

DuPont Modeling Methodology and Results

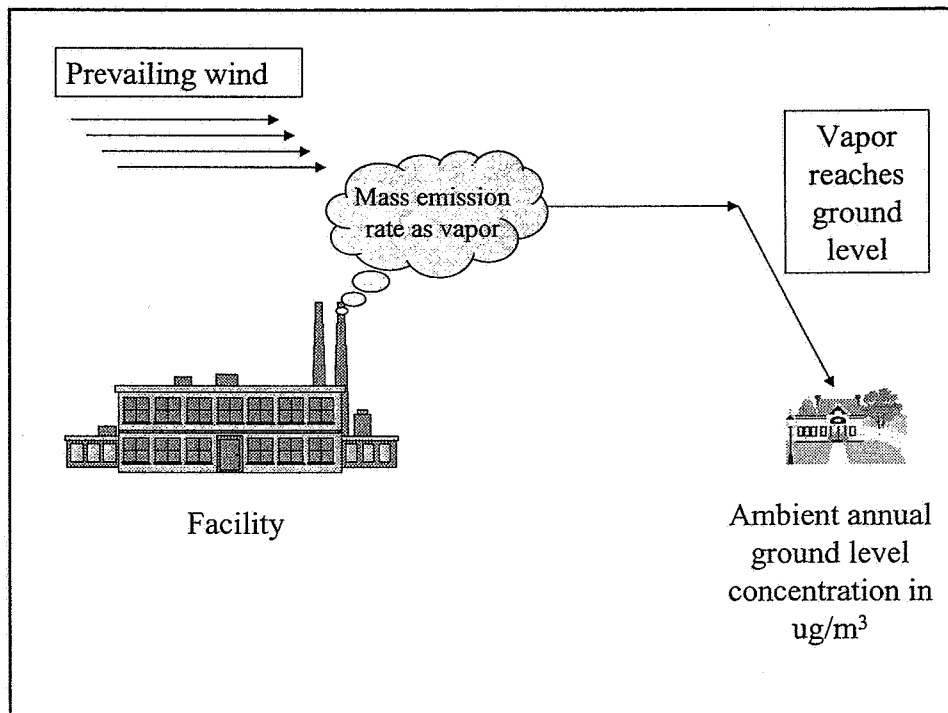
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Dordrecht Site

June 2003

About the Model

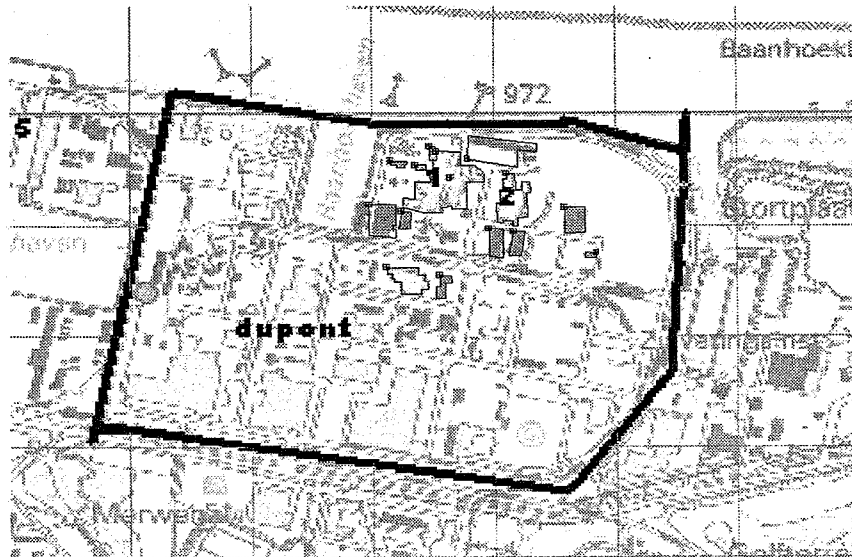
- Industrial Source Complex Short Term 3 (ISCST3)
- Sold/used globally, including in The Netherlands
<http://www.phoenix-r.co.jp/products/products.htm>
- Input
 - Stack height, diameter
 - Flowrate, temperature
 - Mass of pollutant (mass per time)
 - Local meteorological data (Rotterdam, 1996 - 2000)
- Output
 - Ambient air concentrations in ug/m3
 - Max values and locations outside the property line



Model Calculations

- Ambient air concentrations based on Gaussian Equation
- Concentration a function of a vertical term and a dispersion term
- Vertical term based on stack height, receptor elevation, plume rise, mixing
- Dispersion parameters describe distribution of pollutant in lateral and vertical

Dordrecht Plant Site



Dordrecht Modeling Inputs - Stack Parameters

	<u>PTFE</u>	<u>FEP</u>
Stack Height (m)	20.95	30.0
Stack Diam. (cm)	140	40
Stack Velocity (m/s)	3.2	1.3
Stack Exit Temp. (°C)	54	73
Emission Rate (kg/yr)	149	191

Preliminary Modeling Results

- Maximum concentrations calculated as 0.057 ug/m^3
- Well below goal of 1.0 ug/m^3
- Point of maximum concentration at northern boundary of site (on property line, along shoreline)

