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UNECE GRPE

Particle Measurement Programme


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Extra Mass Tests in JRC
12nd – 13rd September 2006

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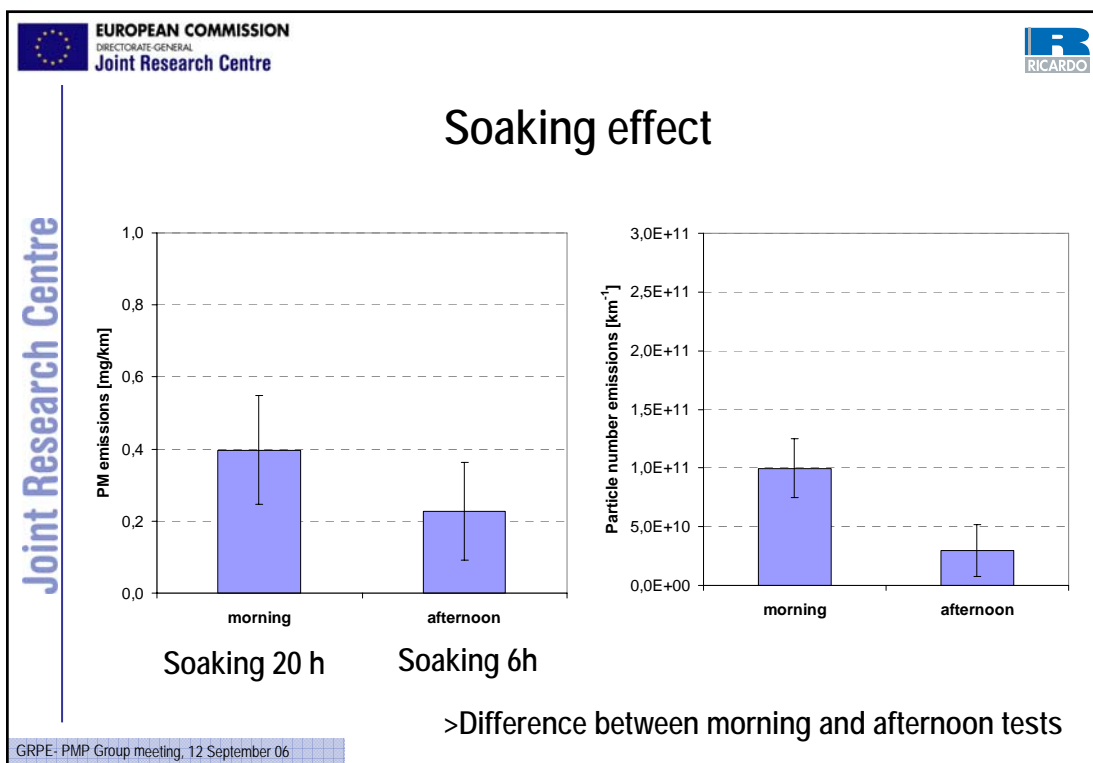
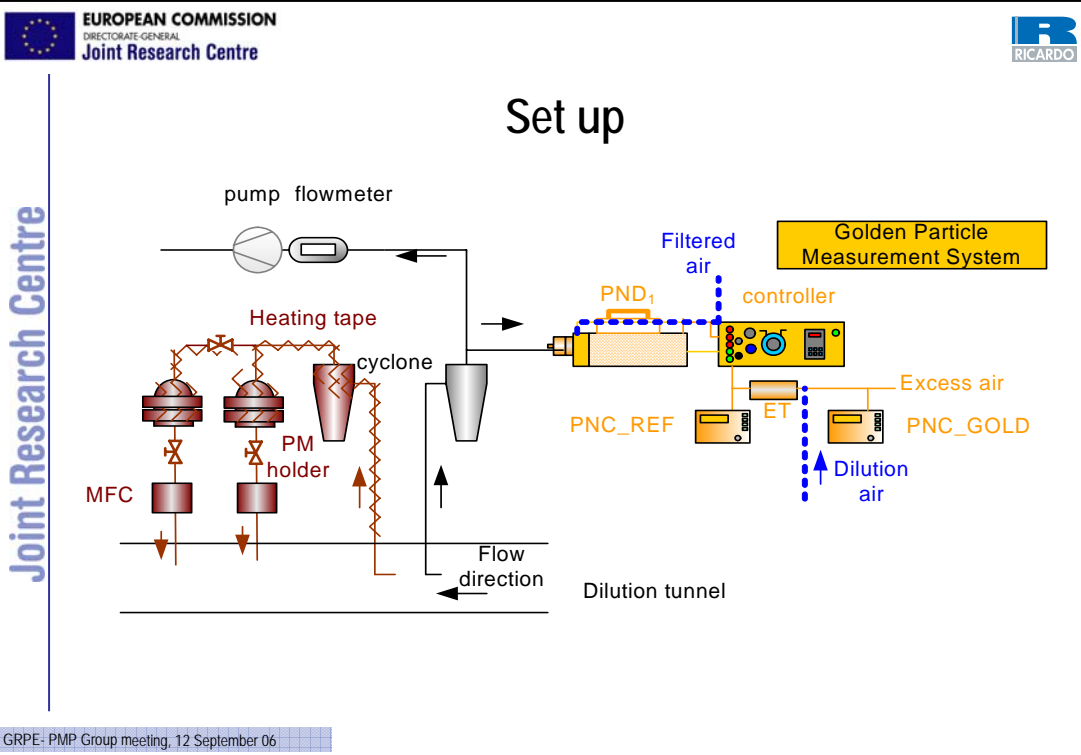
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Mass tests

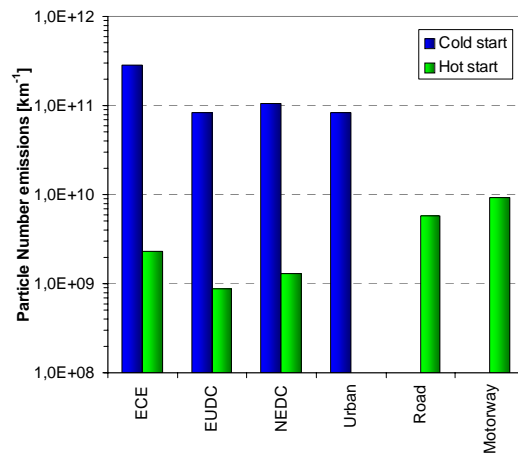
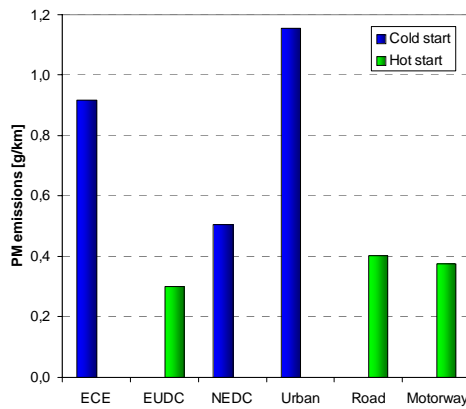
- Effect of conditioning on measurements
- Emission measurements on other test cycles
- Effect of cyclone pre-classifier on measurements
- Teflon filter paper PM test results
- 1 vs 2 filters
- DPF regeneration emissions
- Stabilization of DPF emissions post regeneration
- -7°C cold start performance

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Artemis cycles

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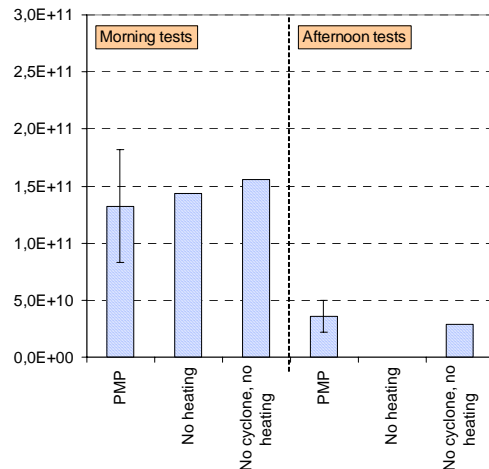
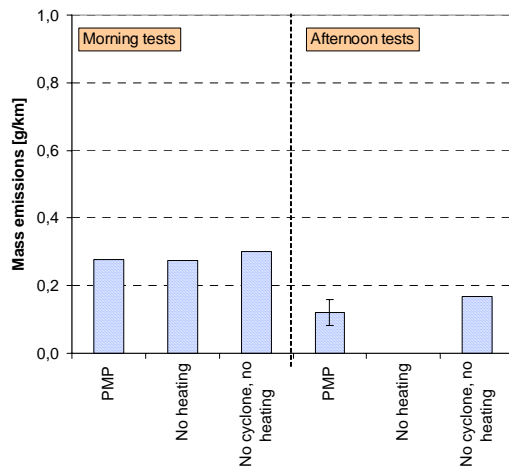


>Effect of cold start (soaking)
>No high emissions during Artemis cycles

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Effect of heating and cyclone

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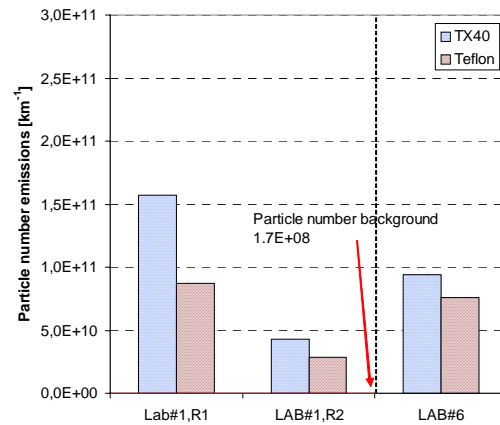
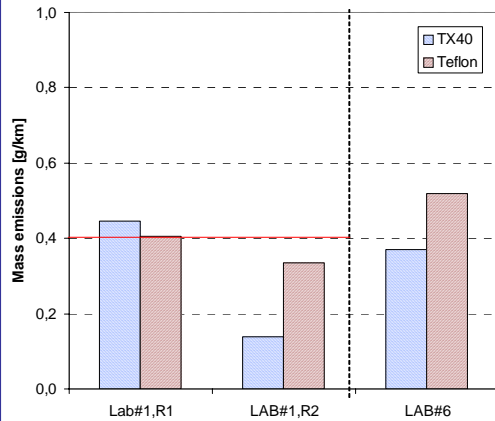


>No effect of heating or cyclone
(no repetitions)

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Effect of filter media

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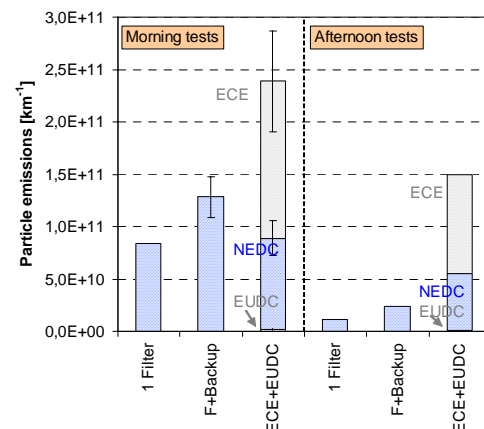
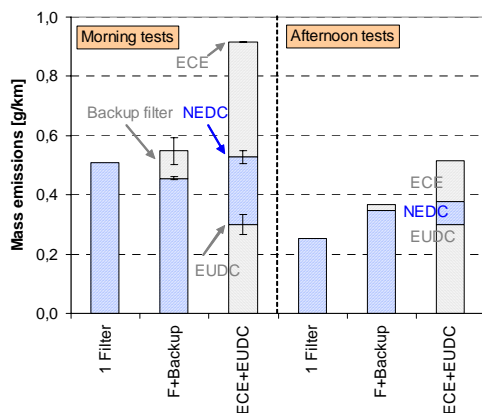


>No effect of TX40 or Teflo
(emissions similar level to background)

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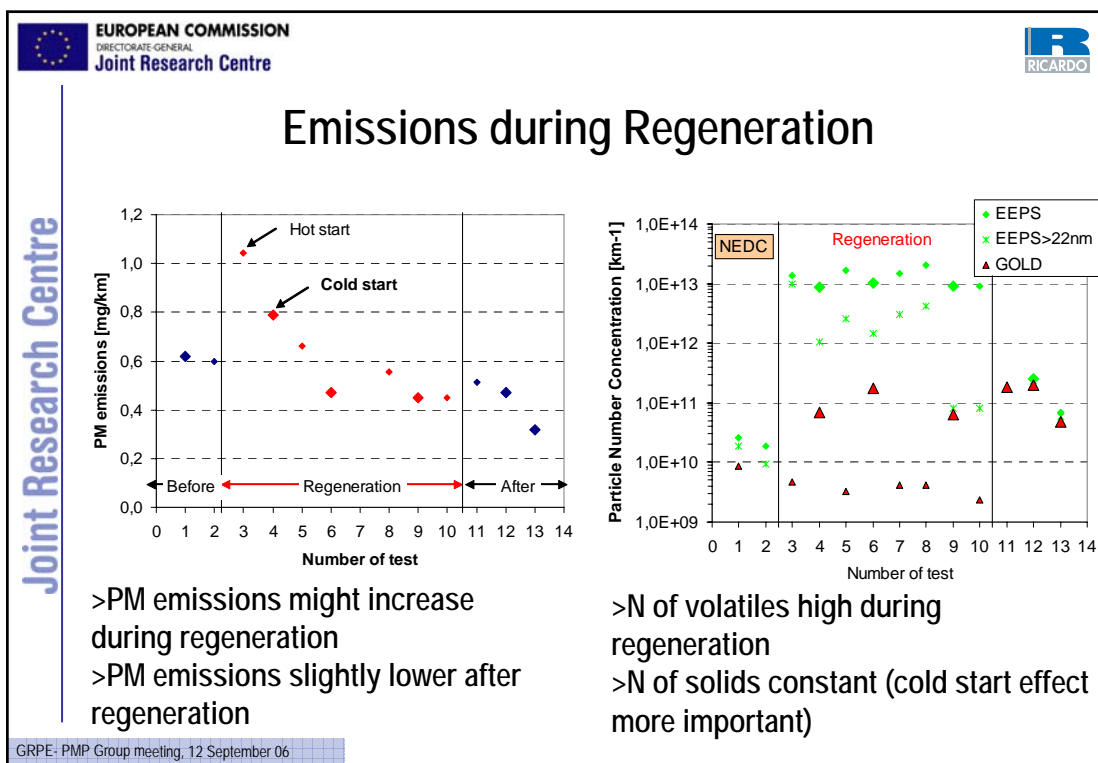
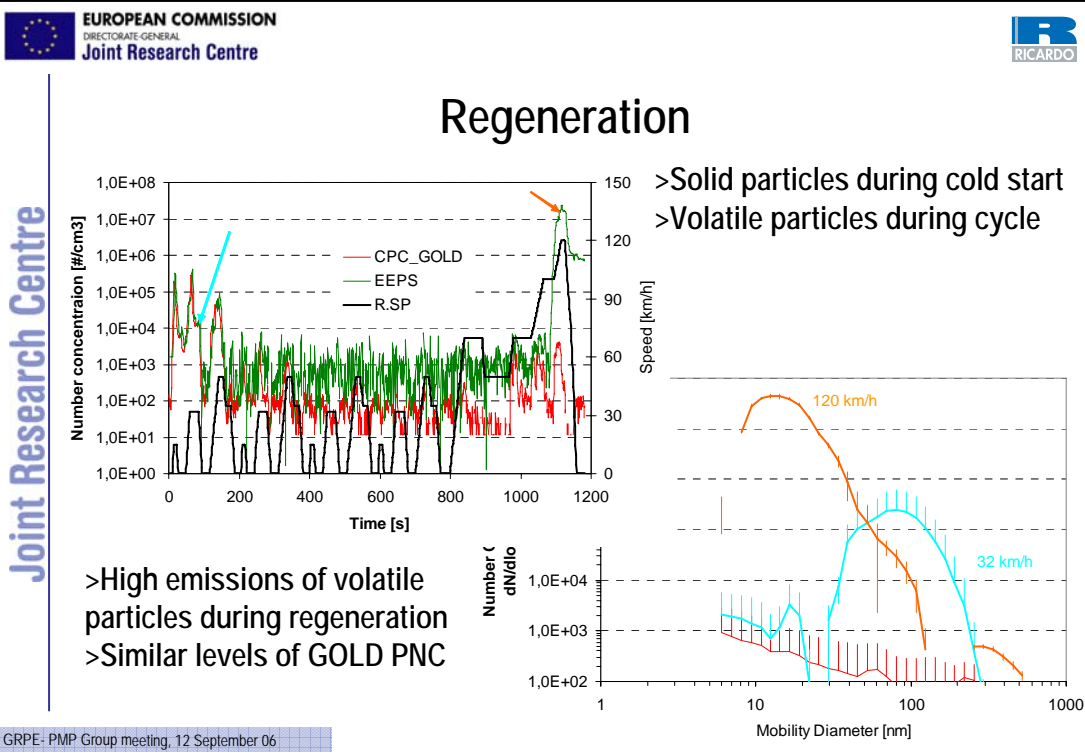
1 vs 2 filters

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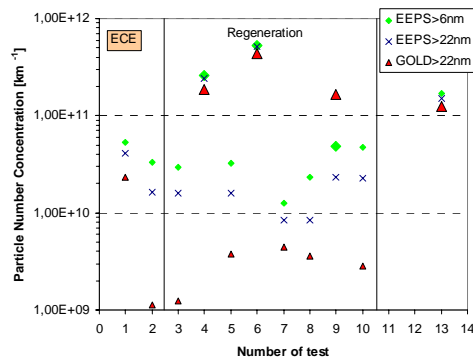
>Small effect of backup filter or extra filter for ECE part

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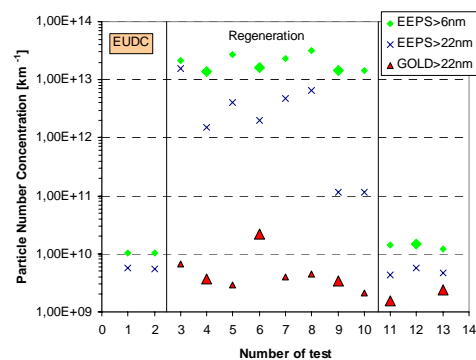


Emissions during Regeneration

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>Cold start effect more important during ECE

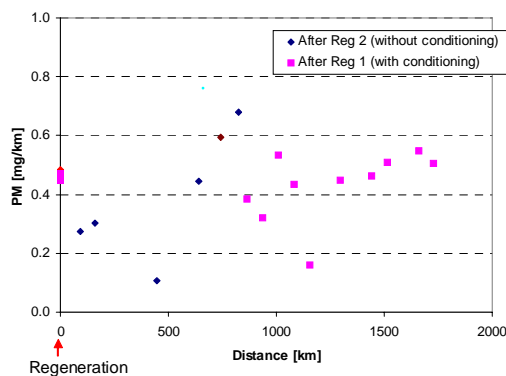


>Volatiles over EUDC high
>Solids over EUDC constant

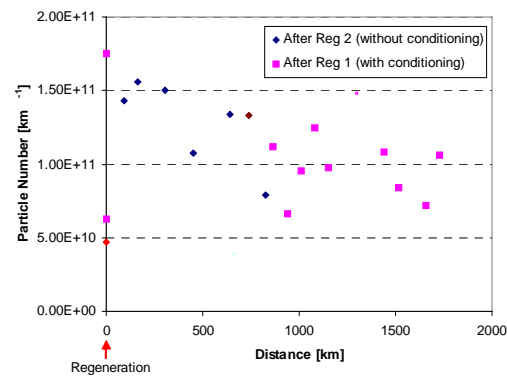
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DPF Stabilization

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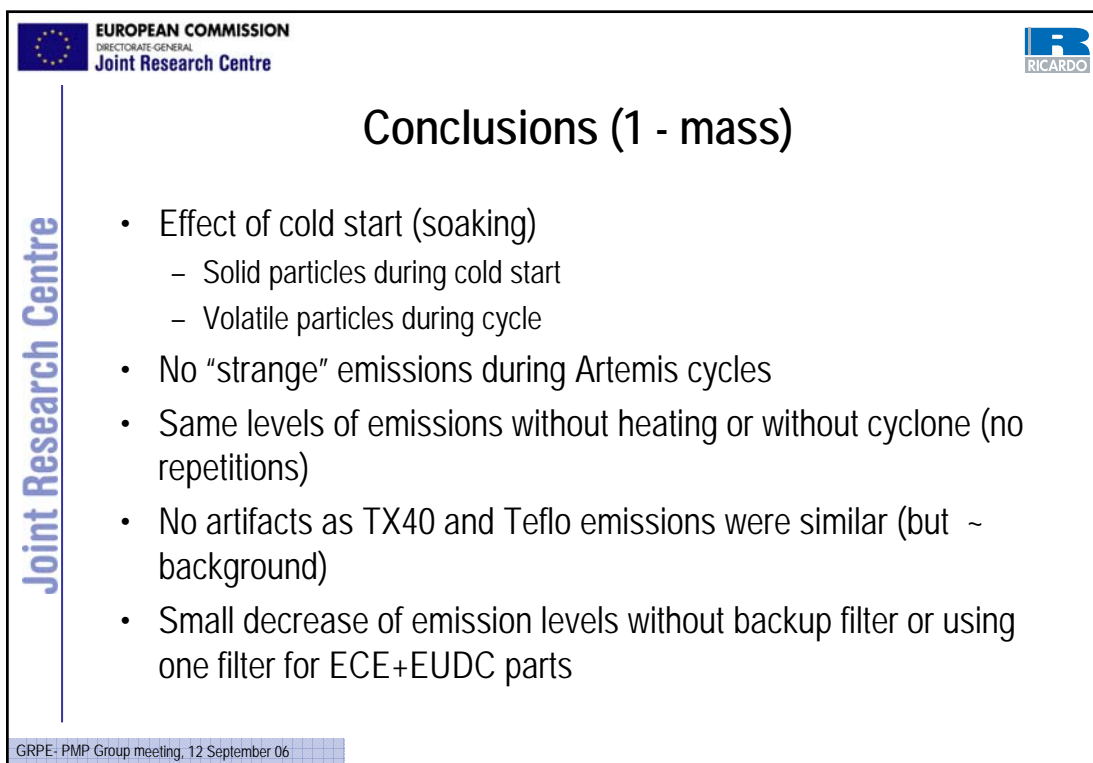
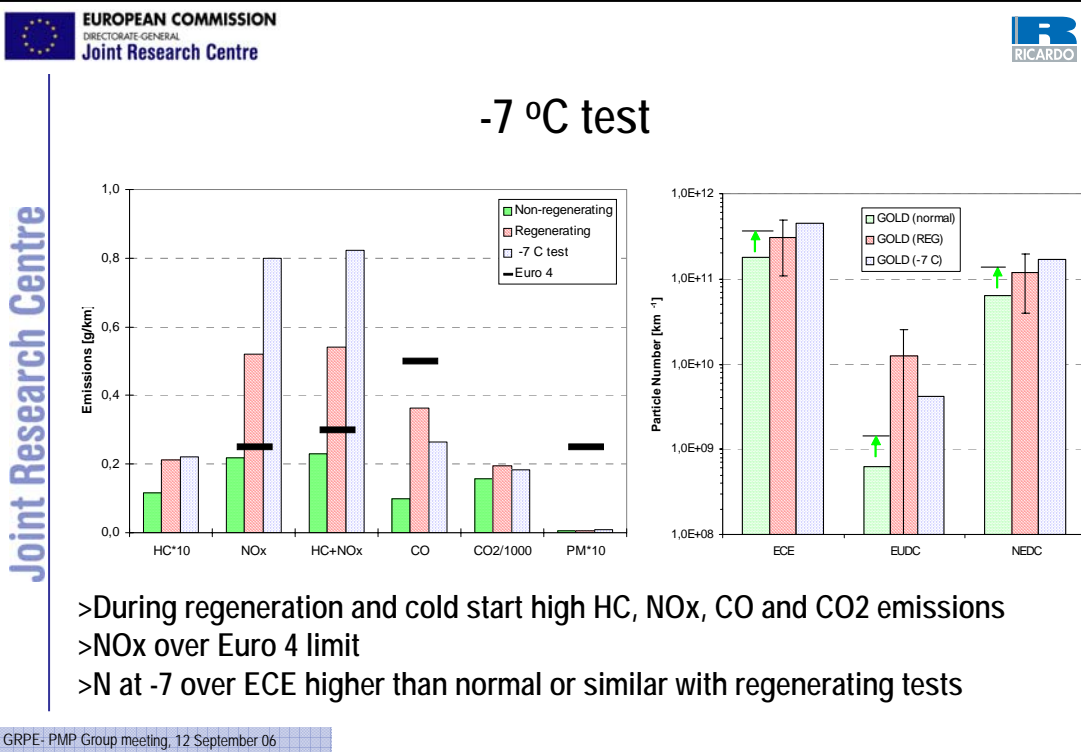


>PM emissions stabilized after 500 km



>N stabilized after 400 km

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Conclusions (2 - regeneration)

- PM emissions might increase during regeneration (+100%)
- PM emissions are slightly lower after regeneration
- High emissions of volatile particles during regeneration
- Similar levels of N of solid particles (GOLD PNC) (cold start effect more important) (max +50%)
- N emissions are higher after regeneration
- N and PM emissions stabilized after ~ 400 km

Conclusions (3 - general)

- During regeneration and -7C start: high HC, NOx, CO and CO2 emissions
- During regeneration and -7C: NOx over Euro 4 limit
- During -7 (over ECE): N higher than normal tests and similar with regenerating tests
- PM method reached its limit at 1 mg/km
- N more sensitive



Thank you for your attention!