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----- START OF SESSION 1(mYBNewNeutralGasDispersionConcentration) -----
INPUT
Model..... : Neutral gas release; concentration
              (196)
Version..... : 5.13
Reference... : Yellow Book (CPR-14E), 3rd edition
              1997, Chapter 4
Case description..... : 70942-Sc21-DispData-0,5LFL-F2
Chemical name..... : Methane
Type of release..... : Continuous
Mass flow rate of the source..... : 0.54 kg/s
  X-coordinate of release..... : 0 m
  Y-coordinate of release..... : 0 m
  Z-coordinate (height) of release..... : 1 m
Length source in wind (x) direction..... : 0.03 m
Length source in crosswind (y) direction..... : 0.03 m
Length source in vertical (z) direction..... : 0.03 m
Ambient temperature..... : 25 °C
Meteorological data..... : Pasquill
Pasquill stability class..... : F (Very Stable)
Latitude of the location..... : 51 deg
Wind speed at 10 m height..... : 2 m/s
Roughness length description..... : Cultivated land
Concentration averaging time..... : 600 s
  Distance from release (Xd)..... : 450 m
  Distance perpendicular to wind direction (Yd)..... : 0 m
  Height (Zd)..... : 1.7 m
Predefined concentration..... : User defined
Threshold concentration..... : 16677 mg/m3
Contour plot accuracy..... : 1 %
Integration tolerance..... : 0.1 %
Predefined wind direction..... : User defined
Wind comes from (West = 180 degrees)..... : 180 deg

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## RESULTS

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Concentration at (X,Y,Z)..... : 621.92 mg/m3
Inverse Monin-Obukhov length (1/L) used..... : 0.057774 1/m
Mixing height used..... : 56.441 m
Stand. dev. of turbulent velocity in vert. direction used... : 0.16747 m/s
Stand. dev. of turbulent velocity in horiz. direction used.. : 0.24477 m/s
Maximum distance to threshold concentration..... : 39.345 m

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----- END OF SESSION 1 -----

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## Administrative &amp; version data:

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Main program (production date) : Effects (15 Jan 2008  10:23:00)
Run mode (complexity level)   : Expert
Model name                    : Neutral gas release; concentration (196)
Date of this calculation      : 24 May 2013  13:08:36
License owner                 : Marco
Calculation performed by     : Marco
Software library version     : 7.5.2.0836
Model driver version(s)      : 5.13
Model driver last modification : 28 Mar 2007
Model executable version(s)  : N/A
Session nr.                  : 1
References                   : Yellow Book (CPR-14E), 3rd edition 1997, Chapter 4
Project file name            : "70942-Scenario 21.alf"
Chemical database used       : "Purple Book (1999).rdb" (04 dic 2007  15:00:44)
Environment database used    : "Purple Book (1999).Env" (20 set 2012  15:14:08)
System database used         : "Purple Book (1999).SPF" (20 set 2012  15:12:42)
Dispersion database used     : "Purple Book (1999).dpf" (30 lug 2007  12:00:00)
Map background file used     : "70942-Scenario 21.gbf" (01 gen  0  00:00:00)
Project file directory       : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"
Chemical database directory  : "C:\Program Files\TNO\Effects 75\Shared data\Databases"
Environment database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"
System database directory    : "C:\Program Files\TNO\Effects 75\Shared data\Databases"
Dispersion database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"
Map background directory     : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"

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End of administrative & version data:
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## Session 2

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----- START OF SESSION 2(mYBNewNeutralGasDispersionConcentration) -----
INPUT

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Model..... : Neutral gas release; concentration
              (196)
Version..... : 5.13
Reference... : Yellow Book (CPR-14E), 3rd edition
              1997, Chapter 4
Case description..... : 70942-Sc21-DispData-LFL-F2
Chemical name..... : Methane
Type of release..... : Continuous
Mass flow rate of the source..... : 0.54 kg/s
  X-coordinate of release..... : 0 m

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Y-coordinate of release..... : 0 m  
Z-coordinate (height) of release..... : 1 m  
Length source in wind (x) direction..... : 0.03 m  
Length source in crosswind (y) direction..... : 0.03 m  
Length source in vertical (z) direction..... : 0.03 m  
Ambient temperature..... : 25 °C  
Meteorological data..... : Pasquill  
Pasquill stability class..... : F (Very Stable)  
Latitude of the location..... : 51 deg  
Wind speed at 10 m height..... : 2 m/s  
Roughness length description..... : Cultivated land  
Concentration averaging time..... : 600 s  
Distance from release (Xd)..... : 450 m  
Distance perpendicular to wind direction (Yd)..... : 0 m  
Height (Zd)..... : 1.7 m  
Predefined concentration..... : LEL (Lower Explosion Limit)  
Threshold concentration..... : 33353 mg/m3  
Contour plot accuracy..... : 1 %  
Integration tolerance..... : 0.1 %  
Predefined wind direction..... : User defined  
Wind comes from (West = 180 degrees)..... : 180 deg

## RESULTS

Concentration at (X,Y,Z)..... : 621.92 mg/m3  
Inverse Monin-Obukhov length (1/L) used..... : 0.057774 1/m  
Mixing height used..... : 56.441 m  
Stand. dev. of turbulent velocity in vert. direction used... : 0.16747 m/s  
Stand. dev. of turbulent velocity in horiz. direction used.. : 0.24477 m/s  
Maximum distance to threshold concentration..... : 20.466 m

----- END OF SESSION 2 -----

## Administrative & version data:

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Main program (production date) : Effects (15 Jan 2008 10:23:00)  
Run mode (complexity level) : Expert  
Model name : Neutral gas release; concentration (196)  
Date of this calculation : 24 May 2013 13:08:37  
License owner : Marco  
Calculation performed by : Marco  
Software library version : 7.5.2.0836  
Model driver version(s) : 5.13  
Model driver last modification : 28 Mar 2007  
Model executable version(s) : N/A  
Session nr. : 2  
References : Yellow Book (CPR-14E), 3rd edition 1997, Chapter 4  
Project file name : "70942-Scenario 21.alf"  
Chemical database used : "Purple Book (1999).rdb" (04 dic 2007 15:00:44)  
Environment database used : "Purple Book (1999).Env" (20 set 2012 15:14:08)  
System database used : "Purple Book (1999).SPF" (20 set 2012 15:12:42)  
Dispersion database used : "Purple Book (1999).dpf" (30 lug 2007 12:00:00)  
Map background file used : "70942-Scenario 21.gbf" (01 gen 0 00:00:00)  
Project file directory : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"  
Chemical database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Environment database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
System database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Dispersion database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Map background directory : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"  
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End of administrative & version data:

## Session 3

----- START OF SESSION 3(mYBNewNeutralGasDispersionConcentration) -----

### INPUT

Model..... : Neutral gas release; concentration (196)  
Version..... : 5.13  
Reference..... : Yellow Book (CPR-14E), 3rd edition 1997, Chapter 4  
Case description..... : 70942-Sc21-DispData-0,5LFL-D5  
Chemical name..... : Methane  
Type of release..... : Continuous  
Mass flow rate of the source..... : 0.54 kg/s  
X-coordinate of release..... : 0 m  
Y-coordinate of release..... : 0 m  
Z-coordinate (height) of release..... : 1 m  
Length source in wind (x) direction..... : 0.03 m  
Length source in crosswind (y) direction..... : 0.03 m  
Length source in vertical (z) direction..... : 0.03 m  
Ambient temperature..... : 25 °C  
Meteorological data..... : Pasquill  
Pasquill stability class..... : D (Neutral)  
Latitude of the location..... : 51 deg  
Wind speed at 10 m height..... : 5 m/s  
Roughness length description..... : Cultivated land  
Concentration averaging time..... : 600 s  
Distance from release (Xd)..... : 450 m  
Distance perpendicular to wind direction (Yd)..... : 0 m  
Height (Zd)..... : 1.7 m

Redefined concentration..... : User defined  
Threshold concentration..... : 16677 mg/m3  
Contour plot accuracy..... : 1 %  
Integration tolerance..... : 0.1 %  
Predefined wind direction..... : User defined  
Wind comes from (West = 180 degrees)..... : 180 deg

RESULTS

Concentration at (X,Y,Z)..... : 43.962 mg/m3  
Inverse Monin-Obukhov length (1/L) used..... : 0 1/m  
Mixing height used..... : 500 m  
Stand. dev. of turbulent velocity in vert. direction used... : 0.7618 m/s  
Stand. dev. of turbulent velocity in horiz. direction used.. : 1.1089 m/s  
Maximum distance to threshold concentration..... : 7.3498 m

----- END OF SESSION 3 -----

Administrative & version data:

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Main program (production date) : Effects (15 Jan 2008 10:23:00)  
Run mode (complexity level) : Expert  
Model name : Neutral gas release; concentration (196)  
Date of this calculation : 24 May 2013 13:08:37  
License owner : Marco  
Calculation performed by : Marco  
Software library version : 7.5.2.0836  
Model driver version(s) : 5.13  
Model driver last modification : 28 Mar 2007  
Model executable version(s) : N/A  
Session nr. : 3  
References : Yellow Book (CPR-14E), 3rd edition 1997, Chapter 4  
Project file name : "70942-Scenario 21.alf"  
Chemical database used : "Purple Book (1999).rdb" (04 dic 2007 15:00:44)  
Environment database used : "Purple Book (1999).Env" (20 set 2012 15:14:08)  
System database used : "Purple Book (1999).SPF" (20 set 2012 15:12:42)  
Dispersion database used : "Purple Book (1999).dpf" (30 lug 2007 12:00:00)  
Map background file used : "70942-Scenario 21.gbf" (01 gen 0 00:00:00)  
Project file directory : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"  
Chemical database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Environment database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
System database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Dispersion database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Map background directory : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"  
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End of administrative & version data:

Session 4

----- START OF SESSION 4(mYBNewNeutralGasDispersionConcentration) -----

INPUT

Model..... : Neutral gas release; concentration (196)  
Version..... : 5.13  
Reference..... : Yellow Book (CPR-14E), 3rd edition 1997, Chapter 4  
Case description..... : 70942-Sc21-DispData-0,5LFL-D5  
Chemical name..... : Methane  
Type of release..... : Continuous  
Mass flow rate of the source..... : 0.54 kg/s  
X-coordinate of release..... : 0 m  
Y-coordinate of release..... : 0 m  
Z-coordinate (height) of release..... : 1 m  
Length source in wind (x) direction..... : 0.03 m  
Length source in crosswind (y) direction..... : 0.03 m  
Length source in vertical (z) direction..... : 0.03 m  
Ambient temperature..... : 25 °C  
Meteorological data..... : Pasquill  
Pasquill stability class..... : D (Neutral)  
Latitude of the location..... : 51 deg  
Wind speed at 10 m height..... : 5 m/s  
Roughness length description..... : Cultivated land  
Concentration averaging time..... : 600 s  
Distance from release (Xd)..... : 450 m  
Distance perpendicular to wind direction (Yd)..... : 0 m  
Height (Zd)..... : 1.7 m  
Predefined concentration..... : LEL (Lower Explosion Limit)  
Threshold concentration..... : 33353 mg/m3  
Contour plot accuracy..... : 1 %  
Integration tolerance..... : 0.1 %  
Predefined wind direction..... : User defined  
Wind comes from (West = 180 degrees)..... : 180 deg

RESULTS

Concentration at (X,Y,Z)..... : 43.962 mg/m3  
Inverse Monin-Obukhov length (1/L) used..... : 0 1/m  
Mixing height used..... : 500 m

Stand. dev. of turbulent velocity in vert. direction used... : 0.7618 m/s  
Stand. dev. of turbulent velocity in horiz. direction used.. : 1.1089 m/s  
Maximum distance to threshold concentration..... : 0 m

----- END OF SESSION 4 -----

Administrative & version data:

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Main program (production date) : Effects (15 Jan 2008 10:23:00)  
Run mode (complexity level) : Expert  
Model name : Neutral gas release; concentration (196)  
Date of this calculation : 24 May 2013 13:08:40  
License owner : Marco  
Calculation performed by : Marco  
Software library version : 7.5.2.0836  
Model driver version(s) : 5.13  
Model driver last modification : 28 Mar 2007  
Model executable version(s) : N/A  
Session nr. : 4  
References : Yellow Book (CPR-14E), 3rd edition 1997, Chapter 4  
Project file name : "70942-Scenario 21.alf"  
Chemical database used : "Purple Book (1999).rdb" (04 dic 2007 15:00:44)  
Environment database used : "Purple Book (1999).Env" (20 set 2012 15:14:08)  
System database used : "Purple Book (1999).SPF" (20 set 2012 15:12:42)  
Dispersion database used : "Purple Book (1999).dpf" (30 lug 2007 12:00:00)  
Map background file used : "70942-Scenario 21.gbf" (01 gen 0 00:00:00)  
Project file directory : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"  
Chemical database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Environment database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
System database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Dispersion database directory : "C:\Program Files\TNO\Effects 75\Shared data\Databases"  
Map background directory : "Z:\Documenti\70000\70942 PROGER Fiume Treste NOF PmagPi\Elaborati\21"  
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End of administrative & version data: