the contenance contenance and to an is a state office NRW ~

in Germany with the regulatory model AUSTAL2000 (Lagrangian particle model)

conterence

e.g. open stables, clarifiers

conference mt-Field inspection for the source of interest yields odour ent as frequencies at different assessor positions





Assign concentration fluctuations to each core plume (Weibull distribution, derived from COFIN experiments)

conference

4. Fold with the perception function to obtain the odour perception frequency



- conterence Known sources can be accounted for ۲ 19e 200
 - 13 Complex terrain (buildings, terrain profile) can be accounted for in the dispersion calculation with AUSTAL2000

-

detailed input data required, computationally combined expensive

Use of dispersion class statistics

Application by non-expert users supported by a graphical user interface (Internet application envisioned)

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ference ESOFIN Version 1.0.3 D:\austal2000\2.3\wi-x\austal2000.exe Select... Program Project D:\esofin-1.0\test\uttw-f Select... Title Uttenweiler, Experiment F Check F: 2000-12-13.13:05:00 to 2000-12-13.13:15:00 -Periods Start Information 1 sources, 11 assessors, 60 records each Reset esofin.csv Show Odor perception frequencies: No Assessor Measured Modelled F.T1P1 0.48 0.24 F.T1P2 1.00 0.78 0.90 F.T1P3 0.90 0.77 0.81 F.T1P4 F.T1P5 0.05 0.90 F.T1P6 0.00 0.01 F.T2P1 0.75 0.23 F.T2P2 0.62 0.56 F.T2P3 0.88 0.78 F.T2P4 0.88 0.77 11 F.T2P5 0.28 0.63 Median (measured): 0.75 Median (modelled): 0.77 Correlation : 0.88 Estimated source strength (kGE/s): 25 4 • ESOFIN allows to estimate the emission strength of an odor source on the basis of measured odor frequencies which were obtained in field inspections for this source (one or more assessment periods of typically 10 minutes duration each). The estimate is carried out by comparing the measured odor frequencies with the modelled ones for the given assessor positions. The modelled odor frequencies are obtained from the time series of modelled odor concentrations (minute averages) in combination with a theoretical description of the concentration fluctuations and the odor perception curve.