OCE meeting - Chicago, September 2005

**"Possible OCE WNTE investigations based
on real-world emissions data"**

Possible OCE WNTE investigations based on real-world emissions data

✓ **OBJECTIVE: to have a better understanding, from a European perspective, of the actual impact of the proposed NTE concept and to evaluate to what extent off-cycle emissions are covered by it**

✓ **HOW: by performing an analysis of real-world data**

PEMS Real-world emissions data

✓ **The European Commission through DG ENTR in cooperation with DG JRC has launched a co-operative research programme to study the feasibility of portable emission measurement systems in view of their application in Europe for IUC of heavy-duty vehicles.**

✓ **The DG JRC is participating in a consortium currently carrying out on-road emission measurement campaigns using PEMS.**

✓**An important set of data is already available**

Features of the PEMS data set

✓ **Real world emissions data, obtained with Portable Emissions Measurement Systems (PEMS)**

✓ **7 vehicles, 1 route per vehicle, 2 vehicle loads**
✓ **Second by second test data (Exhaust concentrations and flow, engine parameters, GPS)**
✓ **Second by second calculated data**
✓ **Averages and integrated values (mass   emissions, distance, fuel and brake specific)**

✓ **Data "filtering"**
    ✓ **Filter 1: Geographical (Sub-trips)**
    ✓ **Filter 2: Based on engine parameters (All engine operation or area of engine map like US-NTE area)**

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✓ **NTE shape and size of NTE window: To estimate the effect of the shape and size of different windows upon the final results**

- Mass emissions [g] or brake-specific emissions [g/kWh]
- US-NTE, WNTE, EU Control Area, Complete Area
- With or without the 30 second rule

✓ **WNTE minimum sampling period: To estimate the effect of the 'minimum sampling period' rule upon the final results**

- Total test time in WNTE area
- % of test time in WNTE area as function of the rule
- Emissions [g/kW] as function of the rule

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TIMING:

✓ **Time required to complete the analysis: 1.5 - 3 months**

✓ **Results could be available for the January meeting**