities.

8.3 Assumptions

- The support requested in Section 2.6.1 will be provided by OPG.
- OPG Departmental manager's and Program teams will be readily available.
- OPG reviews and approvals are in accordance with the schedule.
- OPG purchase order and approval to proceed to Stage 2 is given by Sept 13, 2010.
- OPG will be moving offices the week commencing Sept 13, 2010, and that F+G resources can be mobilized and/or orientated that week.
- Benchmarking information is available from OPG as well as F+G projects/programs.
- 2#, 1 day workshops with OPG Managers will be sufficient as part of Stage 2b activities.
- The Program scope of work has been frozen.

8.4 Exclusions

- Development of an organizational strategy for OPG Darlington and Pickering operating facilities both during and after refurbishment. However, there will be co-ordination between the Study Team and these facilities with respect to resourcing the refurbishment program.
- Determining Resource suitability and skills assessment.
- Resolution of associated HR issues.
- Scope development.
- Training of OPG personnel (F+G will have input into the Training Plan).
- External Communications and communicating to wider OPG audience (F+G will have input into the Communications Plan).
- Detailed assessment of the impact that the proposed New Organization will have on existing OPG processes, systems and infrastructure. A high-level assessment will be provided by F+G.
- The Estimate and Schedule excludes any OPG resources.
- Costs associated with the development of this Study Plan.

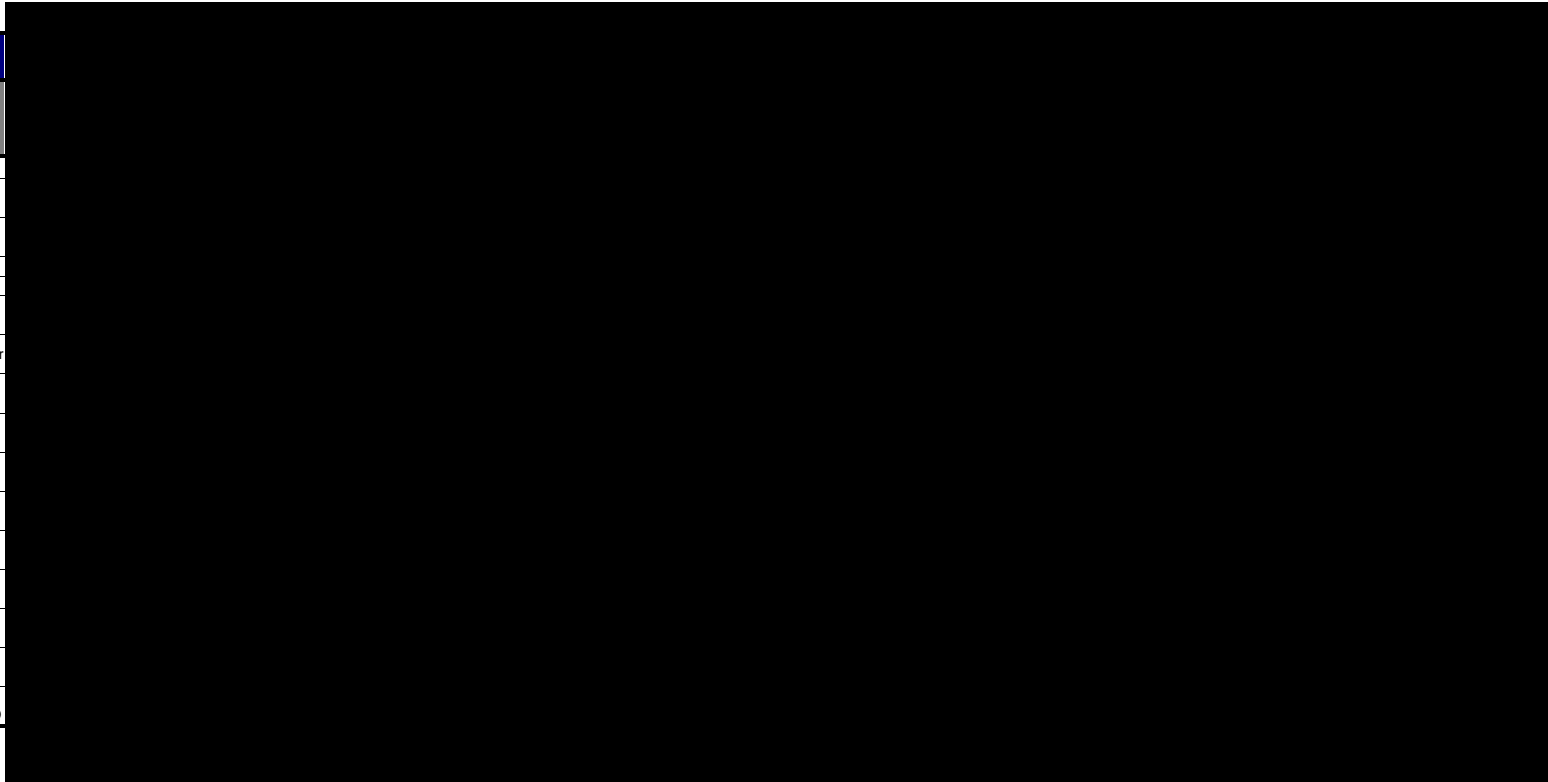
Appendix A

Appendix B

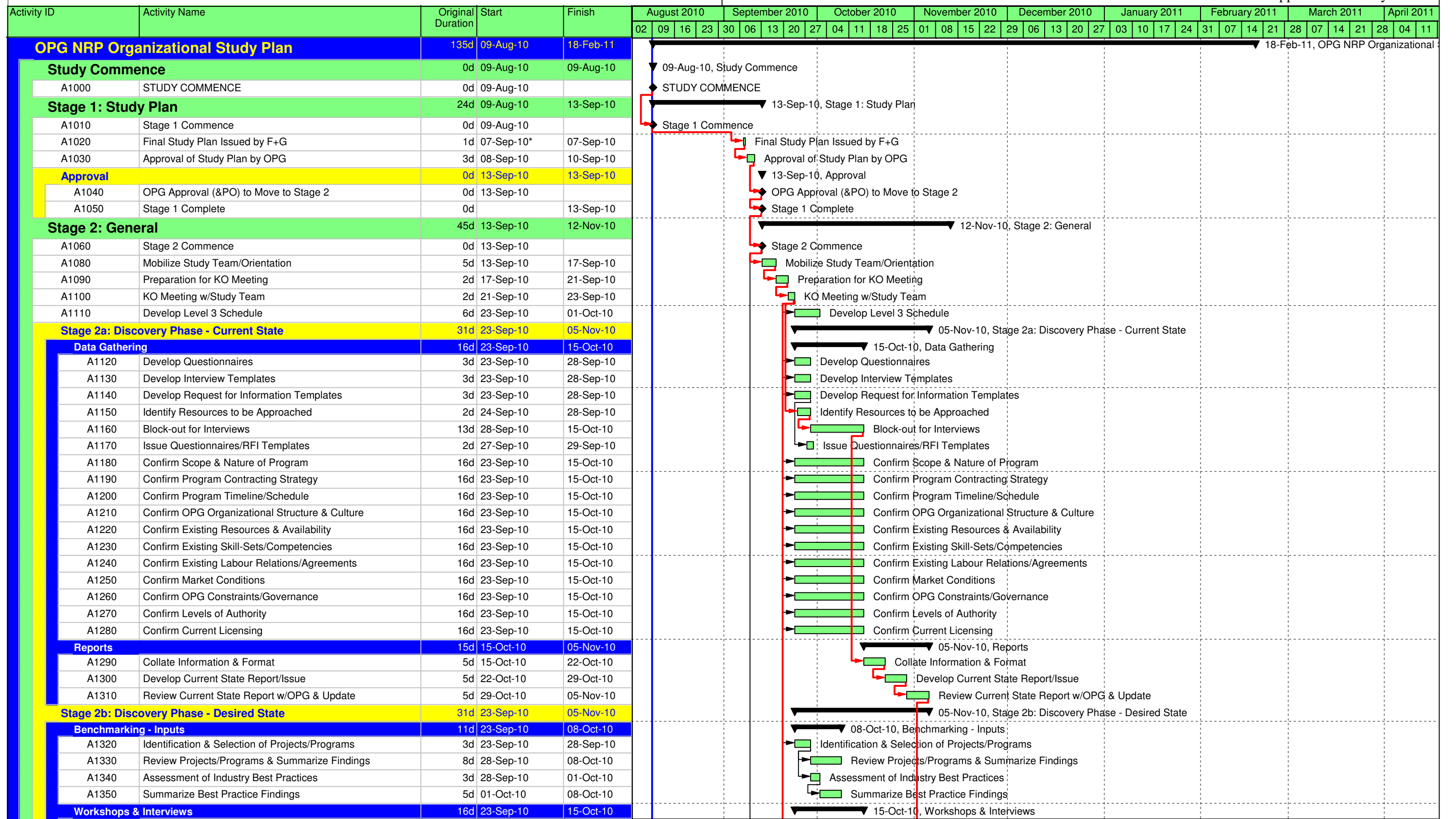
OPG Darlington Nuclear Refurbishment Program

Organizational Strategy Study Plan

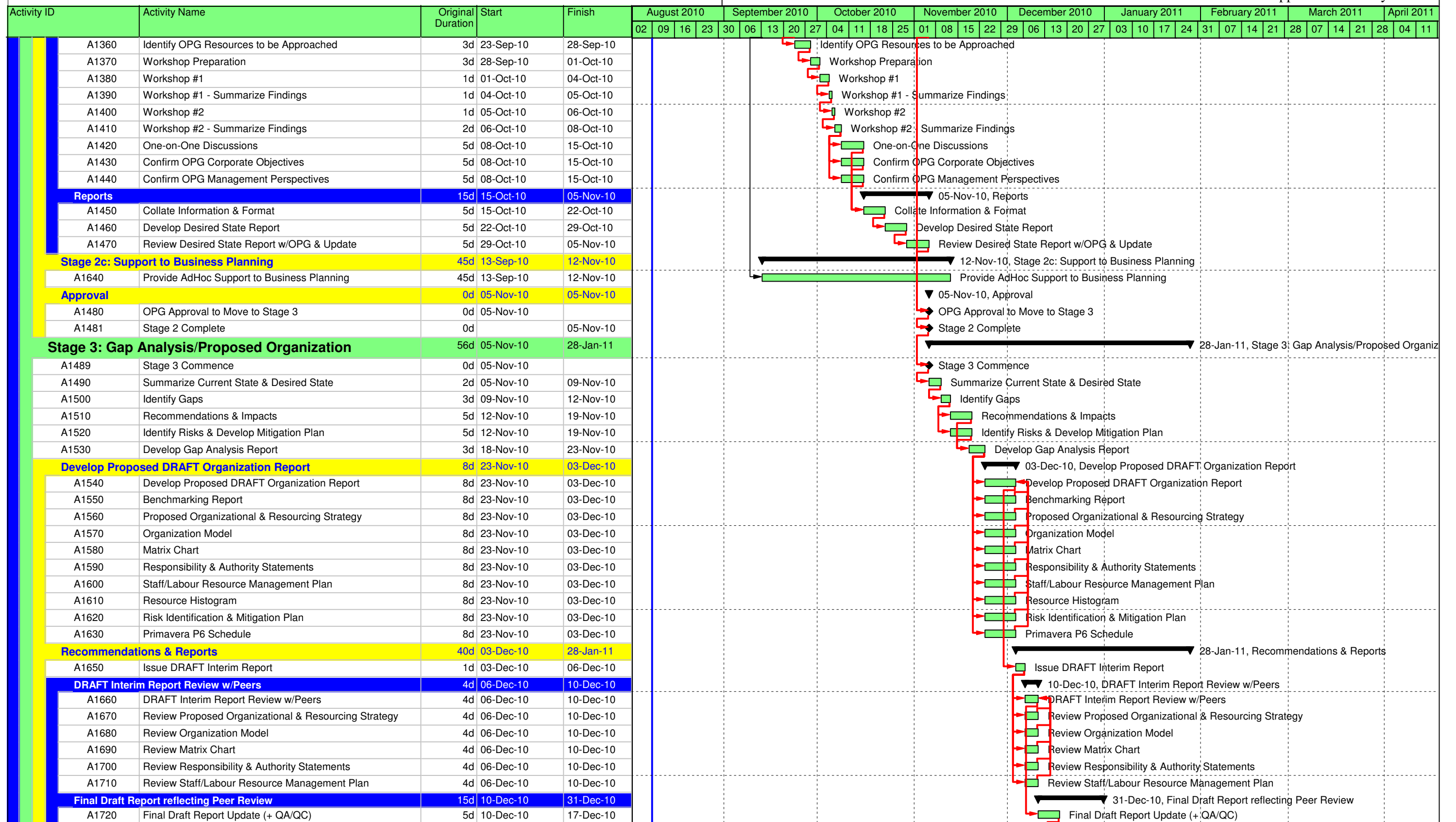
Role
<u>F+G Core Team</u>
SPOC
Project Manager/Coordinator
<u>F+G Extended Team/Consultants</u>
Canada Nuclear & Labor Relations Consultant
OPG Subject Matter Expert & Labor Resource Planner
Organization & HR Consultant
Mega-Projects & OPG Consultant
Licensing & Operations Consultant
Licensing & Operations Consultant (Local Support)
Risk Consultant
Project Support Consultant
Project Coordinator & Deliverable Support
Business Analyst
TO



Appendix C



█ Actual Work
 █ Critical Remaining Work
 Summary
█ Remaining Work
 ◆ Milestone



█ Actual Work
 █ Critical Remaining Work
 Summary
█ Remaining Work
 ◆ Milestone

Appendix D

OPG Darlington Nuclear Refurbishment Program



Organization Strategy Support - F+G Status Report

Status Report #:	001
Week Ending:	08/06/10

Cost Report:

Description	Original Budget		Approved Changes		Current Budget		Actual		Forecast	
	Hours	\$	Hours	\$	Hours	\$	Hours	\$	Hours	\$
SPOC	0	\$0	0	\$0	0	\$0				
Project Manager/Coordinator	0	\$0	0	\$0	0	\$0				
Canada Nuclear & Resource Consultant	0	\$0	0	\$0	0	\$0				
OPG Subject Matter Expert & Labor Resource Planner	0	\$0	0	\$0	0	\$0				
Organization & HR Consultant	0	\$0	0	\$0	0	\$0				
Mega-Project & OPG Consultant	0	\$0	0	\$0	0	\$0				
Licensing & Operations Consultant	0	\$0	0	\$0	0	\$0				
Licensing & Operations Consultant (Local Support)	0	\$0	0	\$0	0	\$0				
Risk Consultant	0	\$0	0	\$0	0	\$0				
Project Support Consultant	0	\$0	0	\$0	0	\$0				
Project Coordinator & Deliverable Support	0	\$0	0	\$0	0	\$0				
Business Analyst	0	\$0	0	\$0	0	\$0				
Expenses	0	\$0	0	\$0	0	\$0				
TOTAL	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0

Notes:	
1.	
2.	
3.	

Schedule:

Task Description	Start Date			Finish Date			Notes:
	Plan	Forecast	Actual	Plan	Forecast	Actual	
1.							
2.							
3.							

Activity Progress:

	Task Description	Period (Hrs)		Cumulative (Hrs)		Notes:
		Plan	Actual	Plan	Actual	
1.						
2.						
3.						

Achievements in Period:

1.	
2.	
3.	
4.	

Goals For Next Period:

1.	
2.	
3.	
4.	

Issues & Concerns:

1.	
2.	
3.	
4.	

RFI Status:

RFI#	Description	Status	Action By
1.		Open	
2.		Open	
3.		Open	
4.		Open	

- = Favorable
- = Neutral
- = Unfavorable

Appendix E

CONSTRUCTIVE EXPERTISE

FGOULD.COM