# Modélisation de la dispersion atmosphérique

## 1- Généralités

La dispersion des gaz engendrés par un incendie est assez difficile à définir et il n'existe pas, à l'heure actuelle, de méthode parfaitement établie. On sait que les gaz chauds ont tendance à s'élever rapidement du fait de leur faible densité (une élévation de température de 300 ° divise environ par 2 la densité d'un gaz ; or les fumées atteignent rapidement des températures de l'ordre de 600 °C).

Pour la chronologie de l'incendie, le TNO propose d'envisager deux phases :

- **Au moment du démarrage**, lorsque les fumées s'accumulent sous les toitures et ne s'échappent que par les ouvertures de désenfumage. La température des fumées est alors encore relativement peu élevée et les fumées s'échappent à faible débit, elles sont donc directement entraînables par les vents. L'impact toxique est alors limité par le fait que les surfaces en combustion sont peu étendues.

- **Au moment de l'intensité maximale** du sinistre, lorsque la totalité du stock est embrasée ; alors le débit des gaz toxiques est plus élevé, mais la température des fumées également. Un panache se forme, la dispersion des toxiques peut être modélisée.

La dispersion atmosphérique des polluants résultant de la combustion des marchandises stockées est modélisée à l'aide d'un modèle de dispersion en panache de type Gaussien (modèle de Pasquill Giffird).

L'INERIS préconise de prendre en considération les cas de figure ci-après : Etat A (au sens de Pasquill) pour des vents de 2 m/s, état D pour des vents de 5 m/s et état F pour des vents de 3 m/s.

## 2- Modélisation de la dispersion

Comme indiqué si dessus, la dispersion atmosphérique résulte de la combinaison de deux phénomènes principaux qui agissent simultanément : le transport et la diffusion. L'étude d'une dispersion de toxiques est complexe et nécessite de distinguer deux cas :

- La dispersion rapprochée,
- La dispersion lointaine.

Dans le cas de la dispersion lointaine, on démontre que cette phase échappe aux effets du sol et à la présence d'obstacles ainsi qu'aux effets induits par la densité du polluant émis.
Il devient alors possible d'utiliser un modèle classique simplifié de type Gaussien.

Le modèle de dispersion employé est le modèle gaussien développé selon la méthode de Pasquill et Grifford. Ce modèle s'applique dans différents cas de figure possibles définis en fonction de la vitesse du vent et de différents états atmosphériques désignés comme « classes » par Pasquill.

Ces classes sont au nombre de 6, caractérisées par l'intensité de la turbulence :

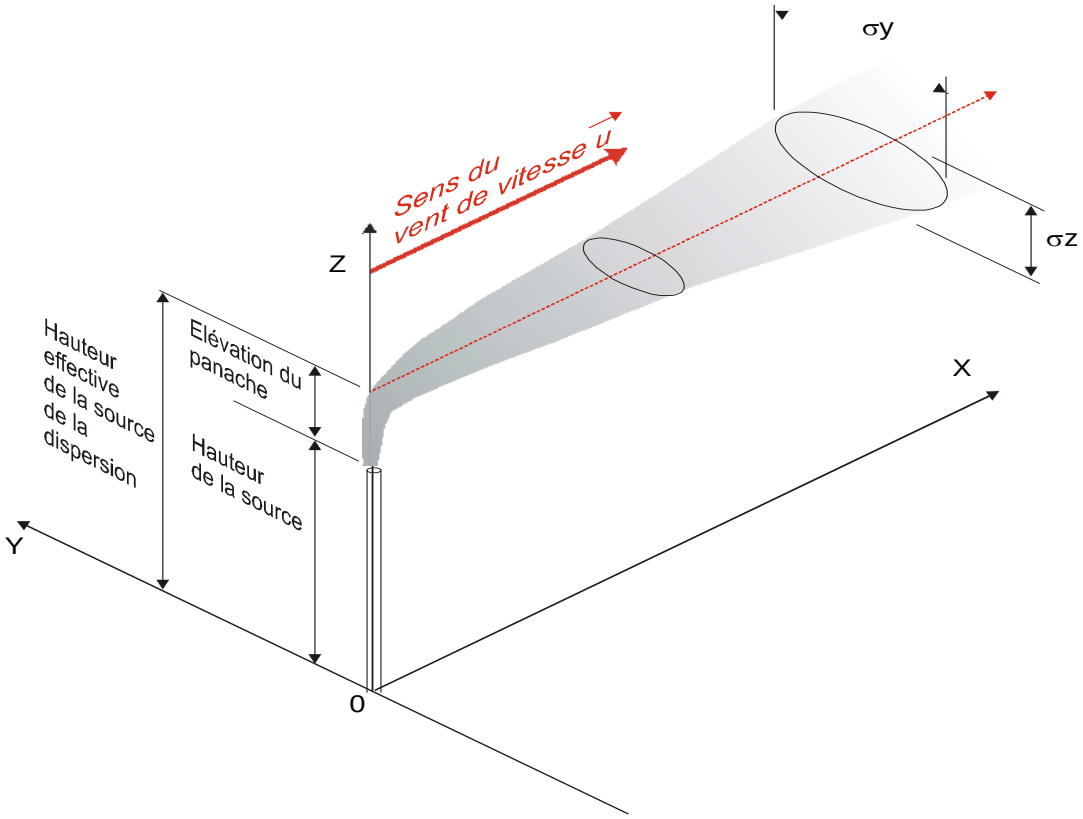
- classe A : « très instable »
- classe B : « instable »
- classe C : « légèrement instable »
- classe D : « neutre »
- classe E : « stable »
- classe F : « très stable »

Le tableau ci-dessous fournit les conditions dans lesquelles sont définies les classes de Pasquill-Turner :

| Vitesse du vent | Jour<br>Selon un rayonnement solaire incident | | | Nuit<br>Selon une couverture nuageuse | |
|---|---|---|---|---|---|
| (m/s | Fort<br>Eté – ciel dégagé | Modéré<br>Ciel nuageux | Léger<br>Hiver – ciel couvert | Dense<br>>1/2 surface | Dégagée<br><1/2 surface |
| < 2<br>2 à 3<br>3 à 5<br>5 à 6<br>>6 | A<br>A – B<br>B<br>C<br>C | A – B<br>B<br>B – C<br>C – D<br>D | B<br>C<br>C<br>D<br>D | <br>E<br>D<br>D<br>D | <br>F<br>E<br>D<br>D |

Le modèle de Pasquill et Grifford repose sur l'idée qu'une substance à l'état gazeux se diffuse dans l'atmosphère de manière aléatoire selon une fonction de distribution de Gauss, on caractérise alors l'allure de la distribution par son « écart-type » $\sigma$.

La représentation de la diffusion dans l'espace se fait généralement en définissant l'axe des X comme celui du sens du vent. Dans le cas de la diffusion dans un panache continu, on ne tient compte que de deux axes de diffusion : en largeur (axe Y) et en hauteur (axe Z) ; et par conséquent on ne définit que deux écarts-types pour déterminer la distribution : $\sigma_y$ et $\sigma_z$. La distribution étant définie par une concentration en fonction de l'éloignement de la source, les écart-types sont mesurés en mètres. Ils résultent d'observations réalisées par les différents auteurs des modèles, qui fournissent des équations empiriques qui permettent d'en calculer l'évolution dans l'espace en fonction des conditions de stabilité de l'atmosphère.




La *figure ci-dessus* montre un exemple de panache continu. :

L'équation générale de la dispersion d'un panache suivant une distribution gausienne est la suivante :

$$C=\frac{Q}{2\pi.u.\sigma_z.\sigma_y}.\exp\left(-\frac{y_2}{2.\sigma_y^2}\right).\exp\left(-\frac{(z-h)^2}{2.\sigma_z^2}\right)$$

dans laquelle :

| | | |
|---|---|---|
| $C$ | (kg/m$^3$) | est la concentration de la substance considérée au point M(x,y,z) |
| $Q$ | (kg/s) | est le débit massique de la substance à la source |
| $u$ | (m/s) | est la vitesse du vent |
| $\sigma_y$ | (m) | est l'écart type de la distribution horizontale |
| $\sigma_z$ | (m) | est l'écart type de la distribution verticale |
| $h$ | (m) | est la hauteur *effective* de l'émission |

Dans le cas des dispersions près du sol, on doit de plus tenir compte de l'effet miroir du sol. Il en résulte l'introduction d'un facteur de correction sur l'exponentielle donnant la dispersion suivant l'axe Z par addition d'un facteur de réflexion, ce qui donne l'équation de Pasquill Grifford :

$$C=\frac{Q}{2\pi.u.\sigma_z.\sigma_y}.\exp\left(-\frac{y_2}{2\cdot\sigma_y^2}\right).\left[\exp\left(-\frac{(z-h)^2}{2\cdot\sigma_z^2}\right)+\exp\left(-\frac{(z+h)^2}{2\cdot\sigma_z^2}\right)\right]$$

La distribution est exprimée sous la forme d'écarts types $\sigma_y$ pour la dispersion horizontale et $\sigma_z$ pour la dispersion verticale.

Ces écarts type traduisent l'étalement de la distribution gaussienne à mesure que l'on s'éloigne de la source d'émission.
Leur établissement a fait l'objet de nombreux travaux et on trouve différentes méthodes pour les évaluer (méthode de Briggs, méthode de Pasquill Grifford).

La méthode de Pasquill Grifford est adaptée aux dispersions dans des environnements dégagées. Dans le cas présent les écarts type ont été calculés à partir de cette méthode.

# Modélisation de la dispersion atmosphérique des toxiques en cas d'incendie d'une cellule de stockage de produits combustibles

Incendie d’une cellule de stockage
**Dispersion des suies**
Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1032 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 22.22 kilograms/sec Source Height: 233 meters
Release Duration: 60 minutes
Release Rate: 1 330 kilograms/min
Total Amount Released: 79 992 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion des suies**
Condition D, vent 5 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1106 hours ST (using computer's clock)

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 22.22 kilograms/sec Source Height: 93 meters
Release Duration: 60 minutes
Release Rate: 1 330 kilograms/min
Total Amount Released: 79 992 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d’une cellule de stockage

**Dispersion des suies**

Condition F, vent 3 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1108 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 22.22 kilograms/sec Source Height: 155 meters
Release Duration: 60 minutes
Release Rate: 1 330 kilograms/min
Total Amount Released: 79 992 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion du Monoxyde de carbone**
Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1110 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28.01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 ppm or 100,0%

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

SOURCE STRENGTH:
Direct Source: 69,74 kilograms/sec Source Height: 233 meters
Release Duration: 60 minutes
Release Rate: 4 180 kilograms/min
Total Amount Released: 251 064 kilograms
Note: This chemical may flash boil and/or result in two phase flow.
Use both dispersion modules to investigate its potential behavior.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (3680 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (920 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC..

Incendie d'une cellule de stockage
**Dispersion du Monoxyde de carbone**
Condition D, vent 5 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1114 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28.01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 ppm or 100,0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 69,74 kilograms/sec Source Height: 93 meters
Release Duration: 60 minutes
Release Rate: 4 180 kilograms/min
Total Amount Released: 251 064 kilograms
Note: This chemical may flash boil and/or result in two phase flow.
Use both dispersion modules to investigate its potential behavior.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (3680 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (920 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion du Monoxyde de carbone**
Condition F, vent 3 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1115 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28.01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 ppm or 100,0%

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

SOURCE STRENGTH:
Direct Source: 69,74 kilograms/sec Source Height: 155 meters
Release Duration: 60 minutes
Release Rate: 4 180 kilograms/min
Total Amount Released: 251 064 kilograms
Note: This chemical may flash boil and/or result in two phase flow.
Use both dispersion modules to investigate its potential behavior.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (3680 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (920 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion du Dioxyde de carbone**
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 1131 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 697,4 kilograms/sec Source Height: 233 meters
Release Duration: 60 minutes
Release Rate: 41 800 kilograms/min
Total Amount Released: 2 510 640 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 d'une cellule de stockage
**Dispersion du Dioxyde de carbone**
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 1132 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 697,4 kilograms/sec Source Height: 93 meters
Release Duration: 60 minutes
Release Rate: 41 800 kilograms/min
Total Amount Released: 2 510 640 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 d'une cellule de stockage
**Dispersion du Dioxyde de carbone**
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 1133 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 20° C
Relative Humidity: 50% Ground Roughness: open country
Cloud Cover: 5 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 697,4 kilograms/sec Source Height: 155 meters
Release Duration: 60 minutes
Release Rate: 41 800 kilograms/min
Total Amount Released: 2 510 640 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 d'une cellule de stockage
**Dispersion du HCl**
Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1118 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CHLORIDE Molecular Weight: 36.46 g/mol
AEGL-1 (60 min): 1.8 ppm AEGL-2 (60 min): 22 ppm AEGL-3 (60 min): 100 ppm
IDLH: 50 ppm
Ambient Boiling Point: -85.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

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

SOURCE STRENGTH:
Direct Source: 26,28 kilograms/sec Source Height: 233 meters
Release Duration: 60 minutes
Release Rate: 1 580 kilograms/min
Total Amount Released: 94 68 kilograms
Note: This chemical may flash boil and/or result in two phase flow.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (358 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (60 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC..

Incendie d'une cellule de stockage
**Dispersion du HCl**
Condition D, vent 5 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1122 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CHLORIDE Molecular Weight: 36.46 g/mol
AEGL-1 (60 min): 1.8 ppm AEGL-2 (60 min): 22 ppm AEGL-3 (60 min): 100 ppm
IDLH: 50 ppm
Ambient Boiling Point: -85.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 26,28 kilograms/sec Source Height: 93 meters
Release Duration: 60 minutes
Release Rate: 1 580 kilograms/min
Total Amount Released: 94 68 kilograms
Note: This chemical may flash boil and/or result in two phase flow.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (358 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (60 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion du HCl**
Condition F, vent 3 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1123 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CHLORIDE Molecular Weight: 36.46 g/mol
AEGL-1 (60 min): 1.8 ppm AEGL-2 (60 min): 22 ppm AEGL-3 (60 min): 100 ppm
IDLH: 50 ppm
Ambient Boiling Point: -85.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

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

SOURCE STRENGTH:
Direct Source: 26,28 kilograms/sec Source Height: 155 meters
Release Duration: 60 minutes
Release Rate: 1 580 kilograms/min
Total Amount Released: 94 68 kilograms
Note: This chemical may flash boil and/or result in two phase flow.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (358 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (60 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion du HCN**
Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1125 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CYANIDE Molecular Weight: 27.03 g/mol
AEGL-1 (60 min): 2 ppm AEGL-2 (60 min): 7.1 ppm AEGL-3 (60 min): 15 ppm
IDLH: 50 ppm LEL: 56000 ppm UEL: 400000 ppm
Ambient Boiling Point: 25.3° C
Vapor Pressure at Ambient Temperature: 0.81 atm
Ambient Saturation Concentration: 815,195 ppm or 81.5%

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

SOURCE STRENGTH:
Direct Source: 2,04 kilograms/sec Source Height: 233 meters
Release Duration: 60 minutes
Release Rate: 122 kilograms/min
Total Amount Released: 7 344 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (45 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion du HCN**
Condition D, vent 5 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1127 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CYANIDE Molecular Weight: 27.03 g/mol
AEGL-1 (60 min): 2 ppm AEGL-2 (60 min): 7.1 ppm AEGL-3 (60 min): 15 ppm
IDLH: 50 ppm LEL: 56000 ppm UEL: 400000 ppm
Ambient Boiling Point: 25.3° C
Vapor Pressure at Ambient Temperature: 0.81 atm
Ambient Saturation Concentration: 815,195 ppm or 81.5%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 2,04 kilograms/sec Source Height: 93 meters
Release Duration: 60 minutes
Release Rate: 122 kilograms/min
Total Amount Released: 7 344 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (45 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion du HCN**
Condition F, vent 3 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1128 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CYANIDE Molecular Weight: 27.03 g/mol
AEGL-1 (60 min): 2 ppm AEGL-2 (60 min): 7.1 ppm AEGL-3 (60 min): 15 ppm
IDLH: 50 ppm LEL: 56000 ppm UEL: 400000 ppm
Ambient Boiling Point: 25.3° C
Vapor Pressure at Ambient Temperature: 0.81 atm
Ambient Saturation Concentration: 815,195 ppm or 81.5%

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

SOURCE STRENGTH:
Direct Source: 2,04 kilograms/sec Source Height: 155 meters
Release Duration: 60 minutes
Release Rate: 122 kilograms/min
Total Amount Released: 7 344 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (45 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage
**Dispersion des fumées de l'incendie**
Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1125 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 3175,5 kilograms/sec Source Height: 233 meters
Release Duration: 60 minutes
Release Rate: 191 000 kilograms/min
Total Amount Released: 11 431 800 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red LOC (21705 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 (5568 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 d’une cellule de stockage
**Dispersion des fumées de l’incendie**
Condition D, vent 5 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1127 hours ST (using computer's clock)

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 3175,5 kilograms/sec Source Height: 93 meters
Release Duration: 60 minutes
Release Rate: 191 000 kilograms/min
Total Amount Released: 11 431 800 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red LOC (21705 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 (5568 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 d'une cellule de stockage
**Dispersion des fumées de l'incendie**
Condition F, vent 3 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1128 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 3175,5 kilograms/sec Source Height: 155 meters
Release Duration: 60 minutes
Release Rate: 191 000 kilograms/min
Total Amount Released: 11 431 800 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red LOC (21705 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 (5568 mg/(cu m)) Max Threat Zone: LOC is not exceeded
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.

# Modélisation de la dispersion atmosphérique des toxiques en cas d'incendie d'une cellule de stockage de pneumatiques

Incendie d’une cellule de stockage de pneumatiques
**Dispersion des suies**
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 1728 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: 54,67 kilograms/sec Source Height: 282 meters
Release Duration: 60 minutes
Release Rate: 3 280 kilograms/min
Total Amount Released: 196 812 kilograms

FOOTPRINT INFORMATION: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d’une cellule de stockage de pneumatiques

**Dispersion des suies**

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 1729 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: 54,67 kilograms/sec Source Height: 113 meters
Release Duration: 60 minutes
Release Rate: 3 280 kilograms/min
Total Amount Released: 196 812 kilograms

FOOTPRINT INFORMATION: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d’une cellule de stockage de pneumatiques
**Dispersion des suies**
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 1729 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: 54,67 kilograms/sec Source Height: 188 meters
Release Duration: 60 minutes
Release Rate: 3 280 kilograms/min
Total Amount Released: 196 812 kilograms

FOOTPRINT INFORMATION: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie d'une cellule de stockage de pneumatiques
**Dispersion du Monoxyde de carbone**
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 1731 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28,01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 26,52 kilograms/sec Source Height: 282 meters
Release Duration: 60 minutes
Release Rate: 1 590 kilograms/min
Total Amount Released: 95 412 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: (GAUSS SELECTED)
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 d'une cellule de stockage de pneumatiques
**Dispersion du Monoxyde de carbone**
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 1732 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28,01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 26,52 kilograms/sec Source Height: 113 meters
Release Duration: 60 minutes
Release Rate: 1 590 kilograms/min
Total Amount Released: 95 412 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: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red LOC (3680 mg/(cu m)) Max Threat Zone: LOC is not exceede
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 d'une cellule de stockage de pneumatiques
**Dispersion du Monoxyde de carbone**
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 1733 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28,01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 26,52 kilograms/sec Source Height: 188 meters
Release Duration: 60 minutes
Release Rate: 1 590 kilograms/min
Total Amount Released: 95 412 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: (GAUSS SELECTED)
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 d’une cellule de stockage de pneumatiques
**Dispersion du Dioxyde de carbone**
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 1731 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 707 kilograms/sec Source Height: 282 meters
Release Duration: 60 minutes
Release Rate: 42 400 kilograms/min
Total Amount Released: 2 545 200 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 d'une cellule de stockage de pneumatiques
**Dispersion du Dioxyde de carbone**
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 1732 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 707 kilograms/sec Source Height: 113 meters
Release Duration: 60 minutes
Release Rate: 42 400 kilograms/min
Total Amount Released: 2 545 200 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 d'une cellule de stockage de pneumatiques
**Dispersion du Dioxyde de carbone**
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 1733 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 20° C
Relative Humidity: 50% Ground Roughness: open country
Cloud Cover: 5 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 707 kilograms/sec Source Height: 188 meters
Release Duration: 60 minutes
Release Rate: 42 400 kilograms/min
Total Amount Released: 2 545 200 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 d'une cellule de stockage de pneumatiques
**Dispersion du $SO_2$**
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
AEGL-1 (60 min): 0.2 ppm AEGL-2 (60 min): 0.75 ppm AEGL-3 (60 min): 30 ppm
IDLH: 100 ppm
Ambient Boiling Point: -10.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 3,59 kilograms/sec Source Height: 282 meters
Release Duration: 60 minutes
Release Rate: 215 kilograms/min
Total Amount Released: 12 924 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 d'une cellule de stockage de pneumatiques

**Dispersion du $SO_2$**

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
AEGL-1 (60 min): 0.2 ppm AEGL-2 (60 min): 0.75 ppm AEGL-3 (60 min): 30 ppm
IDLH: 100 ppm
Ambient Boiling Point: -10.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 3,59 kilograms/sec Source Height: 113 meters
Release Duration: 60 minutes
Release Rate: 215 kilograms/min
Total Amount Released: 12 924 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 d'une cellule de stockage de pneumatiques
**Dispersion du $SO_2$**
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
AEGL-1 (60 min): 0.2 ppm AEGL-2 (60 min): 0.75 ppm AEGL-3 (60 min): 30 ppm
IDLH: 100 ppm
Ambient Boiling Point: -10.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 3,59 kilograms/sec Source Height: 188 meters
Release Duration: 60 minutes
Release Rate: 215 kilograms/min
Total Amount Released: 12 924 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 d'une cellule de stockage de pneumatiques
**Dispersion du $NO_2$**
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
AEGL-1 (60 min): 0.5 ppm AEGL-2 (60 min): 12 ppm AEGL-3 (60 min): 20 ppm
IDLH: 20 ppm
Ambient Boiling Point: 20.8° C
Vapor Pressure at Ambient Temperature: 0.95 atm
Ambient Saturation Concentration: 959,180 ppm or 95.9%

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: 1,02 kilograms/sec Source Height: 282 meters
Release Duration: 60 minutes
Release Rate: 61,2 kilograms/min
Total Amount Released: 3 672 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 d'une cellule de stockage de pneumatiques
**Dispersion du $NO_2$**
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
AEGL-1 (60 min): 0.5 ppm AEGL-2 (60 min): 12 ppm AEGL-3 (60 min): 20 ppm
IDLH: 20 ppm
Ambient Boiling Point: 20.8° C
Vapor Pressure at Ambient Temperature: 0.95 atm
Ambient Saturation Concentration: 959,180 ppm or 95.9%

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: 1,02 kilograms/sec Source Height: 113 meters
Release Duration: 60 minutes
Release Rate: 61,2 kilograms/min
Total Amount Released: 3 672 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 d'une cellule de stockage de pneumatiques
**Dispersion du $NO_2$**
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
AEGL-1 (60 min): 0.5 ppm AEGL-2 (60 min): 12 ppm AEGL-3 (60 min): 20 ppm
IDLH: 20 ppm
Ambient Boiling Point: 20.8° C
Vapor Pressure at Ambient Temperature: 0.95 atm
Ambient Saturation Concentration: 959,180 ppm or 95.9%

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: 1,02 kilograms/sec Source Height: 188 meters
Release Duration: 60 minutes
Release Rate: 61,2 kilograms/min
Total Amount Released: 3 672 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 d’une cellule de stockage de pneumatiques
**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
ERPG-1: 3 ppm ERPG-2: 25 ppm ERPG-3: 250 ppm
IDLH: 30 ppm LEL: 120000 ppm UEL: 380000 ppm
Ambient Boiling Point: 100.2° C
Vapor Pressure at Ambient Temperature: 0.044 atm
Ambient Saturation Concentration: 44,376 ppm or 4.44%

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: 0,04 kilograms/sec Source Height: 282 meters
Release Duration: 60 minutes
Release Rate: 2,4 kilograms/min
Total Amount Released: 144 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 d'une cellule de stockage de pneumatiques

**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
ERPG-1: 3 ppm ERPG-2: 25 ppm ERPG-3: 250 ppm
IDLH: 30 ppm LEL: 120000 ppm UEL: 380000 ppm
Ambient Boiling Point: 100.2° C
Vapor Pressure at Ambient Temperature: 0.044 atm
Ambient Saturation Concentration: 44,376 ppm or 4.44%

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: 0,04 kilograms/sec Source Height: 113 meters
Release Duration: 60 minutes
Release Rate: 2,4 kilograms/min
Total Amount Released: 144 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 d'une cellule de stockage de pneumatiques
**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
ERPG-1: 3 ppm ERPG-2: 25 ppm ERPG-3: 250 ppm
IDLH: 30 ppm LEL: 120000 ppm UEL: 380000 ppm
Ambient Boiling Point: 100.2° C
Vapor Pressure at Ambient Temperature: 0.044 atm
Ambient Saturation Concentration: 44,376 ppm or 4.44%

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: 0,04 kilograms/sec Source Height: 188 meters
Release Duration: 60 minutes
Release Rate: 2,4 kilograms/min
Total Amount Released: 144 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 d'une cellule de stockage de pneumatiques
**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: 39 657 kilograms/sec Source Height: 282 meters
Release Duration: 60 minutes
Release Rate: 2 380 000 kilograms/min
Total Amount Released: 1,43. $10^8$ kilograms

FOOTPRINT INFORMATION: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red LOC (3018 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 d'une cellule de stockage de pneumatiques
**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: 39 657 kilograms/sec Source Height: 113 meters
Release Duration: 60 minutes
Release Rate: 2 380 000 kilograms/min
Total Amount Released: 1,43. $10^8$ kilograms

FOOTPRINT INFORMATION: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red LOC (3018 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 d'une cellule de stockage de pneumatiques
**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: 39 657 kilograms/sec Source Height: 188 meters
Release Duration: 60 minutes
Release Rate: 2 380 000 kilograms/min
Total Amount Released: 1,43. $10^8$ kilograms

FOOTPRINT INFORMATION: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red LOC (3018 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

# Modélisation de la dispersion atmosphérique des toxiques en cas d’incendie de trois cellules de stockage de produits combustibles

Incendie de trois cellules de stockage

**Dispersion des suies**

Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1005 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 66,7 kilograms/sec Source Height: 358 meters
Release Duration: 60 minutes
Release Rate: 4 000 kilograms/min
Total Amount Released: 240 120 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone 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:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1013 hours ST (using computer's clock)

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D (user override)
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 66,7 kilograms/sec Source Height: 143 meters
Release Duration: 60 minutes
Release Rate: 4 000 kilograms/min
Total Amount Released: 240 120 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

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

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1015 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 66,7 kilograms/sec Source Height: 239 meters
Release Duration: 60 minutes
Release Rate: 4 000 kilograms/min
Total Amount Released: 240 120 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone 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:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1017 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28.01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 ppm or 100,0%

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

SOURCE STRENGTH:
Direct Source: 209,22 kilograms/sec Source Height: 358 meters
Release Duration: 60 minutes
Release Rate: 12 600 kilograms/min
Total Amount Released: 753 192 kilograms
Note: This chemical may flash boil and/or result in two phase flow.
Use both dispersion modules to investigate its potential behavior.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (3680 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (920 mg/(cu m))
Note: Threat zone 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:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1019 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28.01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 ppm or 100,0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 209,22 kilograms/sec Source Height: 143 meters
Release Duration: 60 minutes
Release Rate: 12 600 kilograms/min
Total Amount Released: 753 192 kilograms
Note: This chemical may flash boil and/or result in two phase flow.
Use both dispersion modules to investigate its potential behavior.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (3680 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- 920 mg/(cu m))
Note: Threat zone 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:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1019 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28.01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 ppm or 100,0%

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

SOURCE STRENGTH:
Direct Source: 209,22 kilograms/sec Source Height: 239 meters
Release Duration: 60 minutes
Release Rate: 12 600 kilograms/min
Total Amount Released: 753 192 kilograms
Note: This chemical may flash boil and/or result in two phase flow.
Use both dispersion modules to investigate its potential behavior.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (3680 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (920 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie de 3 cellules de stockage
**Dispersion du Dioxyde de carbone**
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 1015 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 2092 kilograms/sec Source Height: 358 meters
Release Duration: 60 minutes
Release Rate: 126 000 kilograms/min
Total Amount Released: 7 531 200 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 3 cellules de stockage
**Dispersion du Dioxyde de carbone**
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 1015 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 2092 kilograms/sec Source Height: 143 meters
Release Duration: 60 minutes
Release Rate: 126 000 kilograms/min
Total Amount Released: 7 531 200 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 3 cellules de stockage
**Dispersion du Dioxyde de carbone**
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 1017 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 20° C
Relative Humidity: 50% Ground Roughness: open country
Cloud Cover: 5 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 2092 kilograms/sec Source Height: 239 meters
Release Duration: 60 minutes
Release Rate: 126 000 kilograms/min
Total Amount Released: 7 531 200 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 HCl**
Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1021 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CHLORIDE Molecular Weight: 36.46 g/mol
AEGL-1 (60 min): 1.8 ppm AEGL-2 (60 min): 22 ppm AEGL-3 (60 min): 100 ppm
IDLH: 50 ppm
Ambient Boiling Point: -85.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

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

SOURCE STRENGTH:
Direct Source: 78,9 kilograms/sec Source Height: 358 meters
Release Duration: 60 minutes
Release Rate: 4 730 kilograms/min
Total Amount Released: 284 040 kilograms
Note: This chemical may flash boil and/or result in two phase flow.

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (358 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (60 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage

**Dispersion du HCl**

Condition D, vent 5 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1022 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CHLORIDE Molecular Weight: 36.46 g/mol
AEGL-1 (60 min): 1.8 ppm AEGL-2 (60 min): 22 ppm AEGL-3 (60 min): 100 ppm
IDLH: 50 ppm
Ambient Boiling Point: -85.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 78,9 kilograms/sec Source Height: 143 meters
Release Duration: 60 minutes
Release Rate: 4 730 kilograms/min
Total Amount Released: 284 040 kilograms
Note: This chemical may flash boil and/or result in two phase flow

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (358 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (60 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

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

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1024 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CHLORIDE Molecular Weight: 36.46 g/mol
AEGL-1 (60 min): 1.8 ppm AEGL-2 (60 min): 22 ppm AEGL-3 (60 min): 100 ppm
IDLH: 50 ppm
Ambient Boiling Point: -85.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

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

SOURCE STRENGTH:
Direct Source: 78,9 kilograms/sec Source Height: 239 meters
Release Duration: 60 minutes
Release Rate: 4 730 kilograms/min
Total Amount Released: 284 040 kilograms
Note: This chemical may flash boil and/or result in two phase flow

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (358 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.
Orange: LOC is not exceeded --- (60 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage

**Dispersion du HCN**

Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1025 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CYANIDE Molecular Weight: 27.03 g/mol
AEGL-1 (60 min): 2 ppm AEGL-2 (60 min): 7.1 ppm AEGL-3 (60 min): 15 ppm
IDLH: 50 ppm LEL: 56000 ppm UEL: 400000 ppm
Ambient Boiling Point: 25.3° C
Vapor Pressure at Ambient Temperature: 0.81 atm
Ambient Saturation Concentration: 815,195 ppm or 81.5%

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

SOURCE STRENGTH:
Direct Source: 6,12 kilograms/sec Source Height: 358 meters
Release Duration: 60 minutes
Release Rate: 367 kilograms/min
Total Amount Released: 22 032 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (45 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

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

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1027 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CYANIDE Molecular Weight: 27.03 g/mol
AEGL-1 (60 min): 2 ppm AEGL-2 (60 min): 7.1 ppm AEGL-3 (60 min): 15 ppm
IDLH: 50 ppm LEL: 56000 ppm UEL: 400000 ppm
Ambient Boiling Point: 25.3° C
Vapor Pressure at Ambient Temperature: 0.81 atm
Ambient Saturation Concentration: 815,195 ppm or 81.5%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 6,12 kilograms/sec Source Height: 143 meters
Release Duration: 60 minutes
Release Rate: 367 kilograms/min
Total Amount Released: 22 032 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (45 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

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

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1027 hours ST (using computer's clock)

CHEMICAL DATA:
Chemical Name: HYDROGEN CYANIDE Molecular Weight: 27.03 g/mol
AEGL-1 (60 min): 2 ppm AEGL-2 (60 min): 7.1 ppm AEGL-3 (60 min): 15 ppm
IDLH: 50 ppm LEL: 56000 ppm UEL: 400000 ppm
Ambient Boiling Point: 25.3° C
Vapor Pressure at Ambient Temperature: 0.81 atm
Ambient Saturation Concentration: 815,195 ppm or 81.5%

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

SOURCE STRENGTH:
Direct Source: 6,12 kilograms/sec Source Height: 239 meters
Release Duration: 60 minutes
Release Rate: 367 kilograms/min
Total Amount Released: 22 032 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (45 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC.

Incendie de trois cellules de stockage
**Dispersion des fumées de l'incendie (seuil équivalent)**
Condition A, vent 2 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 12 2016 1025 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 9 527 kilograms/sec Source Height: 358 meters
Release Duration: 60 minutes
Release Rate: 572 000 kilograms/min
Total Amount Released: 34 297 200 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red LOC (21705 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 (5568 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 de l'incendie (seuil équivalent)**
Condition D, vent 5 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 12 2016 1027 hours ST (using computer's clock)

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
Wind: 5 meters/second from SW at 3 meters
Ground Roughness: open country Cloud Cover: 5 tenths
Air Temperature: 20° C Stability Class: D
No Inversion Height Relative Humidity: 50%

SOURCE STRENGTH:
Direct Source: 9 527 kilograms/sec Source Height: 143 meters
Release Duration: 60 minutes
Release Rate: 572 000 kilograms/min
Total Amount Released: 34 297 200 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red LOC (21705 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 (5568 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 de l'incendie (seuil équivalent)**
Condition F, vent 3 m/s

SITE DATA:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.65 (unsheltered single storied)
Time: June 12 2016 1027 hours ST (using computer's clock)

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

SOURCE STRENGTH:
Direct Source: 9 527 kilograms/sec Source Height: 239 meters
Release Duration: 60 minutes
Release Rate: 572 000 kilograms/min
Total Amount Released: 34 297 200 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red LOC (21705 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 (5568 mg/(cu m)) Max Threat Zone: LOC is not exceeded
Note: Footprint was not drawn because the ground level concentrations never exceed the LOC.

# Modélisation de la dispersion atmosphérique des toxiques en cas d'incendie de 3 cellules de stockage de pneumatiques

Incendie de 3 cellules de stockage de pneumatiques

**Dispersion des suies**

Condition A, vent 2 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 13 2016 1728 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: 164 kilograms/sec Source Height: 437 meters
Release Duration: 60 minutes
Release Rate: 9 840 kilograms/min
Total Amount Released: 590 400 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC..

Incendie de 3 cellules de stockage de pneumatiques

**Dispersion des suies**

Condition D, vent 5 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 13 2016 1729 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: 164 kilograms/sec Source Height: 175 meters
Release Duration: 60 minutes
Release Rate: 9 840 kilograms/min
Total Amount Released: 590 400 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC..

Incendie de 3 cellules de stockage de pneumatiques

**Dispersion des suies**

Condition F, vent 3 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)
Time: June 13 2016 1729 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: 164 kilograms/sec Source Height: 291 meters
Release Duration: 60 minutes
Release Rate: 9 840 kilograms/min
Total Amount Released: 590 400 kilograms

THREAT ZONE: (GAUSSIAN SELECTED)
Model Run: Gaussian
Red : LOC is not exceeded --- (79 mg/(cu m))
Note: Threat zone was not drawn because the ground level concentrations never exceed the LOC..

Incendie de 3 cellules de stockage de pneumatiques
**Dispersion du Monoxyde de carbone**
Condition A, vent 2 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 13 2016 1731 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28,01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 79,6 kilograms/sec Source Height: 437 meters
Release Duration: 60 minutes
Release Rate: 4 780 kilograms/min
Total Amount Released: 286 560 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: (GAUSS SELECTED)
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 3 cellules de stockage de pneumatiques
**Dispersion du Monoxyde de carbone**
Condition D, vent 5 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 13 2016 1732 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28,01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 79,6 kilograms/sec Source Height: 175 meters
Release Duration: 60 minutes
Release Rate: 4 780 kilograms/min
Total Amount Released: 286 560 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: (GAUSS SELECTED)
Dispersion Module: Gaussian
Red LOC (3680 mg/(cu m)) Max Threat Zone: LOC is not exceede
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 3 cellules de stockage de pneumatiques
**Dispersion du Monoxyde de carbone**
Condition F, vent 3 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)
Time: June 13 2016 1733 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON MONOXIDE Molecular Weight: 28,01 g/mol
AEGL-1 (60 min): N/A AEGL-2 (60 min): 83 ppm AEGL-3 (60 min): 330 ppm
IDLH: 1200 ppm LEL: 125000 ppm UEL: 742000 ppm
Ambient Boiling Point: -191.7° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 79,6 kilograms/sec Source Height: 291 meters
Release Duration: 60 minutes
Release Rate: 4 780 kilograms/min
Total Amount Released: 286 560 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: (GAUSS SELECTED)
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 3 cellules de stockage de pneumatiques
**Dispersion du Dioxyde de carbone**
Condition A, vent 2 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 13 2016 1731 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 1060.6 kilograms/sec Source Height: 330 meters
Release Duration: 60 minutes
Release Rate: 63,600 kilograms/min
Total Amount Released: 3,818,160 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 3 cellules de stockage de pneumatiques
**Dispersion du Dioxyde de carbone**
Condition D, vent 5 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 13 2016 1732 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 1060.6 kilograms/sec Source Height: 132 meters
Release Duration: 60 minutes
Release Rate: 63,600 kilograms/min
Total Amount Released: 3,818,160 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 3 cellules de stockage de pneumatiques
**Dispersion du Dioxyde de carbone**
Condition F, vent 3 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)
Time: June 13 2016 1733 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: CARBON DIOXIDE Molecular Weight: 44.01 g/mol
PAC-1: 30000 ppm PAC-2: 30000 ppm PAC-3: 50000 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: 20° C
Relative Humidity: 50% Ground Roughness: open country
Cloud Cover: 5 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1060.6 kilograms/sec Source Height: 220 meters
Release Duration: 60 minutes
Release Rate: 63,600 kilograms/min
Total Amount Released: 3,818,160 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 3 cellules de stockage de pneumatiques
**Dispersion du $SO_2$**
Condition A, vent 2 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 13 2016 1734 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: SULFUR DIOXIDE Molecular Weight: 64,06 g/mol
AEGL-1 (60 min): 0.2 ppm AEGL-2 (60 min): 0.75 ppm AEGL-3 (60 min): 30 ppm
IDLH: 100 ppm
Ambient Boiling Point: -10.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 1,77 kilograms/sec Source Height: 437 meters
Release Duration: 60 minutes
Release Rate: 646 kilograms/min
Total Amount Released: 38 772 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 3 cellules de stockage de pneumatiques

**Dispersion du $SO_2$**

Condition D, vent 5 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 13 2016 1735 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: SULFUR DIOXIDE Molecular Weight: 64,06 g/mol
AEGL-1 (60 min): 0.2 ppm AEGL-2 (60 min): 0.75 ppm AEGL-3 (60 min): 30 ppm
IDLH: 100 ppm
Ambient Boiling Point: -10.3° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1000000 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: 1,77 kilograms/sec Source Height: 175 meters
Release Duration: 60 minutes
Release Rate: 646 kilograms/min
Total Amount Released: 38 772 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 3 cellules de stockage de pneumatiques
**Dispersion du $SO_2$**
Condition F, vent 3 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)
Time: June 13 2016 1737 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: SULFUR DIOXIDE Molecular Weight: 64,06 g/mol
AEGL-1 (60 min): 0.2 ppm AEGL-2 (60 min): 0.75 ppm AEGL-3 (60 min): 30 ppm
IDLH: 100 ppm
Ambient Boiling Point: -10.3° 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: 1,77 kilograms/sec Source Height: 291 meters
Release Duration: 60 minutes
Release Rate: 646 kilograms/min
Total Amount Released: 38 772 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 3 cellules de stockage de pneumatiques
**Dispersion du $NO_2$**
Condition A, vent 2 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.42 (unsheltered single storied)
Time: June 13 2016 1738 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: NITROGEN DIOXIDE Molecular Weight: 46,01 g/mol
AEGL-1 (60 min): 0.5 ppm AEGL-2 (60 min): 12 ppm AEGL-3 (60 min): 20 ppm
IDLH: 20 ppm
Ambient Boiling Point: 20.8° C
Vapor Pressure at Ambient Temperature: 0.95 atm
Ambient Saturation Concentration: 959,180 ppm or 95.9%

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: 3,06 kilograms/sec Source Height: 437 meters
Release Duration: 60 minutes
Release Rate: 184 kilograms/min
Total Amount Released: 11 016 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 3 cellules de stockage de pneumatiques
**Dispersion du $NO_2$**
Condition D, vent 5 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 1.04 (unsheltered single storied)
Time: June 13 2016 1740 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: NITROGEN DIOXIDE Molecular Weight: 46,01 g/mol
AEGL-1 (60 min): 0.5 ppm AEGL-2 (60 min): 12 ppm AEGL-3 (60 min): 20 ppm
IDLH: 20 ppm
Ambient Boiling Point: 20.8° C
Vapor Pressure at Ambient Temperature: 0.95 atm
Ambient Saturation Concentration: 959,180 ppm or 95.9%

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: 3,06 kilograms/sec Source Height: 175 meters
Release Duration: 60 minutes
Release Rate: 184 kilograms/min
Total Amount Released: 11 016 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 3 cellules de stockage de pneumatiques
**Dispersion du $NO_2$**
Condition F, vent 3 m/s

SITE DATA INFORMATION:
Location: ARTENAY, FRANCE
Building Air Exchanges Per Hour: 0.61 (unsheltered single storied)
Time: June 13 2016 1742 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: NITROGEN DIOXIDE Molecular Weight: 46,01 g/mol
AEGL-1 (60 min): 0.5 ppm AEGL-2 (60 min): 12 ppm AEGL-3 (60 min): 20 ppm
IDLH: 20 ppm
Ambient Boiling Point: 20.8° C
Vapor Pressure at Ambient Temperature: 0.95 atm
Ambient Saturation Concentration: 959,180 ppm or 95.9%

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: 3,06 kilograms/sec Source Height: 291 meters
Release Duration: 60 minutes
Release Rate: 184 kilograms/min
Total Amount Released: 11 016 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 3 cellules de stockage de pneumatiques
**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 13 2016 1742 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID Molecular Weight: 46,03 g/mol
ERPG-1: 3 ppm ERPG-2: 25 ppm ERPG-3: 250 ppm
IDLH: 30 ppm LEL: 120000 ppm UEL: 380000 ppm
Ambient Boiling Point: 100.2° C
Vapor Pressure at Ambient Temperature: 0.044 atm
Ambient Saturation Concentration: 44,376 ppm or 4.44%

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: 0,122 kilograms/sec Source Height: 437 meters
Release Duration: 60 minutes
Release Rate: 7,32 kilograms/min
Total Amount Released: 439 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 3 cellules de stockage de pneumatiques

**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 13 2016 1744 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID Molecular Weight: 46,03 g/mol
ERPG-1: 3 ppm ERPG-2: 25 ppm ERPG-3: 250 ppm
IDLH: 30 ppm LEL: 120000 ppm UEL: 380000 ppm
Ambient Boiling Point: 100.2° C
Vapor Pressure at Ambient Temperature: 0.044 atm
Ambient Saturation Concentration: 44,376 ppm or 4.44%

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: 0,122 kilograms/sec Source Height: 175 meters
Release Duration: 60 minutes
Release Rate: 7,32 kilograms/min
Total Amount Released: 439 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 3 cellules de stockage de pneumatiques
**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 13 2016 1745 hours ST (using computer's clock)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID Molecular Weight: 46,03 g/mol
ERPG-1: 3 ppm ERPG-2: 25 ppm ERPG-3: 250 ppm
IDLH: 30 ppm LEL: 120000 ppm UEL: 380000 ppm
Ambient Boiling Point: 100.2° C
Vapor Pressure at Ambient Temperature: 0.044 atm
Ambient Saturation Concentration: 44,376 ppm or 4.44%

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: 0,122 kilograms/sec Source Height: 291 meters
Release Duration: 60 minutes
Release Rate: 7,32 kilograms/min
Total Amount Released: 439 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 3 cellules de stockage de pneumatiques
**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 13 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: 118973 kilograms/sec Source Height: 437 meters
Release Duration: 60 minutes
Release Rate: 7 140 000 kilograms/min
Total Amount Released: $4{,}28.10^{8}$ 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 3 cellules de stockage de pneumatiques
**Dispersion des fumées d'incendie_ Seuils 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 13 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: 118973 kilograms/sec Source Height: 175 meters
Release Duration: 60 minutes
Release Rate: 7 140 000 kilograms/min
Total Amount Released: $4{,}28.10^{8}$ 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 3 cellules de stockage de pneumatiques
**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 13 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: 118973 kilograms/sec Source Height: 291 meters
Release Duration: 60 minutes
Release Rate: 7 140 000 kilograms/min
Total Amount Released: $4{,}28.10^{8}$ 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.