

OH Sub No. 18

Reed From: Dorte Rasmussen  
Dublin City C.

Environmental Protection Agency

16 APR 2008

ORAL HEARING  
RECEIVED

WtE EPA Oral Hearing

## Chapter 12 Water

Inquiries to:

Thermal Plume

Recirculation

Mr. Jacob Vested

Biocides

Dr. Dorte Rasmussen

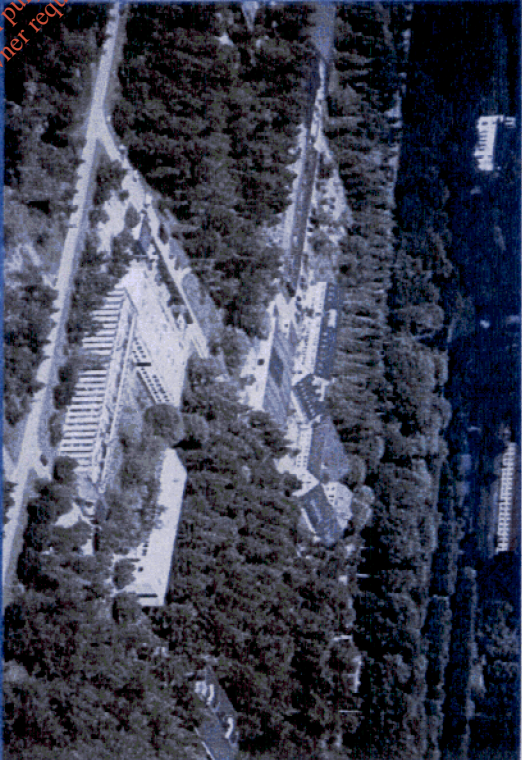
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## WTE Oral Hearing



# DHI Water. Environment. Health



Independent, international consulting and research organisation.  
Objectives are to advance technological development and competence within the fields of water, environment and health.

Offers a wide range of consulting services and leading edge technologies, software tools, chemical / biological laboratories and physical model test facilities as well as field surveys and monitoring programmes.

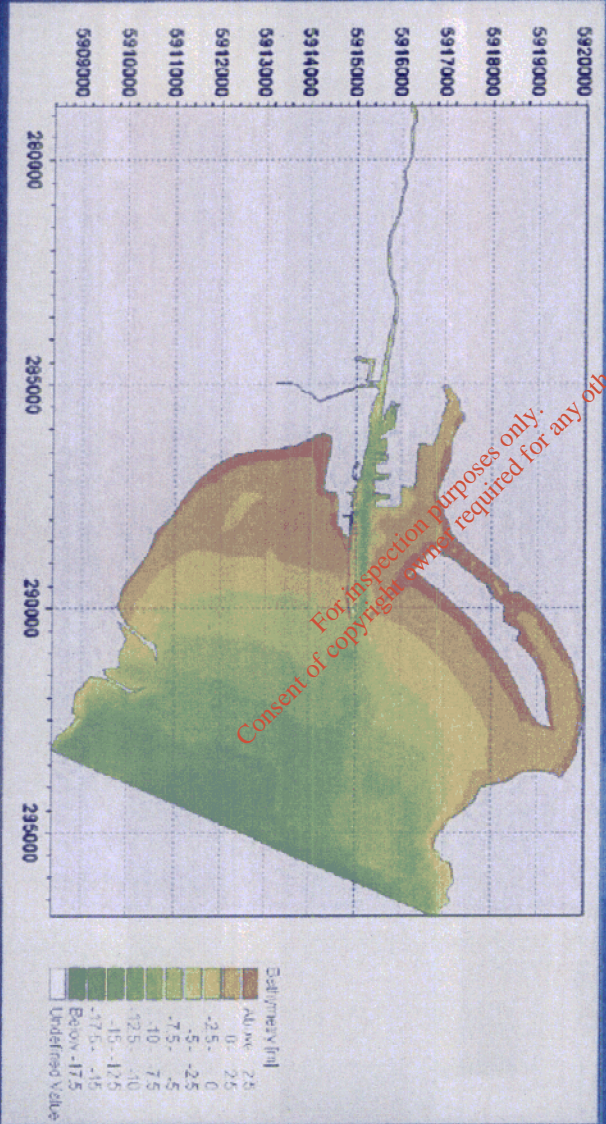
We are 640 employees based in 19 countries worldwide.

Environmental Protection Agency  
12 APR 2003  
ORAL HEARING

# WTE Thermal Plume



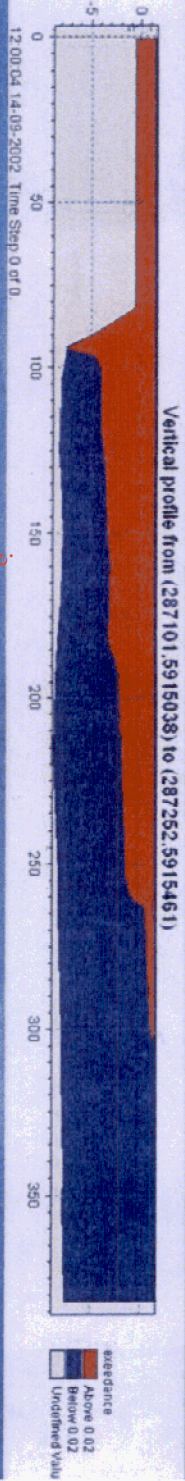
MIKE 3 Hydrodynamic and Thermal Plume Model  
set up and calibrated with field measurements  
of water levels, currents, temperature and salinity



# WTE Oral Hearing



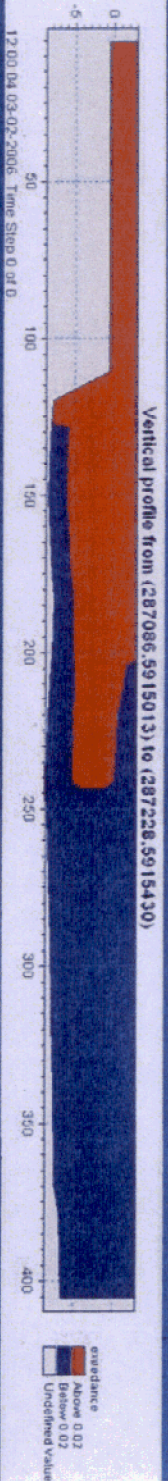
## a) Excess temperature (1.5 deg C) - 98% conformance



## b) Absolute temperature (21.5 deg C) - 98% conformance



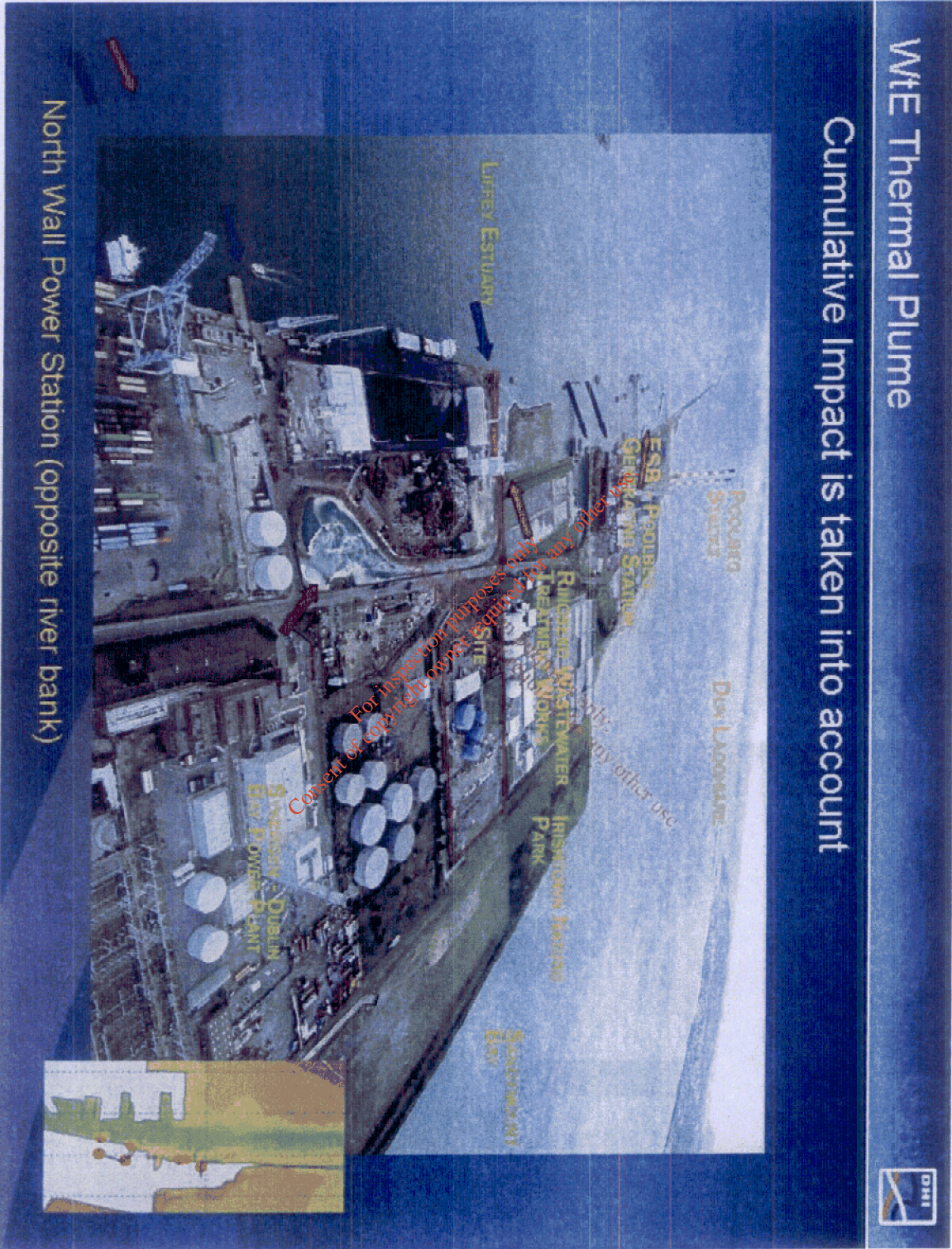
## c) Absolute temperature (10 deg C) - 98% conformance



# WTE Thermal Plume

## Cumulative Impact is taken into account

North Wall Power Station (opposite river bank)



# WTE Thermal Plume



## Calibration

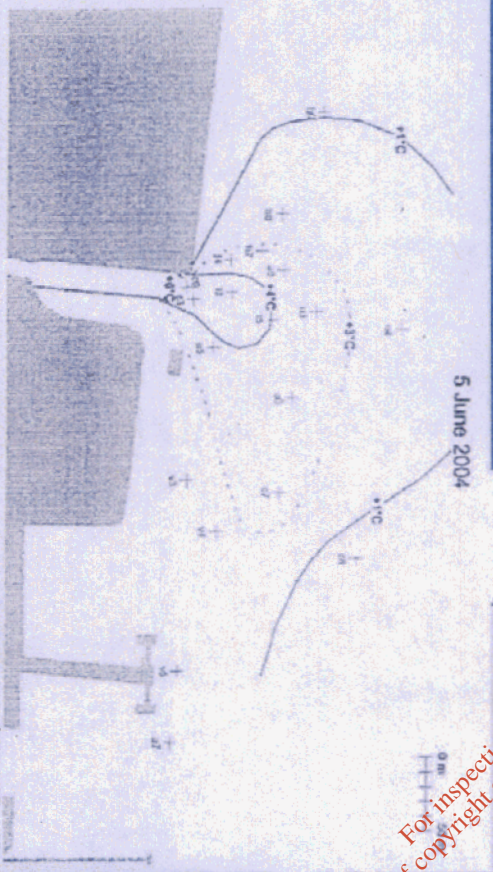
June 2004

Comparison between measured (Svend Ole Hansen Aps 2005) and simulated surface plume

- 5915400
- 5915350
- 5915300
- 5915250
- 5915200
- 5915150
- 5915100
- 5915050
- 5915000
- 5914950



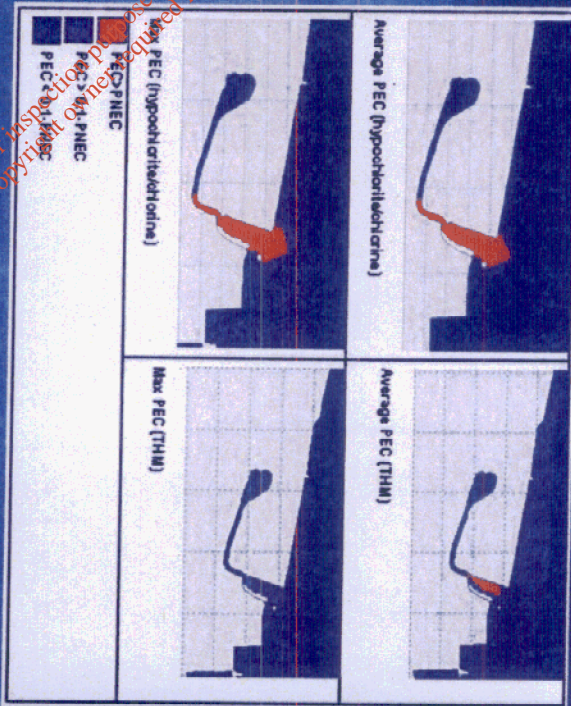
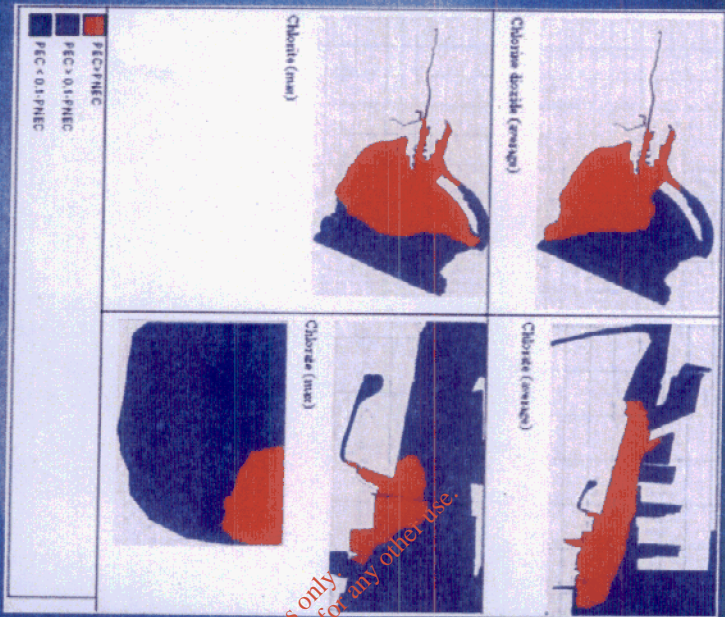
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p 230 of 211, Sigma Layer No. 5 of 5



- 1) Q = 6.0 m<sup>3</sup>/s, ΔT = 8.0 C  
Svend Ole Hansen Aps 2005
- 2) Q = 8.0 m<sup>3</sup>/s, ΔT = 6.8 C  
Average 2004 Synergen  
epa. ann. 2004



## Chlorine dioxide

## Chlorine hypochlorite

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