Applying CAST to Human Error Related Manufacturing Mishaps

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Enhancing Mishap Analysis with Multi-Incident CAST

CAST Indicates Deeper Systems Issues

Five CAST studies completed across three sites found six common causal factors:

- **Site #1**
  - Incident A
  - Multiple Sources of Instruction
  - Overreliance on Memory
  - LOTO Underemphasized
  - Responsibilities/Expectations Inadequately Defined

- **Site #2**
  - Incident B
  - Multiple Sources of Instruction
  - LOTO Underemphasized
  - Uncoordinated Communication

- **Site #2**
  - Incident C
  - Lack of LOTO Understanding & Feedback
  - LOTO Underemphasized
  - Responsibilities/Expectations Inadequately Defined

- **Site #2**
  - Incident D
  - Lack of LOTO Understanding & Feedback
  - Multiple Sources of Instruction
  - Overreliance on Memory
  - LOTO Underemphasized
  - Uncoordinated Communication
  - Responsibilities/Expectations Inadequately Defined

- **Site #3**
  - Incident E
  - Overreliance on Memory
  - Uncoordinated Communication
  - Responsibilities/Expectations Inadequately Defined
Site #2 Multi-Incident Control Structure Model
Site #2 Multi-Incident Control Structure Model

Results raised new insights toward corrective actions.
Enhancing Mishap Analysis with Multi-Incident CAST

• Control Structure Models being created for other processes that have had mishaps attributed to human error
• Replicating technique across two sites, plans to expand to Enterprise
• CAST supports leadership commitment to Just Culture and Safety Management System
• CAST enables our Company to look upstream and create targeted corrective actions

Government Customer Comments:

“Detailed analysis that must have provided many ‘aha and are you kidding me?!’ moments”

“This control structure model is great systems engineering, and doing this work to get the process right is a big deal”
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