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| SCO Selection Tool |

Refer to the SCO Selection Tool guidance document for details on how to perform these steps.

1. List processes that have been designated as high risk based on use of the process risk screening tool, Appendix A.
2. Select a Worst Case Accident Scenario (WCAS) for each of the high risk processes.
3. Select the appropriate consequence category (C – Catastrophic, S – Severe, M – Minor) for the WCAS based on the **SCO Consequence Categories Table.**
4. Use the **Frequency Characteristics** **Tool** to develop a frequency score (11 – 55).
5. Select the frequency category for the WCAS (F – Frequent, I – Infrequent, or R – Rare)
6. Label the appropriate frequency and consequence category for the operation on the **Risk Matrix for Determining an SCO.**
7. The process will be designated an SCO if the process maps to Cell 1, 2, or 3 in the risk matrix.
8. Document the determination using the **SCO Documentation Form** below.

**SCO Selection Documentation Form**

Process Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Bldg./Area:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Business Area: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Review Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Process Description: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Drawings Used: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Attendees: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Describe the Worst Case Accident Scenario: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#### SCO Consequence Categories Table

|  |  |  |
| --- | --- | --- |
| **Category** | **Category Description** | **Selection** |
| **Catastrophic**  **(C)** | C1 - Loss of life (>1 fatality, onsite) |  |
| C2 - Loss of life (1 or more fatalities, offsite) or more than one serious injury (offsite) |  |
| C3 - Permanent or long-term environmental impact |  |
| C4 - Production downtime for more than 1 month |  |
| C5 - Total loss of production facility or property damage in excess of $2.0 million U.S. |  |
| **Severe**  **(S)** | S1 - High potential for loss of life (single fatality, onsite) OR serious injury to six or more persons (onsite) |  |
| S2 - A single serious injury (offsite) or more than one minor injuries (offsite) |  |
| S3 - Some environmental impact but not permanent or long-term |  |
| S4 - Production downtime from 1 week to 1 month |  |
| S5 - Widespread damage to production facility or property damage from $100,000 to $2.0 million U.S. |  |
| **Minor**  **(M)** | M1 - No fatalities anticipated. Potential injuries to personnel (onsite) |  |
| M2 - A single minor injury (offsite) |  |
| M3 - No significant environmental impact |  |
| M4 - Production downtime less than 1 week |  |
| M5 - Minor damage to production facility or property damage < $100,000 U.S. |  |

#### Frequency Characteristics: Use 1-Very low, 2-Low, 3-Moderate, 4-High, 5-Very High

|  |  |
| --- | --- |
| 1. Complex – interactive |  |
| 1. Complex – coupling |  |
| 1. Dependence on automation |  |
| 1. Proximity to low hazard operations |  |
| 1. Process – otherwise low |  |
| 1. Lack of in-depth knowledge |  |
| 1. Human/system interaction |  |
| 1. Unavailability of adequate technical resources   Frequency Categories  Frequent 44 - 55  Infrequent 26 - 43  Rare 11 - 25 |  |
| 1. Personnel turnover |  |
| 1. Production vs. protection |  |
| 1. Human/ human interaction |  |
| **Frequency Score (Total**) |  |
| Frequency Category |  |

## Risk Matrix for Determining an SCO

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Frequency** | | |
|  |  | **Rare**  (11-25)  <1/1,000 years | **Infrequent**  (26-43)  1/1,000 years – 1/100 years | **Frequent**  (44-55)  >1/100 years |
|  | **Catastrophic** | **Cell 4**  **Non-SCO**  **Potential HRO** | **Cell 2**  **SCO** | **Cell 1**  **SCO** |
| **Consequence** | **Severe** | **Cell 7**  Non-SCO/HRO | **Cell 5**  **Non-SCO**  **Potential HRO** | **Cell 3**  **SCO** |
|  | **Minor** | **Cell 9**  Non-SCO/HRO | **Cell 8**  Non-SCO/HRO | **Cell 6**  Non-SCO/HRO |

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| SCO Justification: |  |
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