

Modélisation de la dispersion atmosphérique des  
toxiques en cas d'incendie de trois cellules de  
stockage de pneumatiques

Incendie de trois cellules de stockage  
**Dispersion des suies**  
Condition A, vent 2 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.32 (sheltered single storied)  
Time: November 2, 2017 1613 hours ST (using computer's clock)

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 2 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: A (user override)    Air Temperature: 20° C  
Relative Humidity: 50%                  Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 131.21 kilograms/sec    Source Height: 399 meters  
Release Duration: 60 minutes  
Release Rate: 7,870 kilograms/min  
Total Amount Released: 472,356 kilograms

**FOOTPRINT INFORMATION:**

Dispersion Module: Gaussian  
Yellow LOC (79 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage  
**Dispersion des suies**  
Condition D, vent 5 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.78 (sheltered single storied)  
Time: November 2, 2017 1635 hours ST (using computer's clock)

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: D                      Air Temperature: 20° C  
Relative Humidity: 50%              Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 131.21 kilograms/sec    Source Height: 160 meters  
Release Duration: 60 minutes  
Release Rate: 7,870 kilograms/min  
Total Amount Released: 472,356 kilograms

**FOOTPRINT INFORMATION:**

Dispersion Module: Gaussian  
Yellow LOC (79 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage  
**Dispersion des suies**  
Condition F, vent 3 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.51 (sheltered single storied)  
Time: November 2, 2017 1638 hours ST (using computer's clock)

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 3 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: F (user override)    Air Temperature: 15° C  
Relative Humidity: 50%                  Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 131.21 kilograms/sec    Source Height: 266 meters  
Release Duration: 60 minutes  
Release Rate: 7,870 kilograms/min  
Total Amount Released: 472,356 kilograms

**FOOTPRINT INFORMATION:**

Dispersion Module: Gaussian  
Yellow LOC (79 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage  
**Dispersion du Monoxyde de carbone**  
Condition A, vent 2 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.32 (sheltered single storied)  
Time: November 2, 2017 1645 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: CARBON MONOXIDE      Molecular Weight: 28.01 g/mol  
ERPG-3: 500 ppm    ERPG-2: 350 ppm    ERPG-1: 200 ppm  
IDLH: 1200 ppm  
Normal Boiling Point: -191.5° C      Ambient Boiling Point: -191.7° C  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 2 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: A (user override)    Air Temperature: 20° C  
Relative Humidity: 50%                  Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 63.65 kilograms/sec    Source Height: 399 meters  
Release Duration: 60 minutes  
Release Rate: 3,820 kilograms/min  
Total Amount Released: 229,140 kilograms  
Note: This chemical may flash boil and/or result in two phase flow.  
Use both dispersion modules to investigate its potential behavior.

**FOOTPRINT INFORMATION:**

Dispersion Module: Gaussian  
Red LOC (3680 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.  
Orange LOC (920 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage  
**Dispersion du Monoxyde de carbone**  
Condition D, vent 5 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.78 (sheltered single storied)  
Time: November 2, 2017 1647 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: CARBON MONOXIDE      Molecular Weight: 28.01 g/mol  
ERPG-3: 500 ppm    ERPG-2: 350 ppm    ERPG-1: 200 ppm  
IDLH: 1200 ppm  
Normal Boiling Point: -191.5° C      Ambient Boiling Point: -191.7° C  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: D                      Air Temperature: 20° C  
Relative Humidity: 50%              Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 63.65 kilograms/sec    Source Height: 160 meters  
Release Duration: 60 minutes  
Release Rate: 3,820 kilograms/min  
Total Amount Released: 229,140 kilograms  
Note: This chemical may flash boil and/or result in two phase flow.  
Use both dispersion modules to investigate its potential behavior.

**FOOTPRINT INFORMATION:**

Dispersion Module: Gaussian  
Red LOC (3680 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.  
Orange LOC (920 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.

**Incendie de trois cellules de stockage**  
**Dispersion du Monoxyde de carbone**  
Condition F, vent 3 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.51 (sheltered single storied)  
Time: November 2, 2017 1649 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: CARBON MONOXIDE      Molecular Weight: 28.01 g/mol  
ERPG-3: 500 ppm    ERPG-2: 350 ppm    ERPG-1: 200 ppm  
IDLH: 1200 ppm  
Normal Boiling Point: -191.5° C      Ambient Boiling Point: -191.7° C  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 3 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: F (user override)    Air Temperature: 15° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 63.65 kilograms/sec    Source Height: 266 meters  
Release Duration: 60 minutes  
Release Rate: 3,820 kilograms/min  
Total Amount Released: 229,140 kilograms  
Note: This chemical may flash boil and/or result in two phase flow.  
Use both dispersion modules to investigate its potential behavior.

**FOOTPRINT INFORMATION:**

Dispersion Module: Gaussian  
Red LOC (3680 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.  
Orange LOC (920 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because  
the ground level concentrations never exceed the LOC.

**Incendie de trois cellules de stockage**  
**Dispersion du Dioxyde de carbone**  
Condition A, vent 2 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.32 (sheltered single storied)  
Time: November 2, 2017 1655 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: CARBON DIOXIDE      Molecular Weight: 44.01 g/mol  
TEEL-3: 40000 ppm    TEEL-2: 30000 ppm    TEEL-1: 30000 ppm  
IDLH: 40000 ppm  
Normal Boiling Point: -unavail-  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%  
Note: Not enough chemical data to use Heavy Gas option

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 2 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: A (user override)    Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 1696.95 kilograms/sec  
Source Height: 399 meters  
Release Duration: 60 minutes  
Release Rate: 102,000 kilograms/min  
Total Amount Released: 6,109,020 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (89980 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.



**Incendie de trois cellules de stockage**  
**Dispersion du Dioxyde de carbone**  
Condition D, vent 5 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.78 (sheltered single storied)  
Time: November 2, 2017 1657 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: CARBON DIOXIDE      Molecular Weight: 44.01 g/mol  
TEEL-3: 40000 ppm    TEEL-2: 30000 ppm    TEEL-1: 30000 ppm  
IDLH: 40000 ppm  
Normal Boiling Point: -unavail-  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%  
Note: Not enough chemical data to use Heavy Gas option

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: D                      Air Temperature: 20° C  
Relative Humidity: 50%                Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 1696.95 kilograms/sec  
Source Height: 160 meters  
Release Duration: 60 minutes  
Release Rate: 102,000 kilograms/min  
Total Amount Released: 6,109,020 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (89980 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.

**Incendie de trois cellules de stockage**  
**Dispersion du Dioxyde de carbone**  
Condition F, vent 3 m/s

**SITE DATA INFORMATION:**

Location: BULLY LES MINES, FRANCE  
Building Air Exchanges Per Hour: 0.51 (sheltered single storied)  
Time: November 2, 2017 1659 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: CARBON DIOXIDE      Molecular Weight: 44.01 g/mol  
TEEL-3: 40000 ppm    TEEL-2: 30000 ppm    TEEL-1: 30000 ppm  
IDLH: 40000 ppm  
Normal Boiling Point: -unavail-  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%  
Note: Not enough chemical data to use Heavy Gas option

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 3 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: F (user override)    Air Temperature: 15° C  
Relative Humidity: 50%                  Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 1696.95 kilograms/sec  
Source Height: 266 meters  
Release Duration: 60 minutes  
Release Rate: 102,000 kilograms/min  
Total Amount Released: 6,109,020 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (89980 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage  
**Dispersion du SO<sub>2</sub>**  
Condition A, vent 2 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)  
Time: June 12 2016 1734 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: SULFUR DIOXIDE      Molecular Weight: 64.06 g/mol  
ERPG-3: 15 ppm    ERPG-2: 3 ppm    ERPG-1: 0.3 ppm  
IDLH: 100 ppm  
Carcinogenic risk - see CAMEO  
Normal Boiling Point: -10.0° C      Ambient Boiling Point: -10.2° C  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 2 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: A (user override)    Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 8.61 kilograms/sec    Source Height: 399 meters  
Release Duration: 60 minutes  
Release Rate: 517 kilograms/min  
Total Amount Released: 30,996 kilograms  
Note: This chemical may flash boil and/or result in two phase flow.

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (1885 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (211 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion du SO<sub>2</sub>**  
Condition D, vent 5 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)  
Time: June 12 2016 1735 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: SULFUR DIOXIDE      Molecular Weight: 64.06 g/mol  
ERPG-3: 15 ppm    ERPG-2: 3 ppm    ERPG-1: 0.3 ppm  
IDLH: 100 ppm  
Carcinogenic risk - see CAMEO  
Normal Boiling Point: -10.0° C      Ambient Boiling Point: -10.2° C  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: D      Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 8.61 kilograms/sec    Source Height: 160 meters  
Release Duration: 60 minutes  
Release Rate: 517 kilograms/min  
Total Amount Released: 30,996 kilograms  
Note: This chemical may flash boil and/or result in two phase flow.

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (1885 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (211 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion du SO<sub>2</sub>**  
Condition F, vent 3 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)  
Time: June 12 2016 1737 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: SULFUR DIOXIDE      Molecular Weight: 64.06 g/mol  
ERPG-3: 15 ppm    ERPG-2: 3 ppm    ERPG-1: 0.3 ppm  
IDLH: 100 ppm  
Carcinogenic risk - see CAMEO  
Normal Boiling Point: -10.0° C      Ambient Boiling Point: -10.2° C  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 3 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: F (user override)    Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 8.61 kilograms/sec    Source Height: 266 meters  
Release Duration: 60 minutes  
Release Rate: 517 kilograms/min  
Total Amount Released: 30,996 kilograms  
Note: This chemical may flash boil and/or result in two phase flow..

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (1885 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (211 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage  
**Dispersion du NO<sub>2</sub>**  
Condition A, vent 2 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)  
Time: June 12 2016 1738 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: NITROGEN DIOXIDE      Molecular Weight: 46.01 g/mol  
TEEL-3: 30 ppm    TEEL-2: 15 ppm    TEEL-1: 2 ppm  
IDLH: 20 ppm  
Normal Boiling Point: 21.0° C      Ambient Boiling Point: 20.9° C  
Vapor Pressure at Ambient Temperature: 0.95 atm  
Ambient Saturation Concentration: 958,041 ppm or 95.8%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 2 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: A (user override)    Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 2.45 kilograms/sec    Source Height: 399 meters  
Release Duration: 60 minutes  
Release Rate: 147 kilograms/min  
Total Amount Released: 8,820 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (132 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (75 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion du NO<sub>2</sub>**  
Condition D, vent 5 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE

Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)

Time: June 12 2016 1740 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: NITROGEN DIOXIDE      Molecular Weight: 46.01 g/mol

TEEL-3: 30 ppm    TEEL-2: 15 ppm    TEEL-1: 2 ppm

IDLH: 20 ppm

Normal Boiling Point: 21.0° C      Ambient Boiling Point: 20.9° C

Vapor Pressure at Ambient Temperature: 0.95 atm

Ambient Saturation Concentration: 958,041 ppm or 95.8%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 meters/sec from SW at 3 meters

No Inversion Height

Stability Class: D

Air Temperature: 20° C

Relative Humidity: 50%

Ground Roughness: open country

Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 2.45 kilograms/sec      Source Height: 160 meters

Release Duration: 60 minutes

Release Rate: 147 kilograms/min

Total Amount Released: 8,820 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian

Red LOC (132 mg/(cu m)) Max Threat Zone: LOC is not exceeded

Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.

Orange LOC (75 mg/(cu m)) Max Threat Zone: LOC is not exceeded

Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage  
**Dispersion du NO<sub>2</sub>**  
Condition F, vent 3 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)  
Time: June 12 2016 1742 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: NITROGEN DIOXIDE      Molecular Weight: 46.01 g/mol  
TEEL-3: 30 ppm    TEEL-2: 15 ppm    TEEL-1: 2 ppm  
IDLH: 20 ppm  
Normal Boiling Point: 21.0° C      Ambient Boiling Point: 20.9° C  
Vapor Pressure at Ambient Temperature: 0.95 atm  
Ambient Saturation Concentration: 958,041 ppm or 95.8%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 3 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: F (user override)    Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 2.45 kilograms/sec    Source Height: 266 meters  
Release Duration: 60 minutes  
Release Rate: 147 kilograms/min  
Total Amount Released: 8,820 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (132 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (75 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC



Incendie de trois cellules de stockage  
**Dispersion du formol**  
Condition A, vent 2 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)  
Time: June 12 2016 1742 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: FORMIC ACID      Molecular Weight: 46.03 g/mol  
TEEL-3: 30 ppm    TEEL-2: 10 ppm    TEEL-1: 10 ppm  
IDLH: 30 ppm  
Normal Boiling Point: 100.6° C      Ambient Boiling Point: 100.3° C  
Vapor Pressure at Ambient Temperature: 0.044 atm  
Ambient Saturation Concentration: 44,317 ppm or 4.43%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 2 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: A (user override)    Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 0.09 kilograms/sec    Source Height: 399 meters  
Release Duration: 60 minutes  
Release Rate: 5.4 kilograms/min  
Total Amount Released: 324 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (31 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (12 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion du formol**  
Condition D, vent 5 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)  
Time: June 12 2016 1744 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: FORMIC ACID      Molecular Weight: 46.03 g/mol  
TEEL-3: 30 ppm    TEEL-2: 10 ppm    TEEL-1: 10 ppm  
IDLH: 30 ppm  
Normal Boiling Point: 100.6° C      Ambient Boiling Point: 100.3° C  
Vapor Pressure at Ambient Temperature: 0.044 atm  
Ambient Saturation Concentration: 44,317 ppm or 4.43%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: D      Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 0.09 kilograms/sec    Source Height: 160 meters  
Release Duration: 60 minutes  
Release Rate: 5.4 kilograms/min  
Total Amount Released: 324 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (31 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (12 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion du formol**  
Condition F, vent 3 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)  
Time: June 12 2016 1745 hours ST (using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: FORMIC ACID      Molecular Weight: 46.03 g/mol  
TEEL-3: 30 ppm    TEEL-2: 10 ppm    TEEL-1: 10 ppm  
IDLH: 30 ppm  
Normal Boiling Point: 100.6° C      Ambient Boiling Point: 100.3° C  
Vapor Pressure at Ambient Temperature: 0.044 atm  
Ambient Saturation Concentration: 44,317 ppm or 4.43%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 3 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: F (user override)    Air Temperature: 20° C  
Relative Humidity: 50%      Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 0.09 kilograms/sec    Source Height: 266 meters  
Release Duration: 60 minutes  
Release Rate: 5.4 kilograms/min  
Total Amount Released: 324 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (31 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (12 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion des fumées d'incendie\_ Seuils équivalents**  
Condition A, vent 2 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)  
Time: June 12 2016 1742 hours ST (using computer's clock)

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 2 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: A (user override)    Air Temperature: 20° C  
Relative Humidity: 50%                  Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 1960.848 kilograms/sec  
Source Height: 399 meters  
Release Duration: 60 minutes  
Release Rate: 118,000 kilograms/min  
Total Amount Released: 7,059,053 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (11346 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (31018 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion des fumées d'incendie\_ Seuls équivalents**  
Condition D, vent 5 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)  
Time: June 12 2016 1744 hours ST (using computer's clock)

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: D                      Air Temperature: 20° C  
Relative Humidity: 50%                Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 1960.848 kilograms/sec  
Source Height: 160 meters  
Release Duration: 60 minutes  
Release Rate: 118,000 kilograms/min  
Total Amount Released: 7,059,053 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (31018 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (11346 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC

Incendie de trois cellules de stockage  
**Dispersion des fumées d'incendie\_ Seuils équivalents**  
Condition F, vent 3 m/s

**SITE DATA INFORMATION:**

Location: ARTENAY, FRANCE  
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)  
Time: June 12 2016 1745 hours ST (using computer's clock)

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 3 meters/sec from SW at 3 meters  
No Inversion Height  
Stability Class: F (user override)    Air Temperature: 20° C  
Relative Humidity: 50%                  Ground Roughness: open country  
Cloud Cover: 5 tenths

**SOURCE STRENGTH INFORMATION:**

Direct Source: 1960.848 kilograms/sec  
Source Height: 266 meters  
Release Duration: 60 minutes  
Release Rate: 118,000 kilograms/min  
Total Amount Released: 7,059,053 kilograms

**FOOTPRINT INFORMATION: (GAUSS SELECTED)**

Dispersion Module: Gaussian  
Red LOC (31018 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.  
Orange LOC (11346 mg/(cu m)) Max Threat Zone: LOC is not exceeded  
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC