

Monterey County  
Cal-ARP Risk Ranking Evaluation

1. Total Amount of Chemical on Site: Sum total of all AHM handled at the location.
2. Total Amount of Chemical in a Process: Amount of AHM handled in a single vessel, group of interconnected vessels, or in separate vessels co-located so that they may be involved in a single release incident.
3. Amount released for worst case release scenario. Amount in a single vessel or in connected piping. May be reduced by 55% of the total if located inside a building.
4. Distance to Level of Concern (LOC): Distance to concentration of level of concern reached from worst case release of chemical.
5. Population Impact: Scaled from 1 to 5 based on numbers of individuals potentially impacted by worst case release.
  - 5 = Highest – Residential/Urban impacts > 1 mile
  - 4 = High – Industrial impacts > 1 mile
  - 3 = Moderate – Residential/Urban impacts 0.5 – 1 mile
  - 2 = Moderate – Industrial impacts, 0.5 – 1 mile, residential impacts < 0.5mile
  - 1 = low – Rural or < 0.5 mile industrial impacts, < 0.1 mile residential
6. Sensitive Facilities: Numbers of schools, hospitals, licensed day care or long term health care facilities within worst case release area.
7. Release Potential: Scale from 1 to 5, likelihood of release based on process complexity and elevated temperatures and pressures.
  - 5 = High – Elevated temperatures, pressures, old equipment, no fire suppression
  - 4 = High – Elevated temperatures, pressures, new equipment, no fire suppression
  - 3 = Moderate – Elevated temperatures, pressures, new equipment, fire suppression OR Storage, some transfer, old equipment, no fire suppression
  - 2 = Moderate – Storage, some transfer, new equipment, fire suppression
  - 1 = Low – Storage only, no transfer, fire suppression
8. Alarms/Detectors: Scaled from 1 to 5 based on presence and complexity of automatic control and monitoring systems.
  - 5 = No gas detectors, no equipment/system monitors, no alarms
  - 4 = No gas detectors, equipment/system monitors but no offsite alarms
  - 3 = Continuous gas detection & equipment/system monitors, no offsite alarms
  - 2 = Continuous gas detection & equipment/system monitors, offsite alarms
  - 1 = 24 hour on-site security, continuous gas detection & equipment/system monitors, offsite alarms

**Risk Ranking Calculation:**

$$\text{Risk Score} = (\text{OCA} + 1) * (\text{I} + \text{S}) * \text{R}) + \text{A}$$

**OCA = Worst case release distance to level of concern in miles**

**I = Impacted Population**

**S = Sensitive facilities**

**R = Release Potential**

**A = Alarms and Detectors**