Advanced CALPUFF and ODOUR Course Outline

Bilbao, Spain
November 20-21, 2015

Instructor: Jenny Barclay

Friday, November 20 – Day 1

INTRODUCTION (8:30 a.m. – 10:30 a.m.)

1. Introduction
1.1 Odour Characteristics
1.2 Odour Measurement and units
1.3 Odour Intensity
1.4 Individual Dose-Response Odour Concentration Gradient
1.5 Grey 'area' Between Health and Annoyance
1.6 Nuisance Laws vs. Guidelines
1.7 Odour Regulation updates – Europe, America, Australasia

2. Odour Modelling
2.1 Why Conduct Air Modelling?
2.2 Regulatory Models for Odours
2.3 Latest Regulatory Status of Odour Models
2.3.1 CALPUFF Regulatory Status
2.3.2 Steady-State Conditions
2.3.3 Non-Steady State Conditions
2.4 Hedonic Tone and latest developments in Odour Science
2.5 Odour modelling vs regular modelling

3. Odour Modelling Processing
3.1 Adjustments to sub hourly guidelines
3.2 Percentiles
3.3 Peak to Mean Ratios

4. Introduction to CALPUFF Modelling System

Morning Break (10:30 a.m. – 10:45 a.m.)

5. Complex Flow Situations

6. Introduction Meteorological Modelling
6.1 Prognostic Models (WRF, MM5, TAPM, RAMS)
6.2 Numerical Model Data
6.3 Observations
6.4 3D Diagnostic Meteorological Model (CALMET)
6.5 2D Meteorological Data (AERMOD)

7. Odour Industry
7.1 Emissions
7.2 Sources
7.3 Fugitive Sources
7.4 Industry types

Lunch (12:30 a.m. – 1:30 p.m.)

HANDS-ON ODOUR COMPUTER EXERCISES (1:30 p.m. – 5:30 p.m.)

8.1 Introduction to CALApps and CALPUFF Version 7.
8.2 Simple CALApps Test Case Study
8.3 Hands on Odour Application using latest Beta Version of CALApps

Saturday, November 21 – Day 2

ADVANCED TOPICS (8:30 a.m. – 10:30 a.m.)

9. CALMET and Meteorology
    - 9.1 Development of Model Domains and Grid Resolution
    - 9.2 Terrain and Land use
    - 9.3 Critical Model Parameters – When To Use Them, How to Choose
    - 9.4 Sub-hourly Meteorology
        - 9.4.1 ASOS Stations USA
        - 9.4.2 Sonic Anemometers
        - 9.4.3 One Minute ASOS Data
        - 9.4.4 SURFCSV Generic Data File
    - 9.5 Low Wind Speed

10. Problems with AERMOD for Modelling Odours
    - 10.1 Surface Characteristics
    - 10.2 Calms, Light winds and Stagnation
    - 10.3 Cumulative Impacts
    - 10.4 Terrain

11. Meteorological Evaluation

12. CALPUFF Variable Emission Files

Morning Break (10:30 p.m. – 10:45 a.m.)

13. CALPUFF V7 New Developments

14. Advanced Source Types for Modelling

15. What Can Go Wrong?

16. Post Processing

17. Interpretation of Results

Lunch (12:30 p.m. – 1:30 p.m.)

HANDS-ON ODOUR COMPUTER EXERCISES (1:30 p.m. – 5:30 p.m.)

18.1 Sub-hourly case, calm conditions
18.2 Waste Water Treatment Plant
18.3 CALRANK, CALMAX, CALAVE

For any doubt, suggestion or issue, please contact us here:

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The registration period is open. Registration and payments should be made through the online platform in the following web address:

https://olores.stagehq.com/events/3518/booking/new

Course Fee:

790€ (VAT included*) (late registration available at a cost of 950€)
Last date for early registration: 30th October 2015.
Last date for late registration: 19th November 2015.