UNDERTAKING J2.3

Undertaking

To enquire whether the risk management plan is available in template form and produce it, subject to review.

Response

OPG has reviewed the request and attached are three illustrative templates:

1. Risk Management Plan - Template
2. Risk Register - Template
3. Risk Monitoring Form - Template

Risk Management Plan (Template)

<< Project Title >>
<< Project Number >>
<< Date >>
<< Revision Number >>

Prepared By:

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Approved By:

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Concurred By:

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Table of Contents

1. **Project Description**
   << Provide a general description of the project. The team can decide how elaborate / detailed the description should be, but it should be detailed enough to give someone unfamiliar with the project enough information to evaluate the adequacy of the Risk Management Plan in relation to the project. >>

2. **Corporate / Plant / Plant Group Risk Management Policies / Procedure References**
   << If there are Corporate of local Plant / Plant Group risk management policies or procedures they should, as a minimum, be referenced here >>

3. **Project Risk Tolerance Statement**
   << The overall project risk tolerance or risk philosophy as defined by the sponsor and/or owner should be described here >>

4. **Stakeholders / Stakeholders' Risk Tolerance**
   << Individual Stakeholders should be identified and their specific risk tolerances / philosophies may that need to be identified. This is especially true if they differ from the corporate, local or project risk tolerances. This section will address any differences and how they will be dealt with. >>

5. **Project Reference Data**
   << The project documents / data that will be used in carrying out project risk management process will be identified here. This may include the Charter, Scope Statement, WBS & WBS Dictionary, network diagram, critical path, time and cost estimates, historical information, lessons learned form previous projects, reliability maintenance and operating philosophies of the product, constructability operability and maintainability reviews >>

6. **Risk Management Participants, Roles and Responsibilities**
   << The names of all those involved in completing the risk management process will be listed here and their roles and responsibilities documented. This includes team members, stakeholders, experts, project managers external to this project, consultants, contractors, etc. >>

7. **Methodology**

   7.1 Project Areas of Application

   << It should be clear where this plan is applicable. Is it intended to be used to address programming risks (marketing risks, financial (operating) viability risks, Industry (technology) risks) and/or just the project execution risks (logistical risks, Execution strategy risks, material risks, staffing risks, etc.) >>

   << Risk Management applies not only to the work packages (WBSEs) but also to execution strategies (such as the procurement strategy, the contracting strategy, the project execution strategies, etc.) and changes (i.e. scope change, work method changes, sequency changes,) that occur during the execution of the project. The plan will have to identify how these changes will be addressed. Will the same methodology apply or will they be addressed differently >>

7.2 Risk Identification Process

Identification Techniques

<<7.2.1 What Categories will be used to break the risk identification task into manageable pieces. Will a Risk breakdown structure sub categories levels be used?

<< 7.2.2 What gathering technique (or combination of) will be used to identify the risks? Brainstorming? Interviewing? SWOT (Strengths, Weaknesses, Opportunities and Threat analysis)? Delphi Technique? >>

<< 7.2.3 What output will be prepared, buy whom>>

7.3 Risk Qualitative Analysis and Prioritization Process

<<Define the Probability scale that will be used during the project. (Low/Medium/High, 1 to 10, %, Very Low/Low/Moderate/High/Very High, etc.) >>

<<Define the Impact scale that will be used during the project. (Low/Medium/High, 1 to 10, %, Very Low/Low/Moderate/High/Very High, etc.) >>

<<Develop evaluation matrixes to standardize the ratings >>

<< Define the methodology to be used to test assumptions >>

<< Define the methodology to be used to test Data Precision >>

<< Create a Risk Rating Matrix to be used in qualifying the project risks and define how it will be used >>

<< Define the prioritization process and the response to each of the risk ratings assigned to the risks. (Document as non-critical to be monitored as the project progresses, send directly to response planning, send to quantification >>

<< Define the timing of the Qualitative Analysis >>

<< The outputs from the Qualitative Analysis will be defined >>

7.4 Risk Quantitative Analysis and Prioritization Process

<< Identify if Quantitative Risk analysis will be done on the project and if so for what purpose(Sensitivity Analysis to prioritise risks, decision tree analysis to make choices or establish reserves, simulation to predict probability of success or establish realising and achievable project costs or schedule) >>

<< Identify the methodologies to be used >>

<< Identify roles and responsibilities >>

<<Identify the prioritization process>>

<< Identify timing of the Quantitative Risk Analysis exercise >>

<< The outputs from the Quantitative Analysis will be defined >>

7.5 Risk Prioritization and Response Planning Process

<<Methodology >>

<< Risk Owners >>

<< Risk Triggers>>

<<Secondary Risk Management>>

<< Contingency calculations – Response Plan funding >>
<<Outputs >>
<< Reserve funding >>

7.6 Risk Monitoring and Control Methodology

<< Monitoring techniques, frequency of monitoring, method(s) of reporting, forms/records, taking corrective action, follow up on corrective action, contingency administration all need to be defined in the risk management plan >>

8. Ongoing Risk Reviews

<< The Risk Management Plan contains a plan to review itself periodically throughout a project (to ensure it is still valid). Risks which were classified as non-critical need to be reviewed periodically to ensure they have not become critical and need to be addressed in with a response plan. Lessons learned will need to be prepared for non-critical risks that became critical and caught the team off guard. As the probability of a risk is passed, it can be removed from the active monitoring list, the contingency reserve removed from the budget and a lessons learned completed as applicable. >>

9. Risk Management Communications

<< Identify which Rink Management Forms will be used, the active storage, distribution and permanent filing.>>
<< Identify the Risk Management Reports, their content, distribution, frequency and filing.>>
<< Identify Risk Management Meetings, their purpose, attendees, frequency, distribution of minutes.>>

10. Risks in Change Reviews

<< Explain the Methodology of dealing with risks associated with changes. Whenever there is a change in the plan (in scope, schedule, resources, quality, workarounds (recover from unforeseen risk events that have occurred), etc.) there is a requirement for a risk assessment and response plan. In this section, the what, who, when and how of such risk assessments and response planning will be described.>>

11. Risk Management Budget

<< It costs money to execute a Risk Management Plan. Funds are needed to carry out the Risk Management Process, the response plans and the contingency reserves for residual and accepted risks. This section should detail that budgeting exercise>>

12. Risk Management Schedule

<< The Risk Management Process during the planning phase and then throughout the project will need to be scheduled. Risk review meeting can be set based on calendar dates/periods, project events, or incorporated in other processes (i.e. included in the schedule reviews or monthly progress reviews). This section will deal with these types of issues>>

13. Lessons Learned

<< How will lessons learned during the Risk Management Process be captured and recorded. Who will be responsible, the Risk Owner or a designated individual? When or how often will lessons learned reviews be carried out? In what format will the lessons be recorded? >>

Appendix: Forms, Matrixes, Project Specific Risk Management Procedures or Methodologies

<< Templates for the forms and matrixes that will be used in the Risk management Process will be displayed here. If there are any project specific procedures or methodologies then they too would appear in the appendices >> (Risk Register and Risk Monitoring Form)

Risk Register

Project Name:
Project Number:
Name of Project Leader:

A Record of all Risks Identifed on the Project

				Initial Risk Analysis										Residual Risk Score								
Risk Reference #	Risk Event Description	Risk Owner	Risk Drivers/Triggers/Conditions	Probability of Occurance	Financial Impact	Schedule Impact	Corporate Reputation	Regulatory Leagal Impact	Health & Safety Impact	Environmental Impact	Risk Score	Risk Response Tactic (refer to risk response plan dictionary for details)	Residual Risk Description	Probability of Occurance	Financial Impact	Schedule Impact	Corporate Reputation	Regulatory Leagal Impact	Health & Safety Impact	Environmental Impact	Risk Score	Risk Expiry Date Predicted (P) Actual (A)

Risk Response Tactics

OPG confidencial

REDUCE: Mitigating exposure to risk by reducing the probability of occurrence, reducing the consequence of the risk if it occurs, or a combination of the two.

People Investment: Reduce the risk by increasing or improving the human resources available for executing the task. This can include:
- hiring new personnel,
- altering compensation and incentive arrangements,
- training and other staff development activities
- Employing personnel with specialized or developed skill sets (i.e. Journeymen over apprentices).

Equipment Investment: Reducing risk by employing specialized equipment, tools, systems, (i.e. the right tool for the job)

Process Improvement: Reducing risk by improving techniques, mehtods or infrastructure (i.e. finding a less risky means of accomplishing the task).

External Influence: Effort to mitigate risks driven by external parties such as regulators, suppliers or business partners. This includes negotiation, consultation and lobbying.

TRANSFER: Implementing a mechanism or agreement where an outside party takes on all or part of the responsibility for a risk.

Contract: Transferring risk to outside parties by contracting with proven contractors and/or consultants with expertise in executing the work. In addition to using subject matter experts employ contractual provisions, such as limited liability clauses, fixed price contracts and risk sharing agreements to reduce OPG's risk exposure.

Insure: Purchasing insurance against serious financial consequences of risks. Used for low probability, high consequence risks for which insurance is available in the market.

Hedge: Use of financial instruments or contracts to limit the financial consequences of changes in market variables, such as interest rates, exchange rates or commodity prices.

AVOID: Eliminate the risk by finding an alternate method /execution strategy that doesn't pose a risk or which poses a significantly reduced or more controlable risk. Alternately change the scope and/or the objectives for project.

ACCEPT: A decision to accept a risk because:
- additional mitigation is either impossible or not cost effective
- resources are better directed towards mitigating higher priority risks
- probability and/or impact are insignifcant (Risk Level IV)

Risk Monitoring Sheet

Risk Ref No.	Date identified	Original Risk Level (Probability x Impact)	Residual Risk Level (Probability x Impact)	Closeout Date (Insert the date when risk is passed)

Description of the risk event	
Timing (related schedule activity or seasonal period)	
Risk triggers and conditions to watch for	
Consequences of the risk event occurring	
Risk Owner	

Actions to control the risk event (optional)	Target date

Record of activities

- Record any reanalysis of the risk event (probability & impact) - state the resulting risk level
- Record the appearance of any risk trigger or condition
- Record the occurrence of any significant event that could impact on the risk.
- Record any actions taken in monitoring or controlling the risk event
- Record the closeout date and retirement of this risk

Date	Activity