
I/M Program & METT Evaluation Status

Mobile Sources Technical Review Committee

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I/M Program Status

- ◆ **IM240**
 - AZ, CO, WI, IN -- No major issues
 - IL -- Contract awarded; 1/99 start
 - DC -- RFP awarded, NPRM signed 3/1/98
 - MD, OH -- Start-up issues
 - MO -- No bids received on RFP

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I/M Program Status (cont)

◆ **ASM**

- CA, GA, VA -- Equipment delays
- PA -- FRM 1/28/97; 10/1/97 start
- NJ -- RFP released 2/18/98
- WA -- ASM 2525
- CT -- ASM 2525; 1/5/98 start

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I/M Program Status (cont)

◆ **Idle**

- AK
- DE -- Possible vehicle screening
- LA
- NV
- TX

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I/M Program Status (cont)

◆ Other Tests

- Phase 2
 - ◆ Addresses IM240 preconditioning concerns
 - ◆ Work with AZ DEQ and Sierra Research
- NYTEST -- FRM published 10/24/97
- IM93
 - ◆ Work with IN DEM
- OR BAR31
 - ◆ Program operating

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METT Evaluation

◆ Timeline

- 8/11/97- Stakeholder Meeting
- 9/15/97- EPA Selects Candidate Methods
- 5/31/98- Complete Collection of Test Data
- 10/15/98- Complete Data Analysis
- 10/31/98- Release Policy Memo
- 11/30/98- SIP Revision Deadline

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METT Evaluation Candidates

- ◆ **VMAS**
- ◆ **California Analytical Bench**
- ◆ **Sierra Research Report: “Development of a Proposed Procedure for Determining the Equivalency of Alternative I/M Programs”**
- ◆ **RSD**

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VMAS Hardware

- ◆ **BAR97 Analyzers**
- ◆ **ASM+ Dyno**
 - ASM dyno with inertia simulation
 - Faster response time (~0.100 s)
- ◆ **Sensors Mass Flow Measurement**
 - Low flow CVS
 - O2 Mass Balance
- ◆ **Substantially cheaper than full IM240 equipment**

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VMAS Data

◆ NY DEC IM240 vs VMAS correlation

● Preliminary Data

- ◆ ~ 140 vehicles
- ◆ $r^2 > 0.93$; IDR > 90%

● 5,000 vehicles by 11/1/98

◆ EPA data

● FTP / IM240 / VMAS correlation

● ~ 30 vehicles by 6/30/98

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California Analytical Instruments Bench

◆ IM240 dilute measurements

- FID, NDIR, Chemiluminescence
- Low flow CVS

◆ Simultaneous BAR90 raw measurements

◆ Substantially cheaper than full IM240 equipment

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CAI Bench Data

- ◆ **IM240 vs CAI correlation**
 - 100 vehicles from RI Pilot
 - ◆ Encouraging correlation
 - ◆ $r^2 \sim 0.99$ for all pollutants
 - Potential for ~2,000 vehicles from other state pilots

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Sierra Research Report

- ◆ **Objective: Develop a methodology to find the sample size needed to determine if an alternative I/M test is equivalent to the IM240 based on the measured variance of the two tests.**

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Sierra Research Report (cont)

- ◆ **Two data sets needed**
 - 1st set establishes IM240 vs Alternative I/M Test correlation
 - 2nd set used to determine average fleet mass emissions

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Sierra Research Report (cont)

- ◆ **IM240 Correlation Sample Sizes**
 - **Ozone & CO; 90% Confidence Level**
 - ◆ ASM 5015: 698
 - ◆ ASM 2525: 680
 - ◆ Both ASM Tests: 661
 - ◆ Idle: 791

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Sierra Research Report (cont)

- ◆ **Average Fleet Mass Emissions Sample Sizes**
 - **Ozone & CO; 90% Confidence Level**
 - ◆ IM240: 1,640
 - ◆ ASM 5015: 3,693
 - ◆ ASM 2525: 3,965
 - ◆ 2500 Idle: 6,245
 - ◆ Idle: 7,943

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Sierra Research Report (cont)

- ◆ **Due to site specific influences, RSD was determined by Sierra to be inadequate at this time to provide average fleet mass emission estimates.**

- ◆ **OMS is having this report reviewed externally under contract by two independent organizations.**

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RSD

- ◆ **Presentations on 8/11/97 did not suggest using RSD as program evaluation tool.**
- ◆ **No other data in support of RSD for use as a program evaluation tool has been submitted.**
- ◆ **Only data submissions to OMS with regard to RSD have been for Clean Screening.**

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Next Steps

- ◆ **By 10/15/98**
 - Analyze VMAS, CAI data
 - Discuss reviewers comments on Sierra report
- ◆ **By 10/31/98**
 - Issue policy memo

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