**WORST case release scenario for flammable substances**

***(Complete this form for each flammable substance above threshold quantity)***

**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 |

**Single Largest Vessel / Pipeline**

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| --- |
| Equipment Name       Equipment ID       Drawing Number |
| Max. Capacity (lbs.)       Location on Site       *(i.e. NW Corner)* |
| Describe In Detail The Administrative Controls *(i.e. % max. fill including procedure reference)* |

**Scenario**

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| Vapor Cloud Explosion *(regulatory default scenario)*  For a flammable liquid, provide whichever is higher:       Highest daily max. temperature over previous 3 yrs.  Or      Process temperature  For 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. |

**Mitigation** *(describe any that were considered in determining the release quantity for the worst case 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)* |
| 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 = F, unless local data show a higher min. at all times during previous 3 yrs.)* |
| Wind Speed       *(default = 1.5 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**

|  |  |  |  |
| --- | --- | --- | --- |
| 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)* | | | |

**Additional Worst-Case Scenarios**

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| * If there are smaller quantities of the substance handled at higher temperatures or pressures in closer proximity to the facility boundary that would result in a greater distance to an endpoint than above, an additional worst-case scenario must be developed. * Additional worst-case scenarios must be developed if different public receptors are affected.   Based on this information, are additional worst-case scenarios required?  Yes  No  If yes, perform and attach. |