Confined Space - Nitrogen Asphyxiation Bowtie Example Insufficient Process Nitrogen Asphyxiation **Energy Isolation and Inherently Safer** Cooler Design (Ease of Safety-Critical Process Safety Risk Bypassing Safety Controls Life Saving Procedures to Access Confined Space Emergency Shutoffs, Alarms and Emergency Ventilation) One or More Fatalities ERP Equipment (Harness, Lift Cage, SCBA, etc.) Confined Space Attendant First Aid and Medical **Absent Confined** Space Code of Practice Exposure to Confined Space Confined Space **Fixed and Personal** Confined Space Entry Confined Space Life Oxygen Deficient Hazard and Risk Inventory and Signage Saving Rule Assessment & Management (Including Change) Post Traumatic Confined Space Stress Disorder Atmosphere Employee Short and Long-Term Disability Company Mental Health Program **Employee Assistance** WCB Insurance Program Nitrogen Hazard Identification Gaps Safety Data Sheet Formal Hazard WHMIS Signage **Worker Orientation** (Failure to Learn) Corrective Action that Builds Capacity to Fail Safely Alarm and Gas Monitoring Data Review PSI and Other Near Miss and Hazard ID Reporting Learning Team (HOP Principles in Action) Competency Deficiency **Competency Program H&S Management** WHMIS and Confined Respiratory Protection (SCBA) **Gas Detection** Legend -Threats -Barriers -Event -Consequences

