

Capital Consulting

INTERNATIONAL

Business Interruption

The Benefits Of Programme

Monitoring

*Workshop Presentation To The
London Power Forum
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17 November 2010*

Outline Of Presentation

Brief Introduction To CCI

Why Is Time Important?

- Potential Costs In The Event Of A Claim
- What To Look Out For – What Is Analysis?
- Methodology & Solutions
- Case Study
 - Damage To Gas Rig Top Side

What Is Monitoring & How Is It Accomplished?

- Reinstatement Monitoring
- What Is Involved & How Is It Achieved?
- Case Studies:-
 - Natural Gas Plant
 - Power Station - Operational
 - Petrochemical Plant
- Delay In Start Up – Post Claim Analysis & Monitoring
- Case Study:-
 - Power Station - Construction

Summary & Conclusions

CCI Is A Specialist Consultancy Providing:-

- **Insurance Claims Consultancy**
 - Forensic Schedule & Programme Analysis
 - Programme & Project Monitoring
- **Litigation Support**
 - Expert Reports
 - Expert Witness
- **Project Management Services**
 - Project Planning
 - Interim Planning Support
 - Cost Support
- **Work Product Developed Exclusively For Insurers & Reinsurers**

Potential Costs In The Event Of A Claim

Business Interruption Claimed Costs Generated By:-

- Time taken from date of loss occurring until the date of Return To Service, e.g.
 - DOL = 1 January, Return To Commercial Operation 31 March = 90 days
 - Therefore, loss = 90 days x daily BI rate (say, £250,000 per day) = £22.5m

Delay In Start Up Claimed Costs Generated By:-

- Contract overrun following a claimed event, e.g.
 - Contractual project completion = 31 December, Actual Project Completion, including claimed event = 30 June
 - Therefore, loss = 180 days x daily DSU rate (say, £150,000 per day) = £27m
- Does this simple calculation reflect the correct answer?
- Are there any other issues that need to be taken into account?

What To Look Out For – What Is Analysis?

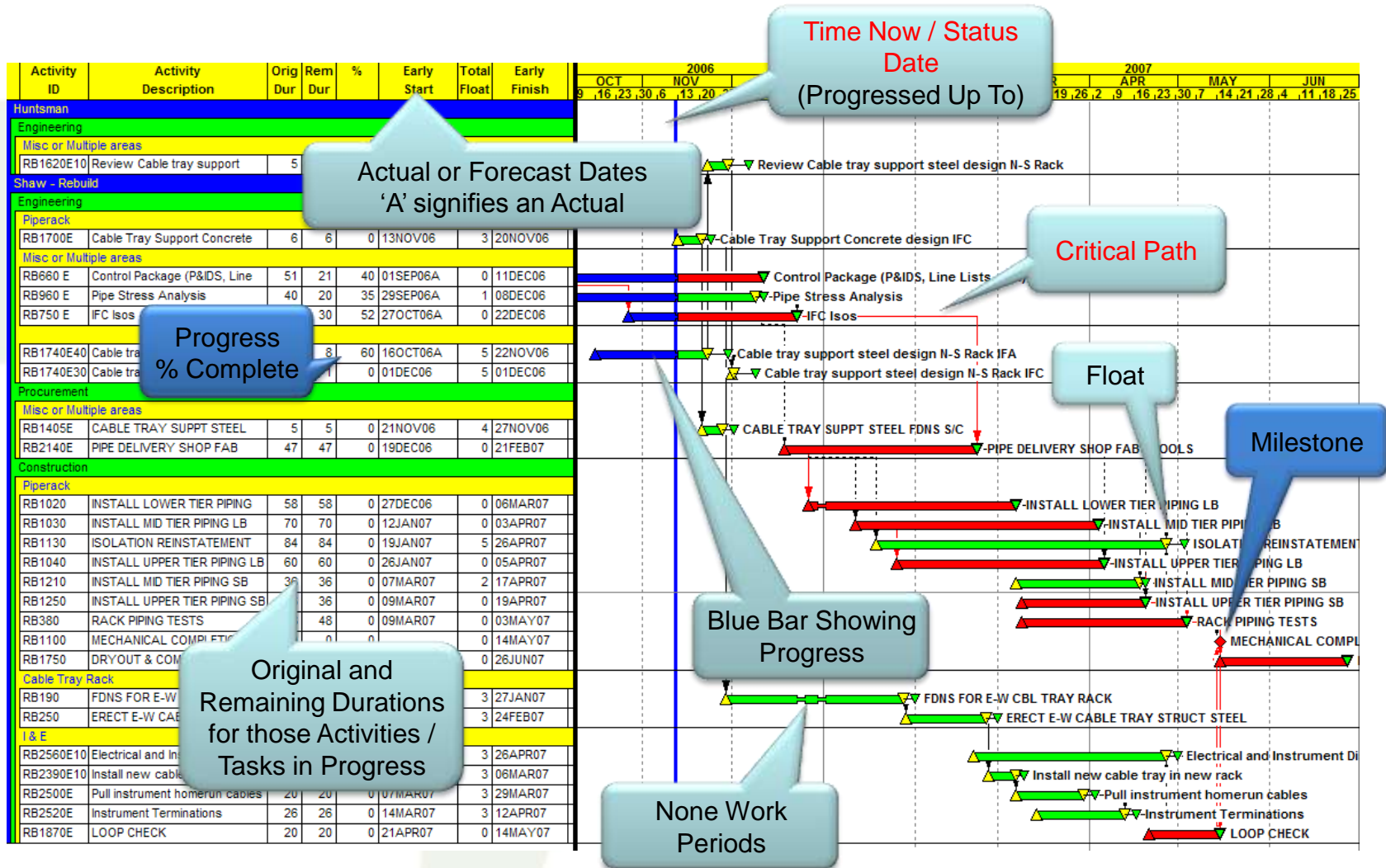
- **Where is the Critical Path?**
- **Is there any other work being carried out?**
- **Assess influence of concurrent turnaround & maintenance works**
- **Take out non-insured events – As-Built-But-For Analysis**
- **Is the reinstatement work being carried out as quickly as possible?**
- **Is there an attempt to mask the Insured's delays with covered reinstatement?**
- **Is the Insured making changes? What are their effect?**
- **Has the contractor performed adequately?**
- **Create stand alone programme if necessary to test the timeline**
- **Share findings with the Insured**

The Claims Analysis Process

– What Needs To Be Done Retrospectively

- Establish information used to manage the project
 - Formal requests for information
 - Meetings with interested parties
- Request electronic copies of pertinent programmes
 - Original baseline / contract programme
 - Progressed programmes produced during the reinstatement
 - Any mitigation or changed strategy programmes
- Relevant Reports
 - Regular progress reports produced by the contractor
 - Any other progress information, e.g. Earned Value Analysis, Meeting Minutes, etc
 - Clerk of Works reports

Primavera Programme - Detail



Case Study

➤ Damage To Gas Rig Topside

Damage To Gas Rig Topside

Background

- Construction of topside at Taiwan yard
- Typhoon damage – crane landed on deck

Claim

- Claim consisted of Physical Damage – approximately US\$2.5m
- Delay – mentioned in passing in reports
- Delay claim – agreed at 1 meeting, no programme analysis undertaken
- Delay agreed at 100 days out of a claimed 122 days based on contractor evidence
- 1 day = US\$100,000
- Total delay claim = US\$10m



Problems With Post-Reinstatement Analysis

- Information may not/will not be available – general reluctance to provide programming information
- Paper –v- Electronic Copy
 - pdf ‘pictures’ may only show what they want you to see
 - The use of analytical software is not possible
 - Checking paper can be very time consuming
- No control for Insurers during the rebuild
- Evaluation of options is limited
- Lengthy overruns – lack of culpability
- Overall claims process normally takes longer
- You will pay more for the claim
- Looks at problems after the event – no early warning system
- What harm is there in getting the correct information, even if it is not eventually used?
- BUT – most claims are dealt with in this fashion & satisfactory results are achieved

Questions Raised

- Breakdown of audience – Loss Adjusters, Underwriters, Claims Managers, Brokers
- Have you ever had a loss you considered was over-claimed?
- Have maintenance/turnaround works been carried out at the same time as repair?
- How has this been managed?
- Have there been other delaying events during the repair period?

Reinstatement Monitoring For Business Interruption

- **BI monitoring consists of monitoring the reinstatement of a facility following an insured event, such as:-**
 - **Explosion at a petrochemical plant**
 - **Turbine failure at a power plant**
 - **Machinery breakdown**
- **Why bother monitoring? Need to correctly assess:-**
 - **Upgrades**
 - **Re-modelling**
 - **Betterment**
 - **Pre-existing problems**
 - **Maintenance shutdowns/Planned outages**
 - **Contractor errors**
 - **Expediting the re-build**
 - **Anything else – what at the experiences of the audience?**
- **With Daily Values often in the \$250-\$500k range, each day saved is important**

Business Interruption Monitoring – What Does It Involve?

- **Review any pre-existing outage plans**
- **Review of contractor's target programme, preferably before re-build work commences**
- **Meeting with Insured & Contractor to fully understand what work will be undertaken**
- **Review of regular progress updates - sometimes daily, possibly with clerk of works**
- **Independent progressing of reinstatement schedule**
- **Determination of cause of any delays**
- **Final report setting out findings**

Reinstatement Monitoring Action List

Initial Information Request

- Request information that is already being or will be produced
- Baseline / Contract programme
- Overall method statement – what will the reinstatement involve?
- Regularly progressed programmes – establish frequency
- Clerk of Works/Daily Reports
- Programme information received in native software format

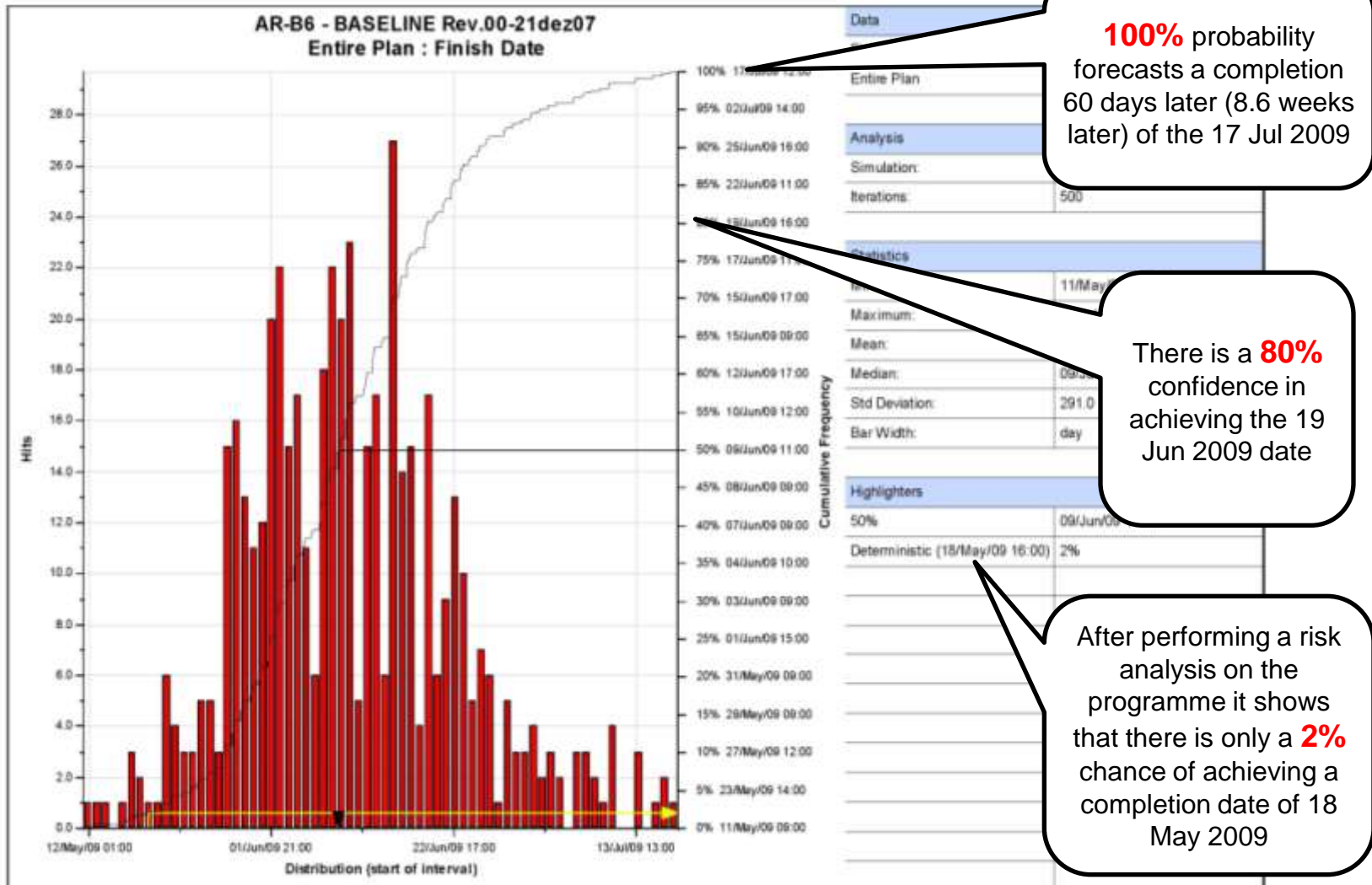
Regular Analysis

- Comparative analysis – use of software
- Generate regular reports
- Interpret results
- Risk Benefit Analysis on probability of completion
- Identification of issues not necessarily covered by the policy, e.g.
 - Upgrades
 - Contractor issues

What Else Can The Information Be Used For?

- **Assessment of mitigation plans**
- **Apportionment of delay**
- **Control of time**
- **Policing of insured**
- **Risk profiling – likelihood of completion success**

Risk Analysis Completion Probability



Monitoring Of Repairs - Summary

- Establish at the commencement of the reinstatement what information will be used and made available to the team
- Have an understanding of what is happening as the project unfolds
- Capture progress across the project, not just the claimed delay
- Use data that is already being produced for the day-to-day project management of the reinstatement
- Avoid reliance on facts being reported by the Insured – find other basis of verification, e.g. independent clerk of works
- Make sure you get available information
- Share findings with the Insured on a periodic basis
- Objective is to establish that the works carried out for the reinstatement of the claimed event were done as quickly as possible and isolate any factors outside of the policy coverage
- Review of any mitigation plans

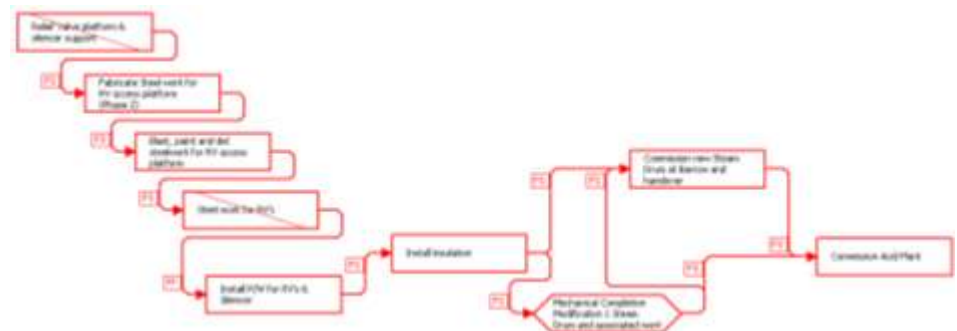
NB: With no monitoring, you are a passenger on a bus being driven by the Insured – with monitoring you get to drive the bus

Case Studies

- **Natural Gas Plant**
- **Power Station - Operational**
- **Petrochemical Plant**

Natural Gas Plant

- Equipment failure during operational phase
- Loss of Production Income
- Enhancement & Betterment carried out to make the plant function correctly
 - Poor original design & build
 - Plant upgraded
 - Time element for upgrades
- “As-Built-But-For” analysis carried out to determine delay caused by specific events
- Achieved by monitoring daily progress updates and determining influences of enhancements



Power Station - Operational

- Major core fault to a Generator Unit
- The first planned forecast completion date for the reinstatement works as stated by the contractor was **15 Jan 08**
- Return to Service (current going into the grid) actually happened on **18 Feb 08**
- Equated to an overall programme delay of **34** calendar days
- Project monitoring of reinstatement works undertaken – using daily reports of Insurers' Clerk of Works
- Programme updated on a daily basis to track what was actually happening
- Determined that contractor was responsible for part of the delay
 - Works carried out incorrectly
 - Procurement of incorrect equipment
 - Longer than anticipated bottom bar installation
- Contractor delay assessed at 17 days



Petrochemical Plant

- **Petrochemical plant, Port Arthur Texas producing ethylene & propylene**
- **Explosion & fire – caused damage to approximately 25,000 linear feet of pipework**
- **Expedited reinstatement programme calculated to take 12 months**
- **Actual reinstatement period = 18 months**
- **Monitoring showed other works being carried out – up to 9,000 ‘other’ activities not connected with the fire**
- **BI peaked at US\$1m per day**
- **Arbitration settled in Insurers’ Favour**



Delay In Start Up – Post Claim Analysis & Monitoring

- **Check list of important points to bear in mind:-**
 - **Was the project already in delay?**
 - **Is information forthcoming?**
 - **What was the criticality of the event?**
 - **Are economic mitigation measures possible?**
 - **Will mitigation be solely for insured delays?**
 - **What happens when the project reaches its pre-incident status? How do you know?**
 - **Are there any superseding events?**

Power Station - Construction

- **Facility is a gas-fired power station in US**
- **Explosion occurred during the initial commissioning of the turbines**
- **Initial DSU claim analysis – should there be a claim?**
- **Need to establish exactly what status the project had reached to understand what works were left to complete**
- **Ongoing monitoring carried out to highlight:-**
 - **Current programme is based upon anticipated access dates for vendor inspection**
 - **Risk that further work will be identified after inspections are carried out**
 - **Contingencies that can be deducted from the rebuild schedule or managed for Insurers' benefit**
 - **The work is carried out on an expedited basis**
 - **In the event of another incident occurring, ensure that the associated time can be separated from the current event**
 - **Determine when the rebuild reaches its pre-incident construction status to identify when time-related contractor costs and (if applicable) DSU payments should cease**

Programme Monitoring Summary

- **There are two main approaches in assessing the correct period of reinstatement covered by the policy:-**
 - **Forensic Analysis (no independent monitoring)**
 - Analysis of reinstatement undertaken using information provided following the works being completed
 - Potentially difficult to get correct information in correct format
 - Probable that other issues 'hidden'
 - Potential that overall period is longer & therefore BI is higher
 - **Monitored Approach - Reinstatement Monitoring**
 - Collation of the relevant information as the reinstatement progresses
 - Reports generated throughout the life of the reinstatement
 - Early warnings are sounded
 - A very focused approach
 - Quick and efficient determination of delays
 - Identification of the actual reduction in overrun achieved by any acceleration or mitigation
 - Identification of other delaying factors, not covered by insurance
 - A powerful tool in claims evaluation - You get to drive the bus!

Conclusions

**Time-related claims can be complex and very expensive
They occur across all types of projects & industries, e.g.**

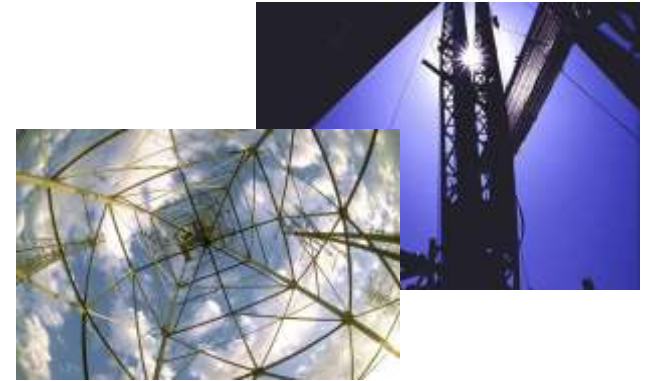
- Construction & Engineering
- Petrochemical
- Energy
- Oil & Gas – both Onshore & Offshore

Need to be managed as closely as PD losses, if not more so

Analysis can be carried out at any stage, but results are dependent on information available

Consider monitoring at an early stage

Never forget, Time IS Money – can you afford not to look after it?



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