

RISK MANAGEMENT PLAN DATA ELEMENTS

1. REGISTRATION

1.1 Source identification

- a. Name
- b. Street
- c. City
- d. County
- e. State
- f. Zip
- g. Latitude
- h. Longitude

1.2 Source Dun and Bradstreet number

- 1.3 a. Name of corporate parent company (if applicable)
- b. Dun and Bradstreet number of corporate parent company (if applicable)

1.4 Owner/operator

- a. Name
- b. Phone
- c. Mailing address

1.5 Name and title of person responsible for part 68 implementation

1.6 Emergency contact

- a. Name
- b. Title
- c. Phone
- d. 24-hour phone

1.7 For each covered process:

- a. 1. Chemical name 2. CAS number 3. Quantity 4. SIC code 5. Program level
- b. 1. Chemical name 2. CAS number 3. Quantity 4. SIC code 5. Program level
- c. 1. Chemical name 2. CAS number 3. Quantity 4. SIC code 5. Program level

1.8 EPA Identifier

1.9 Number of full-time employees

1.10 Covered by

- a. OSHA PSM 1. Yes 2. No
- b. EPCRA section 302 1. Yes 2. No
- c. CAA Title V operating permit 1. Yes 2. No

1.11 Last safety inspection

- Date _____ By _____
- a. _____ b. OSHA
 - c. State OSHA
 - d. EPA
 - e. State EPA
 - f. Fire department
 - g. Other (specify)
 - h. Not applicable

2. TOXICS: WORST CASE (complete at least one)

2.1 Chemical name

2.2 Physical state

a. Gas b. Liquid

2.3 Results based on

a. Reference table b. Modeling

c. Model used _____

2.4 Scenario

a. Explosion c. Toxic gas release
b. Fire d. Liquid spill and vaporization

2.5 Quantity released _____ lbs 2.6 Release rate _____ lbs/min.

2.7 Release duration (if modeled) _____ min.

2.8 Wind speed _____ m/sec 2.9 Stability class _____

2.10 Topography (check one) a. Urban b. Rural

2.11 Distance to endpoint _____ miles

2.12 Residential population within distance (number) _____

2.13 Public receptors (check all that apply)

a. Schools d. Prisons
b. Residences e. Public recreational areas or arenas
c. Hospitals f. Major commercial, office, or industrial areas

2.14 Environmental receptors within distance (check all that apply)

a. National or state parks, forests, or monuments
b. Officially designated wildlife sanctuaries, preserves, or refuges
c. Federal wilderness areas

2.15 Passive mitigation considered (check all that apply)

a. Dikes d. Drains
b. Enclosures e. Sumps
c. Berms f. Other (specify)

3. TOXICS: ALTERNATIVE RELEASES (complete for each toxic)

3.1 Chemical

3.2 Physical state

- a. ___ Gas b. ___ Liquid

3.3 Results based on

- a. ___ Reference table b. ___ Modeling
c. Model used _____

3.4 Scenario (check one)

- a. ___ Transfer hose failure d. ___ Overfilling
b. ___ Pipe leak e. ___ Rupture disk/relief valve
c. ___ Vessel leak f. ___ Excess flow valve failure
g. ___ Other (specify) _____

3.5 Quantity released _____ lbs 3.6 Release rate _____ lbs/min.

3.7 Release duration _____ min.

3.8 Wind speed _____ m/sec 3.9 Stability class _____

3.10 Topography (check one) a. ___ Urban b. ___ Rural

3.11 Distance to endpoint _____ miles

3.12 Residential population within distance (number) _____

3.13 Public receptors (check all that apply)

- a. ___ Schools d. ___ Prisons
b. ___ Residences e. ___ Public recreational areas or arenas
c. ___ Hospitals f. ___ Major commercial, office, or industrial areas

3.14 Environmental receptors within distance (check all that apply)

- a. ___ National or state parks, forests, or monuments
b. ___ Officially designated wildlife sanctuaries, preserves, or refuges
c. ___ Federal wilderness areas

3.15 Passive mitigation considered (check all that apply)

- a. ___ Dikes d. ___ Drains
b. ___ Enclosures e. ___ Sumps
c. ___ Berms f. ___ Other (specify)

3.16 Active mitigation considered (check all that apply)

- a. Sprinkler systems
- b. Deluge system
- c. Water curtain
- d. Neutralization
- e. Excess flow valve
- f. Flares
- g. Scrubbers
- h. Emergency shutdown systems
- i. Other (specify)

4. FLAMMABLES WORST CASE (complete one)

4.1 Chemical

4.2 Results based on (check one)

- a. Reference table b. Modeling
c. Model used _____

4.3 Scenario (check one)

- a. Vapor cloud explosion b. Fireball

4.4 Quantity released _____ lbs

4.5 Endpoint used _____

4.6 Distance to endpoint _____ miles

4.7 Residential population within distance (number) _____

4.8 Public receptors (check all that apply)

- a. Schools
b. Residences
c. Hospitals
d. Prisons
e. Public recreational areas or arenas
f. Major commercial, office, or industrial areas

4.9 Environmental receptors within distance (check all that apply)

- a. National or state parks, forests, or monuments
b. Officially designated wildlife sanctuaries, preserves, or refuges
c. Federal wilderness areas

4.10 Passive mitigation considered (check all that apply)

- a. Dikes
b. Fire walls
c. Blast walls
d. Enclosures
e. Other (specify)

5. FLAMMABLES ALTERNATIVE RELEASES (complete one)

5.1 Chemical

5.2 Results based on (check one)

- a. Reference table
- b. Modeling
- c. Model used _____

5.3 Scenario (check one)

- a. Vapor cloud explosion
- b. Fireball
- c. BLEVE
- d. Pool fire
- e. Jet fire
- f. Vapor cloud fire

5.4 Quantity released _____ lbs

5.5 Endpoint used _____

5.6 Distance to endpoint _____ miles

5.7 Residential population within distance (number) _____

5.8 Public receptors (check all that apply)

- a. Schools
- b. Residences
- c. Hospitals
- d. Prisons
- e. Public recreational areas or arenas
- f. Major commercial, office, or industrial areas

5.9 Environmental receptors within distance (check all that apply)

- a. National or state parks, forests, or monuments
- b. Officially designated wildlife sanctuaries, preserves, or refuges
- c. Federal wilderness areas

5.10 Passive mitigation considered (check all that apply)

- a. Dikes
- b. Fire walls
- c. Blast walls

5.11 Active mitigation considered (check all that apply)

- a. Sprinkler systems
- b. Deluge system
- c. Water curtain
- d. Excess flow valve

6. FIVE-YEAR ACCIDENT HISTORY (complete the following for each release)

6.1 Date _____ 6.2 Time _____

6.3 Release duration _____

6.4 Chemical(s)

6.5 Quantity released (lbs) _____

6.6 Release event

6.7 Release source

- | | |
|--|--|
| a. <input type="checkbox"/> Gas release | a. <input type="checkbox"/> Storage vessel |
| b. <input type="checkbox"/> Liquid spill/evaporation | b. <input type="checkbox"/> Piping |
| c. <input type="checkbox"/> Fire | c. <input type="checkbox"/> Process vessel |
| d. <input type="checkbox"/> Explosion | d. <input type="checkbox"/> Transfer hose |
| | e. <input type="checkbox"/> Valve |
| | f. <input type="checkbox"/> Pump |

6.8 Weather conditions at time of event (if known)

- a. Wind speed/direction _____
- b. Temperature _____
- c. Stability class _____
- d. Precipitation present _____
- e. Unknown _____

6.9 On-site impacts

- a. Deaths _____ (number)
- b. Injuries _____ (number)
- c. Property damage (\$) _____

6.10 Known offsite impacts

- a. Deaths _____ (number)
- b. Hospitalizations _____ (number)
- c. Other medical treatment _____ (number)
- d. Evacuated _____ (number)
- e. Sheltered _____ (number)
- f. Property damage (\$) _____
- g. Environmental damage _____ (specify type)

6.11 Initiating event

6.12 Contributing factors (check all that apply)

- | | |
|---|---|
| a. <input type="checkbox"/> Equipment failure | a. <input type="checkbox"/> Equipment failure |
| b. <input type="checkbox"/> Human error | b. <input type="checkbox"/> Human error |
| c. <input type="checkbox"/> Weather condition | c. <input type="checkbox"/> Improper procedures |
| | d. <input type="checkbox"/> Overpressurization |
| | e. <input type="checkbox"/> Upset condition |
| | f. <input type="checkbox"/> By-pass condition |

- g. Maintenance activity/Inactivity
- h. Process design
- i. Unsuitable equipment
- j. Unusual weather condition
- k. Management error

6.13 Offsite responders notified a. Yes b. No

6.14 Changes introduced as a result of the accident

- a. Improved/upgrade equipment
- b. Revised maintenance
- c. Revised training
- d. Revised operating procedures
- e. New process controls
- f. New mitigation systems
- g. Revised emergency response plan
- h. Changed process
- i. Reduced inventory
- j. Other
- k. None

7. PREVENTION PROGRAM PROGRAM 3 (For Each Program 3 Process)

7.1 SIC code for process _____

7.2 Name of substance(s) covered

a. _____ b. _____ c. _____

7.3 Date on which the safety information was last reviewed or revised

7.4 PHA

a. The date of completion of the most recent PHA or update

b. The technique used

1. ___ What If
2. ___ Checklist
3. ___ What If/Checklist
4. ___ HAZOP
5. ___ Failure Mode and Effects Analysis
6. ___ Fault Tree Analysis
7. ___ Other

c. The expected date of completion of any changes resulting from the PHA

d. Major hazards identified (check all that apply)

1. ___ Toxic release
2. ___ Fire
3. ___ Explosion
4. ___ Runaway reaction
5. ___ Polymerization
6. ___ Overpressurization
7. ___ Corrosion
8. ___ Overfilling
9. ___ Contamination
10. ___ Equipment failure
11. ___ Loss of cooling, heating, electricity, instrument air
12. ___ Earthquake
13. ___ Floods (flood plain)
14. ___ Tornado
15. ___ Hurricanes
16. ___ Other

e. Process controls in use (check all that apply)

1. ___ Vents
2. ___ Relief valves
3. ___ Check valves

4. Scrubbers
5. Flares
6. Manual shutoffs
7. Automatic shutoffs
8. Interlocks
9. Alarms and procedures
10. Keyed bypass
11. Emergency air supply
12. Emergency power
13. Backup pump
14. Grounding equipment
15. Inhibitor addition
16. Rupture disks
17. Excess flow device
18. Quench system
19. Purge system
20. Other

f. Mitigation systems in use (check all that apply)

1. Sprinkler system
2. Dikes
3. Fire walls
4. Blast walls
5. Deluge system
6. Water curtain
7. Enclosure
8. Neutralization
9. Other

g. Monitoring/detection systems in use (check all the apply)

1. Process area detectors
2. Perimeter monitors
3. Other

h. Changes since last PHA update (check all that apply)

1. Reduction in chemical inventory
2. Increase in chemical inventory
3. Change in process parameters
4. Installation of process controls
5. Installation of process detection systems
6. Installation of perimeter monitoring systems
7. Installation of mitigation systems
8. Other
9. None required/recommended

7.5 The date of the most recent review or revision of operating procedures

7.6 Training

a. The date of the most recent review or revision of training programs

b. The type of training provided

1. ___ Classroom
2. ___ Classroom plus on the job
3. ___ On the job
4. ___ Other

c. The type of competency testing used

1. ___ Written tests
2. ___ Oral tests
3. ___ Demonstration
4. ___ Observation
5. ___ Other

7.7 Maintenance

a. The date of the most recent review or revision of maintenance procedures

b. The date of the most recent equipment inspection or test

c. The equipment inspected or tested

7.8 Management of Change

a. The date of the most recent change that triggered management of change procedures

b. The date of the most recent review or revision of management of change procedures

7.8 The date of the most recent pre-startup review

7.9 Compliance audits

a. The date of the most recent compliance audit

b. The expected date of completion of any changes resulting from the compliance audit

7.10 Incident investigation

a. The date of the most recent incident investigation

b. The expected date of completion of any changes resulting from the investigation

7.11 The date of the most recent review or revision of employee participation plans

7.12 The date of the most recent review or revision of hot work permit procedures

7.13 The date of the most recent review or revision of contractor safety procedures

7.14 The date of the most recent evaluation of contractor safety performance

8. PREVENTION PROGRAM PROGRAM 2 (For Each Program 2 Process)

8.1 SIC code for process _____

8.2. Chemicals

- a.
- b.

8.3 Safety information

- a. The date of the most recent review or revision of the safety information
- b. A list of Federal or state regulations or industry-specific design codes and standards used to demonstrate compliance with the safety information requirement.

- 1. ___ NFPA 58 (or state law based on NFPA 58)
- 2. ___ OSHA 1910.111
- 3. ___ ASTM
- 4. ___ ANSI standards
- 5. ___ ASME standards
- 6. ___ Other (specify)
- 7. ___ None

8.4 Hazard review

- a. The date of completion of the most recent hazard review or update
- b. The expected date of completion of any changes resulting from the hazard review
- c. Major hazards identified (check all that apply)

- 1. _____ Toxic release
- 2. _____ Fire
- 3. _____ Explosion
- 4. _____ Runaway reaction
- 5. _____ Polymerization
- 6. _____ Overpressurization
- 7. _____ Corrosion
- 8. _____ Overfilling
- 9. _____ Contamination
- 10. _____ Equipment failure
- 11. _____ Loss of cooling, heating, electricity, instrument air
- 12. _____ Earthquake
- 13. _____ Floods (flood plain)
- 14. _____ Tornado
- 15. _____ Hurricanes
- 16. _____ Other

d. Process controls in use (check all that apply)

1. Vents
2. Relief valves
3. Check valves
4. Scrubbers
5. Flares
6. Manual shutoffs
7. Automatic shutoffs
8. Interlocks
9. Alarms and procedures
10. Keyed bypass
11. Emergency air supply
12. Emergency power
13. Backup pump
14. Grounding equipment
15. Inhibitor addition
16. Rupture disks
17. Excess flow device
18. Quench system
19. Purge system
20. Other

e. Mitigation systems in use (check all that apply)

1. Sprinkler system
2. Dikes
3. Fire walls
4. Blast walls
5. Deluge system
6. Water curtain
7. Enclosure
8. Neutralization
9. Other

f. Monitoring/detection systems in use

1. Process area detectors
2. Perimeter monitors
3. Other

g. Changes since last hazard review update (check all that apply)

1. Reduction in chemical inventory
2. Increase in chemical inventory
3. Change in process parameters
4. Installation of process controls
5. Installation of process detection systems
6. Installation of perimeter monitoring systems
7. Installation of mitigation systems

- 8. _____ Other
- 9. _____ None required/recommended

8.5 The date of the most recent review or revision of operating procedures

8.6 Training

a. The date of the most recent review or revision of training programs

b. The type of training provided

- 1. _____ Classroom
- 2. _____ Classroom plus on the job
- 3. _____ On the job
- 4. _____ Other

c. The type of competency testing used

- 1. _____ Written tests
- 2. _____ Oral tests
- 3. _____ Demonstration
- 4. _____ Observation
- 5. _____ Other

8.7 Maintenance

a. The date of the most recent review or revision of maintenance procedures

b. The date of the most recent equipment inspection or test

c. The equipment inspected or tested

8.8 Compliance audits

a. The date of the most recent compliance audit

b. The expected date of completion of any changes resulting from the compliance audit

8.9 Incident investigation

a. The date of the most recent incident investigation

b. The expected date of completion of any changes resulting from the investigation

8.10 The date of the most recent change that triggered a review or revision of safety information, the hazard review, operating or maintenance procedures, or training

