ALTERNATIVE RELEASE SCENARIO FOR TOXIC SUBSTANCES

(Complete this form for each toxic substance above threshold quantity)

Facility Info

Name	County	Date

Topography *(Select one)*

- ☐ Urban *(for terrain with many obstacles in the immediate area, including buildings and trees)*
- ☐ Rural *(for generally flat and unobstructed terrain with no buildings in the immediate area)*

Chemical

Name CAS# - -

Percent weight of chemical *(if in a mixture)* _____ . _____ %

Physical state *(select one)*

- ☐ a. Gas (Unliquefied)
- ☐ b. Liquid
- ☐ c. Gas liquefied by pressure
- ☐ d. Gas liquefied by refrigeration

Scenario Considerations and Selection

Identify all scenarios that are applicable and were considered for the alternative release scenario at this location:

- ☐ a. A transfer hose release because of splits or sudden uncoupling of the hose.
- ☐ b. Process piping releases because of a failure at a flange, joint, weld, valve and valve seal, drain or bleed.
- ☐ c. A process vessel or pump release because of a crack or a failure of a seal, drain, bleed or plug
- ☐ d. A vessel overfill and spill, or over pressurization and vent through a relief valve or rupture disc
- ☐ e. A shipping container being mishandled and thereby breaking or is punctured leading to a spill

Previous Accidental Releases and Investigated Incidents

Describe any previous accidental release and investigated incident at this location that were considered.

Process Hazzard Analysis (PHA)

Describe any scenario(s) identified in the PHA that were considered.

Scenario Selection

Provide a brief written description of the scenario selected for the alternative release that has the greatest off-site impact. If no alternate release scenario will reach an endpoint off-site, then provide a brief written description of the scenario with the most significant on-site impact.

Describe how it was determined that the scenario selected for the alternative release was more likely to occur than the worst-case.

Scenario Description

Release Type ***(select one)***

☐ a. Gas Release
☐ b. Liquid Spill and Vaporization

For a liquid, provide whichever is higher:
Highest daily max. temperature over previous 3 yrs.
Or Process temperature

☐ c. Other

Equipment Involved Descriptions/Definitions ***(as applicable)***

Equipment Name	Equipment ID	Drawing Number	Capacity / Flow	Site Location *(i.e. NW Corner)*

Release Conditions

Describe the upset condition. *(i.e. pipe rupture due to overpressure, hole in tank, etc.)*

How was the release rate determined? List all parameters and/or equations used to determine the release rate. Also include any relevant process conditions. *(i.e. flow rate, pressure, temperature, area etc.)*

Describe in detail any administrative controls if applicable. *(i.e. % max. fill including procedure reference)*

How was the release duration determined? *(include limiting factors)*

Mitigation *(describe any that were considered in determining the release quantity for the alternative release scenario)*

Passive Define any passive mitigation(s). *(i.e. diked area, enclosure, including dimensions, drawing reference, etc.)* Describe the anticipated effect of the passive mitigation. *(i.e. limits the vaporization or release rate)*
Active Define any active mitigation(s). *(i.e. sprinkler system, excess flow valve, scrubber, etc.)* Describe the anticipated effect of the active mitigation. *(fractional reduction)*
Describe how the mitigation is designed to remain functional under the conditions of the release scenario. ☐ Has it been verified that mitigation is designed to remain functional under the conditions of the release scenario.

Meteorological Conditions

Atmospheric Stability Class	*(default = D, unless local data show a higher min. at all times during previous 3 yrs.)*
Wind Speed	*(default = 3 m/s, unless local data show a less stable atmosphere at all times during previous 3 yrs.)*
Ambient Temperature	*(default = 77 degrees F, or highest daily max. during previous 3 yrs.)*
Relative Humidity	*(default = 50%, or average humidity based on local data)*
Provide an explanation if default information was not used: *(i.e. include data source references)*	

Model Used ***(select one or enter another model name in other below)***

☐ EPA's RMP* Comp	
☐ EPA's OCA Guidance Reference - If Checked List Tables or Equations Used	
☐ Aerial locations of Hazardous Atmospheres (ALOHA®)	
☐ Other model (specify)	☐ Does the model appropriately account for gas density?

Potential Off-site Consequence Impact

Quantity Released (lbs.)	Release Rate
Duration of the released	Distance to endpoint (miles)
Residential population affected	Data Source Used to Estimate *(i.e. 2010 Census)*

Public Receptors Affected *(List all schools, hospitals, correctional facilities, recreation areas, commercial, office, or industrial areas, etc.)*

Name	Address	Estimated Occupancy	Emergency Contact

Environmental Receptors Affected (*List all National/State Parks, Forests, or Monuments; Officially Designated Wildlife Sanctuaries/Preserves/Refuges; Federal Wilderness Areas, etc.)*

Data Source Used to Identify Environmental Receptors: (*i.e. USGS Maps)*