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Discussion of Proposed Changes to Input/Output Structure and Content for MOBILE6

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Outline of Discussion



- Review survey questions (August 1996)
- Review main proposals from March 1997 workshop
- Overview of survey responses
- Other comments / discussion of issues

Survey Questions from 08/96



- Should error/warning msgs be retained in descriptive output?
- Will dropping any current output format cause undue hardship?
- Are two decimal places adequate? Should all EFs include three?

Survey Questions from 08/96



- Is it necessary for users to limit number of fields in electronic output formats?
- Should by-model year option be maintained in descriptive output? Included in electronic output?

Survey Questions from 08/96



- Any other specific changes or additions wanted in the new MOBILE6 output formats?

Summary of Input Changes Proposed 03/97



■ Use of “labeled” input

- Eliminates need for many current flags - if optional labeled data present it is used, else “default” MOBILE6 data used
- Provides more flexibility in ordering of input - optional data in any order so long as properly labeled
- Provides means of “commenting” input files to assist in documentation and interpretation

Sample Illustration of “Labeled Input”



Flag-1 2

Flag-2 1

Flag-3 2

...

ALT-REGDIST C:\reg_data.d

IM-PROGRAM C:\myimfile.d

...

STAGEII-VRS 1998 5 95.0 90.0

...

LAP RECORD xxxxxxxx

SCENARIO-1 xxxxxxxx

SCENARIO-2 xxxxxxxx

Summary of Input Changes Proposed 03/97



- Use external files for complicated optional input data
 - Tampering rates; Registration distributions and annual mileage accumulation rates by age for each vehicle type; Inspection/maintenance (I/M) and anti-tampering program parameters
- Formatted “template” files using internal Block Data supplied

Summary of Input Changes Proposed 03/97



- MOBILE data used unless specific line in input file (e.g., ALT-REGDIST) tells M6 to read specified data from external file
- Changes to I/M or ATP could be handled with revisions to external data file only

Summary of Input Changes Proposed 03/97



- Delete inputs no longer needed
 - Two fuel RVP values, “start year” for change
 - ASTM Fuel Volatility Class
 - Operating mode fractions
- Add options for new user data implied by other model revisions
 - VMT fractions by facility type
 - Soak time distributions

Summary of Input Changes Proposed 03/97



- Reduce output options to descriptive and improved spreadsheet
- Optional by-model year output requested by labeled input line
- Flags reduced to pollutants; idle; composition (NMHC, VOC, etc); breakout (total, exh/evap, units)

Summary of Input Changes Proposed 03/97



■ New “output control” flags

- **EXHFLG:** For LDGVs/LDGTs, exhaust EFs as composite (g/mi) start and running emissions, or, as composite (g/mi) *plus* separated start (g/start) and stabilized running (g/mi) emissions
- **HDFLAG:** For HDGVs/HDDVs, EFs for all HDGVs & all HDDVs, or, that *plus* EFs for HDGVs/HDDVs by GVW class (IIb-VIIIb) and separate school/urban/commercial bus EFs

Summary of Input Changes Proposed 03/97



- ASTM Volatility Class changed to value indicating RVP control and/or RFG region
- Reduce RVP to one input, move to Scenario data (change by year)
- Change to 4-digit year, extend projections to 2050

Summary of Input Changes Proposed 03/97



- Optional input of VMT by facility type (weightings for area EFs)
 - Could be combined with speeds for freeways/arterials
- Optional input of soak time distr (if start emissions modeled as function of engine off time)

Responses to Survey Questions



■ Error/Warning Message Handling

- Most want maintained in current form, or option to route to other file
- Few stated either “don’t change it” or “make it always separate”
- Option left to user would satisfy all comments

Responses to Survey Questions



- “Undue hardship” if any current output format option dropped?
 - Most comments state it’s not a large problem - will require revision of other programs but that’s always been true
 - Pure ASCII output suggested

Responses to Survey Questions



■ Two vs three decimal places in emission factors?

- Most favored three decimal places and discretion in how used
- Some component EFs < 0.10 g/mi; 2 decimal places leaves only one digit

Responses to Survey Questions



■ Need to limit number of fields in electronic output format?

- Most favored expanding all output formats to include more information
- Some older software limited to 254 or 240 characters per record
- Few claimed need to do so but thought user option would be best

Responses to Survey Questions



■ Maintain “by model year” output?

- Strongly favored by all commenters
- Must at minimum keep in descriptive format, most would like in both descriptive and electronic formats

Responses to Survey Questions



■ Anything else you'd like to see?

- Many things mentioned; most commonly
 - Split up HDGV/HDDV into subclasses, buses
 - Add more “echoing” of input in output: flags, data used, everything
 - Add more unit options (g/mi, tons/Mmi, metric)
 - Some provision for alternative-fueled vehicles, at least common fleets
- Many planned for M6, some infeasible

Comments on Input Changes Proposed



- Most favor use of “labeled input” structure
 - Requiring entries supported by some:
assists in documentation and comparisons
- Most favor use of external files
for complex input data

Comments on Input Changes Proposed



- No objections to deletion of unneeded inputs
- No objections to addition of user options
 - Some stressed need for more and better guidance on data requirements and application

Comments of Output Changes Proposed 03/97



- Major interest: Echo all information in output
 - Flag values and meanings
 - Whether “default” or “user” data used (when applicable)
 - Ability to add more identifying info (e.g., geographic tagging)

Comments on Output Changes Proposed 03/97



- Most say one good descriptive and one good electronic (ASCII) format, with additional info included, will be sufficient

Next Steps



- Summary of all I/O-related comments, to date and after workshop, completed and posted
- Detailed proposal for I/O changes (sample input/ output files) developed

Next Steps



- Detailed proposal likely to follow earlier proposals closely
- Final choices for MOBILE6 made after comment period for detailed proposal