**ALTERNATIVE RELEASE scenario for flammable substances**

**Facility Info**

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| Name County Date  |

**Topography *(Select one)***

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| [ ]  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**

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| Name CAS#  - -  |
| **Physical state *(select one)*** |
| [ ]  a. Gas (Unliquefied)[ ]  b. Liquid [ ]  c. Gas liquefied by pressure[ ]  d. Gas liquefied by refrigeration |

**Scenario Considerations and Selection**

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| **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**

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| **Release Type *(select one)***[ ]  a. Vapor Cloud Explosion[ ]  b. Vapor Cloud Fire[ ]  c. Pool Fire[ ]  d. BLEVE[ ]  e. Other For a flammable liquid, provide whichever is higher:      Highest daily max. temperature over previous 3 yrs. Or      Process temperatureFor a flammable mixture, how was heat of combustion assumed? Select one.  [ ]  Based on predominate component [ ]  Based on the constituents of the mixture.  Describe mixture using weight percentages.   |
| **Equipment Involved Descriptions/Definitions *(as applicable, use additional sheets if necessary)*** |
| Equipment Name | Equipment ID | Drawing Number | Capacity / Flow | Site Location *(i.e. NW Corner)* |
|       |       |       |       |       |
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| **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)*

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| **Passive** Define any passive mitigation(s). *(i.e. diked area, including dimensions, drawing reference, etc.)* Describe the anticipated effect of the passive mitigation. *(i.e. limits the vaporization)*  |
| **Active**Define any active mitigation(s). *(i.e. sprinkler system, excess flow valve, flares, 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**

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| 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)***

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| [ ]  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)       |

**Potential Off-site Consequence Impact**

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| 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 |
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| 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)*   |