



<b>1. HCA TEAM AND SUPPORT</b>	
<input type="checkbox"/>	The HCA Team included a skilled BlueDragon HCA trained facilitator.
<input type="checkbox"/>	The HCA Team brought in SMEs as needed to develop Defenses and Lines of Inquiry (LOIs).
<input type="checkbox"/>	The HCA Team briefed the management team on the methodology and gained the support of the management team, including access to working spaces to hold facilitated causal analysis sessions and team meetings.
<input type="checkbox"/>	The HCA Team had access to affected organizations, SMEs and applicable management, so that they could conduct facilitated causal analysis (and not simply individual interviews).

<b>2. DATA GATHERING / ANALYSIS AND DEVELOPMENT OF LINES OF INQUIRY</b>	
<input type="checkbox"/>	Available evidence was collected, initial witness statements were taken and brought to a fact-finding session, to be incorporated into the HCA framework.
<input type="checkbox"/>	The fact-finding meeting used the HCA framework to establish the timeline and identify the administrative requirements and physical barriers that should have prevented or mitigated the event (so we can perform an Analysis of Defenses).
<input type="checkbox"/>	The Extent of Condition was performed as soon as enough information was available.
<input type="checkbox"/>	A problem statement was created and is appropriate for the event.
<input type="checkbox"/>	Available data was analyzed using data analysis tools (Pareto charts, process maps, etc.), to develop insights and generate LOIs for the causal analysis.
<input type="checkbox"/>	The Corrective Action Program was analyzed using Pareto charts or other applicable methods, to develop insights and additional LOIs for the causal analysis.
<input type="checkbox"/>	At-Risk behaviors and Error Likely Situations were identified (real-time or using surveys) and LOIs developed to analyze those issues.
<input type="checkbox"/>	LOIs were developed to determine the effectiveness of each of identified Defenses (i.e., Analysis of Defenses).
<input type="checkbox"/>	Using the HCA chart, Comparative Timeline Analysis, Change Analysis and Task Analysis were conducted simultaneously to develop LOIs.
<input type="checkbox"/>	LOIs were also developed based on the standard themes on the BlueDragon Framework or from emergent themes through other tools such as Affinity Diagrams.
<input type="checkbox"/>	The LOIs were evidence-based (i.e. the evidence was critically and thoroughly evaluated to develop the best insights that generated better LOIs).



## 2. DATA GATHERING / ANALYSIS AND DEVELOPMENT OF LINES OF INQUIRY

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|--------------------------|---|
| <input type="checkbox"/> | The Lines of Inquiry (LOIs) demonstrated the appropriate level or Rigor to explore the potential causes of the event, commensurate with its significance: <ul style="list-style-type: none"><li>• Low Significance: 6 to 15 LOIs</li><li>• Moderate Significance: 15 to 30 LOIs</li><li>• High Significance: 30+ LOIs</li></ul> |
|--------------------------|---|

## 3. CAUSAL ANALYSIS

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|--------------------------|---|
| <input type="checkbox"/> | The causal analysis was conducted using facilitated sessions with subject matter experts (SMEs) and not through individual interviews (unless privacy was needed).  |
| <input type="checkbox"/> | A representative group from affected organizations were included in facilitated causal analysis sessions (not individual interviews).                               |
| <input type="checkbox"/> | Supervisors and managers from affected organizations were included in the facilitated causal analysis sessions.   |
| <input type="checkbox"/> | Each of the groups that went through the causal analysis had an opportunity to validate the information on the BlueDragon Framework or provide additional insights. |
| <input type="checkbox"/> | A final facilitated causal analysis was held with the senior managers in the organization, to get their insights and complete the validation of the analysis.       |
| <input type="checkbox"/> | The root causes were validated through the senior team and can be shown to have caused not only the event being analyzed, but other events as well.                 |
| <input type="checkbox"/> | The root causes required and Extent of Cause review to be performed to determine the impact of the root causes in other areas.                                      |
| <input type="checkbox"/> | The root causes descriptions were not “cherry picked” from the DOE Cause Tree.  |

## HCA EXIT BRIEFING AND REPORT

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|--------------------------|--|
| <input type="checkbox"/> | The HCA team was able to show on the BlueDragon Framework how the root causes drove a sequence of events that resulted in the event being investigated.                  |
| <input type="checkbox"/> | The HCA team communicated the impact on risk, cost and schedule during the HCA exit briefing in a manner that compelled managers to take appropriate corrective actions. |
| <input type="checkbox"/> | Managers from the affected organizations were in attendance at the HCA exit briefing and supported the HCA team in answering questions from senior management.           |
| <input type="checkbox"/> | Any comments from the senior management during the HCA exit briefing were dispositioned on the BlueDragon Framework.   |
| <input type="checkbox"/> | The final root cause report was prepared using the information on the BlueDragon HCA Framework.  |