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Agenda

- 1. Introduction To Risk Management
- 2. Collaborative Risk Management Pilot Project
- 3. Success Factors
- 4. Risk Evaluation Process
- 5. Risk Management Tool
- 6. Examples of Risk mitigated during the project
- 7. Lessons Learned
- 8. Conclusion







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Introduction To Risk Management

Risk Management is a key process to any project. It should start at the very early stage of any project and carried through until the project completion. The overall Risk management process provides lots of benefits such as:

- Enhance internal collaboration and discussions
- Increase ability to manage risks proactively
- Gives the ability to make risks more explicit to the project team and decision makers
- Increase confidence in project decision making
- Gives the ability to manage project costs & Schedule more effectively

Failing to have a risk management process in place indicates that organization is welling to leave the project to chance







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Collaborative Risk Management Pilot Project

Introduction to the Pilot Project

The Objective is to establish and implement an effective shared risk management process for Alberta Oil/Energy Industry.

Selected Project: Suncor Fort Hills Ore Preparation Plant Wet Side

Parties:

- Partnership: Fort Hills Energy Limited Partnership by its operator, Suncor Energy Operating Inc. by its authorized agent, Suncor Energy Services Inc.
- Contractor: Canonbie Contracting Limited







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Collaborative Risk Management Pilot Project

Project Leadership

Both senior leadership from the Partnership and Canonbie Contracting limited provided a vision to both teams and agreed to have an early engagement, transparency, trust and commitment to share and manage the risks in the project by all parties.

Governance

- The Shared Risk Register review is part of the Stewardship meetings
- Have a maturity assessment regularly to see how the program is improving
- Understand interfaces / integrated plan
- Integrate consequence/motivations for risk management
- Identify how data is collected (process)
- Define the frequency checks on each level of reporting/data updating at each level







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Success Factors

The Risk Management process stressed various phases of a risk management including: identification, assessment, mitigation, managing and tracking the risks. Each phase is important to provide the best value of the process. The process started at the early stage and continued throughout the life span of the project.

Critical Success Factors

- Having a supporting culture
- Continuously thinking about risks; led by senior management and project CMT
- Frequent review of the risks
- Open communications between parties
- Collaboration, trust and commitment to project as partners
- Understanding by all stakeholders including senior field supervision impacts to Risks







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Success Factors

People/Competency

- Ability to collaborate, trust partnership mentality
- Requirement for senior field supervision to participate in risk reviews
- People that are in stewardship position must be influencers
- Decision-making capability of senior leadership
- Broad, forward, anticipatory (proactive) leadership
- Having the right people on the job







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Risk Evaluation Process

1. Risk Identification:

The risk identification determined the nature and source of risks, and thus provided a list of the anticipated risks in the project. The basic sources used to identify the risks were historical data and experience.

The process of identifying the risks at the early stage and through the life of the project involved different levels from the executive management, project management, Construction management teams and high level field supervision.

The following factors were considered by the project team during the risk identification process:

- How to get to the right risks
- Identification process that works with some standard
- Granularity of risk arenas is assessed to be appropriate or not
- Apply the right resources in a timely fashion







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Risk Evaluation Process

2. Risk Assessment (measuring the Risk):

Using Historical Data was a good start to assess risks. The assessment went through two steps:

i. Qualifying the Risk:

In this step the probability and the severity of each risk was assigned to determine the risk score. The definitions of the severity and probability of the risks were identified in the Shared Risk Register.

ii. Quantifying the Risk:

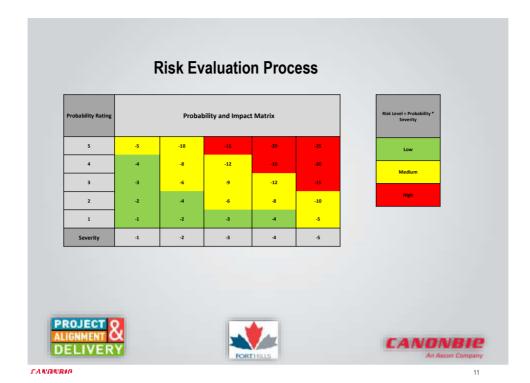
In this step the potential impact to the cost and schedule was identified as applicable







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Risk Evaluation Process

3. Risk Mitigation:

In this phase a mitigation plan was determined to reduce part of the impact of the risk by reducing either likelihood and/or the consequences of the risk. The risk owner and a time line to mitigate the risk were also determined. The risk level was measured after mitigation at the Risk management phase; decisions were made to control the risks in the project scope, in terms of cost & schedule. Contingency plans were discussed as a means of managing risks, and a contingency budget was determined as well. The contingency budget the project team developed was not derived from the Risk Management.

The following factors were considered by the project team during the risk mitigation process:

- Identify the most appropriate owner of risk
- Assign clear accountabilities
- Establish a timeline with look-a heads
- Identify opportunities (or facilitate that process)







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Risk Evaluation Process

4. Monitoring & tracking the risk:

On monthly bases, the status of the mitigation and controlling of the risks are reviewed. Tracking the risks in a formal way kept senior managers informed about performance against anticipated and identified risks and, as importantly any new risks that may be identified.

During the reviews the "no longer important" risks are getting closed while remaining on the list for reference.

A Shared Risk Register was used to identify and track the risks.







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Risk Management Tool

Having an effective risk management tool might be challenging. There are different tools and techniques to manage risks, but any successful tool should at least have:

- A method to proactively focus on identifying risks before they manifest themselves
- Having a mitigation plan for the identified risks
- Have a tracking mechanism to ensure all risks are addressed properly
- Have a mechanism for regular reviews and updates for the risks status

The Risk Registry tool:

 The Risk Registry tool is a powerful tool that manages the risks from the very early stage, throughout the life span of the project. The Risk Registry tool accomplished the following:







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Risk Management Tool

- Provides a process to ensure that risks are identified early
- Ensure that a strategy is developed to address each identified risk
- Ensure that all risks are assessed and rated
- Determine the impacts for the risks (Schedule and cost)
- Ensure that all risks are mitigated
- Provide a mechanism to track risks (both expected and unexpected) during the project execution
- Provide a mechanism to address risks that occur during project execution which were either unexpected or for which the prepared mitigation mechanisms are insufficient
- Close the risks as they become mitigated and are cannot have any further impact on the project.
- Ensure that information about significant risks encountered in the field is shared for future reference (Lessons Learned), and that such information is fed back for future projects.







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Examples of Risks Mitigated During The Project









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Lessons Learned

The Lessons learned address both Positive and negative lessons learned, also any recommendations to improve the risk management process for the future projects.

Specific items where the process worked well:

 The pump box fabrication delay, and the delay in delivery of the structural steel delivery. Both of these items were known months in advance, were on the critical path, and collectively a mitigation plan was developed and executed

Areas to improve:

- The Joint Project Team didn't follow the risk management process diligent through the duration of the project.
- The risk management meetings eventually were not value added due to the lack of structure and forward looking focus on the critical path activities that could negatively impact the outcome of the project







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Conclusion

- Risk analysis was continuous process through the life of the project
- Identifying risks is both difficult and very important
- Information is obtained based on available information, historical data, and experience
- Risk measurement tool was identified and used to prioritized risks
- Careful analysis for the identified risk is necessary
- The risk should be allocated to the party that is best able to control it
- Contingency funds should be managed carefully and based on the items budgeted for
- Sustaining the momentum of the risk management is critical. Leadership and project teams to monitor during the project lifecycle, handovers, and when team changes occurs.
- The collaborative risk management process "pilot" was a success. Lessons learned should be incorporated and the process should be applied to future projects







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