Appendix 9.16

Interagency Conformity Consultation Committee

Conformity Consultation Committee

Meeting Summary

Thursday, July 1st, 2004, 1:00 – 2:30
Building A Room 310A
TCEQ Headquarters, Austin, TX

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1. **PARTICIPANTS**

Jose Campos, FHWA (via phone)
Maureen Crocker, H-GAC (via phone)
Rebecca Dennison, FHWA
Heather Evans, TxDOT
Ranga Kandalam, H-GAC (via phone)
Chris Kite, TCEQ
Chi-Ping Lam, H-GAC (via phone)
Jacquie Lentz, City of Houston (via phone)
Margie McAllister, TCEQ
Mary McGarryBarber, TCEQ
Karl Pepple, H-GAC
Chris Van Slyke, H-GAC (via phone)
Peggy Wade, TCEQ
Shelley Whitworth, H-GAC
Bill Zeis, H-GAC

Note: Some participants may not have been able to participate due to some phone difficulties. Decisions made during this first meeting will be reviewed at the next CCC meeting.

2. **Tentative Conformity Timeline**

The QA/QC tentatively scheduled to begin in December should be moved to before the documentation begins.

3. **Conformity Discussion**

As a result of the proximity of the 1-hour due date, June 4, and the 8-hour due date, June 15, it was proposed to discuss and document the two analyses simultaneously. The group reached the following decisions:

- Discuss both the 1-hour and 8-hour simultaneously at the CCC meetings, and
- Combine the 1-hour and 8-hour documentation, as long as the difference between the two is emphasized in all announcements and within the document itself.

4. **Model Years**

The group agreed to the following analysis years:

- 1-hour Rate of Progress: 2005, 2007
- 1-hour Attainment Demonstration: 2007, 2015, 2025
- 8-hour: 2010, 2015, 2025

5. **Appropriate Conformity Test for 8-hour**

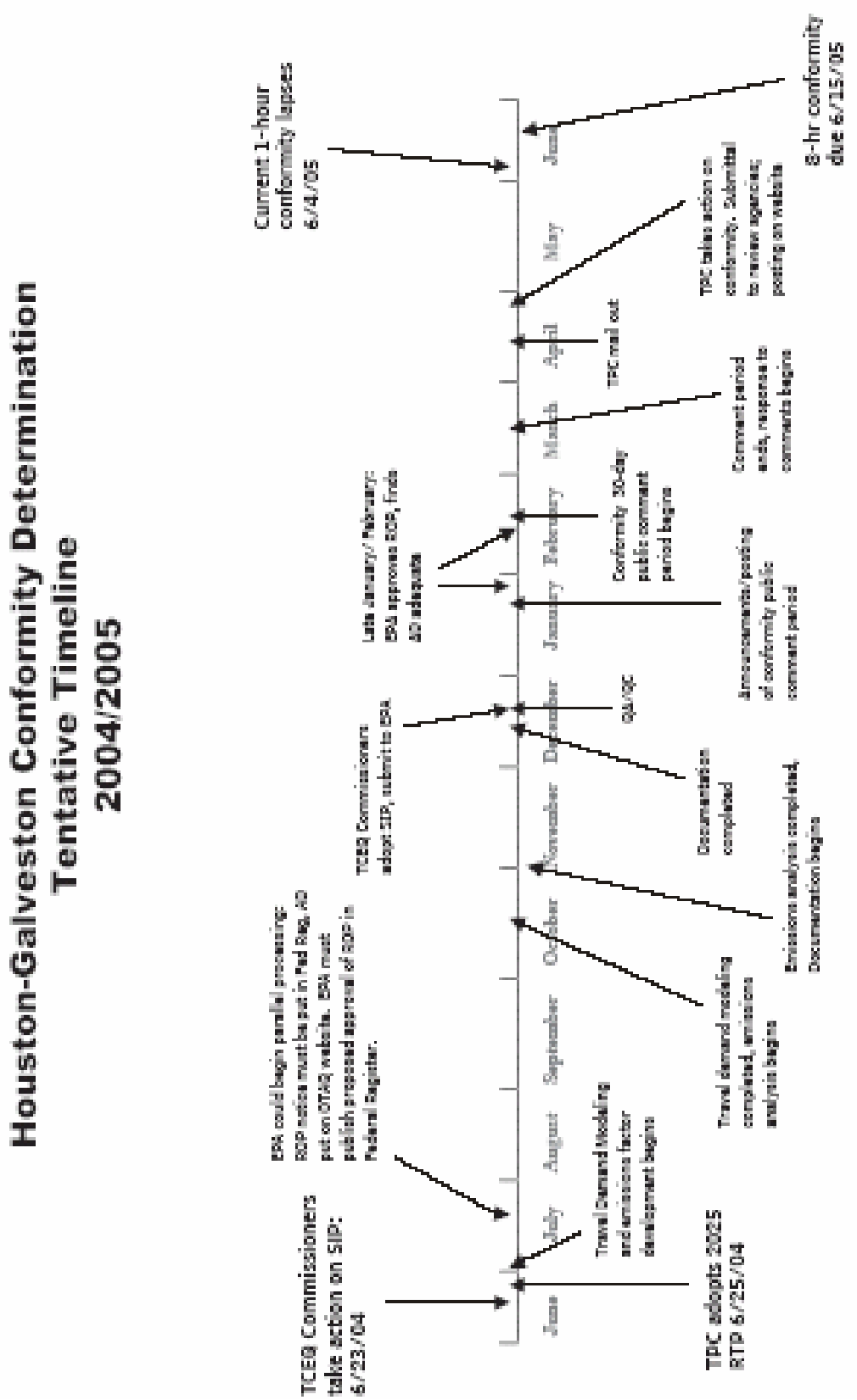
The group reached consensus that since

1) the 8-hour area is exactly the same as the 1-hour area, and
2) a 1-hour budget will exist for this area

that the appropriate 8-hour alternate emissions test for this region would be to apply the more restrictive of the 2007 AD and ROP budgets to 2010.

Handout: Tentative Conformity Timeline

Tentative Conformity Timeline



Conformity Consultation Committee

Meeting Summary

Thursday, October 21st, 2004, 2:00 – 3:00
2nd Floor Conference Room A
H-GAC, 3555 Timmons, Houston, TX

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1. PARTICIPANTS

Charles Airiohoudion – TxDOT
Graciela Lubertino – H-GAC
Karl Pepple – H-GAC
Chris Van Slyke – H-GAC
Shelley Whitworth – H-GAC

Via phone:
Jose Campos - FHWA
Rebecca Dennison - FHWA
Heather Evans - TxDOT
Mark Hodges - TxDOT
Margie McAllister - TCEQ
Edmund Petry - METRO
John Sweek - FTA
Peggy Wade - EPA

2. HGAC PRE-ANALYSIS CONSENSUS TEMPLATE

This meeting focused on a review of the document titled "HGAC Pre-Analysis Consensus Template." The following are questions/comments that arose during this review.

a. Page 1, Validation Year: The first model year may be no more than 10 years from the base year used to validate the travel demand model. The HGAC model was last validated to 1995. The first model year is 2005, which is pushing the ten year limit.
RESULT OF DISCUSSION: HGAC will use the 1995 travel model validation for this conformity. Model revalidation will take place in 2005 to the base year of 2002.

b. Page 2, VMT Adjustments: A question was raised about the seasonal adjustment factor.
RESULT OF DISCUSSION: Seasonal adjustment factor will be included in the description of VMT adjustments.

c. Page 3, 8-Hour budgets: An interim test for the 8-hour ozone rule allows the use of 1-hour budgets applied to the 8-hour attainment year. A question arose due to the fact that there are two budgets for 2007, an Attainment Demonstration and a Rate-of-Progress. As to which of the two budgets apply, it was believed that the more restrictive of the two applied.

RESULT OF DISCUSSION: EPA is going to look into this and report back to the group.

d. Page 3, h. Temperature/Humidity Correction: MOBILE6 only adjusts 6 of 28 vehicle categories for temperature and humidity corrections. The TCEQ developed a methodology to adjust the emission factors of the remaining 22 vehicle categories by temperature and humidity. A question arose about whether or not the EPA would accept this methodology in the SIP, since the Mid-Course SIP is the first SIP to make use of this methodology.
RESULT OF DISCUSSION: EPA is going to write a letter indicating this methodology is acceptable for use in the SIP and conformity.

e. Page 5, k. Vehicle Registration: Mid-year 2003 vehicle registration was used in the development of the Mid-Course Review SIP, but the mid-year 2004 data is now available.
RESULT OF DISCUSSION: H-GAC will contact TTI for the latest registration distribution for use in the conformity.

f. Page 5, m. RVP: This value appears to be a mistake.
RESULT OF DISCUSSION: A value of 6.8 has been entered in the template as a value for the RVP.

g. Page 6, CMAQ Projects: A concern was raised about reporting of the CMAQ values. Some CMAQ programs are captured on-model, while others are captured in an off-model calculation.
RESULT OF DISCUSSION: H-GAC will report the estimated benefits of the CMAQ projects in a separate table. This table will be an estimate of reductions, as some CMAQ projects are captured on-model and others are captured off-model. H-GAC will only take off-model credit for projects in the TCM and VMEP sections of the document. CMAQ funds can be applied to TCMs and VMEPs, but not all CMAQ funds are applied to these two categories.

3. Discussion

It was agreed that this meeting signified the beginning of the conformity analysis, as the travel demand modeling and the emission factor development had started.

Next meeting: Demographic modeling and Travel Demand Modeling. An in-depth discussion of Air Quality inputs will follow.

Handout: Pre-Analysis Consensus Template

H-GAC Pre-analysis Consensus Plan for Transportation Conformity

Aug-04

Purpose of Analysis

Check Those That Apply and Provide Brief Explanation:

- [x] New Metropolitan Transportation Plan (demographics, horizon year, etc.)
- [ ] Modify Existing Metropolitan Transportation Plan
- [x] Transportation Improvement Program
- [x] State Implementation Plan Requirement
- [x] Other

The Houston-Galveston Area Council (H-GAC) is proposing the following plan and procedures to conduct a conformity analysis. This plan is being submitted to the interagency consultation partners for soliciting consensus before commencement of a full scale transportation conformity analysis. The plan and procedures may be revised as H-GAC proceeds with the analysis. Notification of such changes will be made to the interagency consultation partners. Specifically, the process will consist of a Plan Update as a result of new demographics, updated revenue forecasts, refinements to Plan recommendations, and a new horizon year (2025). The TIP will incorporate necessary modifications in its three year scope. This analysis will meet the 36-month conformity requirement following acceptance of a conformity by FHWA. This conformity will satisfy both 1-hour Rate-of-Progress (ROP) and 1-hour Attainment Demonstration (AD) conformity needs. Additionally, this will fulfill the 8-hour conformity requirement using an approved/adequate MVEB from 2007 as an interim emission test for the 8-hour attainment year of 2010.

Demographics

a. Population:	H-GAC will use the REMI -supplied data as a baseline, and feed this into the UrbanSim model for local area forecasts..
b. Employment:	H-GAC will use the REMI -supplied data as a baseline, and feed this into the UrbanSim model for local area forecasts..
c. Socio-economics:	H-GAC will use Census data.

Validation year:	1995
TIP years:	2006-2008
MTP year:	2025
Conformity Analysis Years	
a. Rate of Progress:	2005, 2007
b. Attainment:	2007
c. Interim 8-hour test:	2010

d. Milestone:	2015
e. Horizon:	2025
Affected Nonattainment Counties:	Harris, Galveston, Brazoria, Fort Bend, Montgomery, Liberty, Chambers, and Waller
Land-Use Model:	H-GAC is currently using appraisal district data fed into UrbanSim.
Travel Demand Model:	The VMT will be forecasted by using EMME/2.
Modal Split/Mode Choice	The modal split for transit ridership will be accomplished through the travel demand model.
VMT Adjustments:	H-GAC will adjust the forecasted VMT to TxDOT's HPMS for all roadway facilities based on a 1.02167 validation error (TTI, May 2003).

State Implementation Plan

Applicable SIP:	Mid-Course SIP, proposed Summer 2004	
Attainment Demonstration:	2007	
a. VOC:	89.74 tons/day	
b. NOx:	175.49 tons/day	
c. CO:	n/a	
d. PM:	n/a	
Rate of Progress	2005	2007
a. VOC:	103.6 tpd	89.4 tpd
b. NOx:	249.0 tpd	203.2 tpd
c. CO:	n/a	n/a
d. PM:	n/a	n/a

8-Hour:

2007 budgets will be used as an interim test.

Control Strategies

Emission reduction credits will be taken for the following on-road mobile SIP commitments.

	Strategy	**Methodology**
a.	Speed Limit Reduction (5mph)	Incorporated in Travel Demand Modeling
b.	Transportation Control Measures	See MOSERS list below
c.	Voluntary Mobile Emission Reduction Measures	See MOSERS list below
d.	RFG	MOBILE
e.	I/M Programs	MOBILE
f.	Tier 2/Low Sulfur	MOBILE
g.	TxLED	RATEADJ modification to MOBILE factors

h.	Temperature/Humidity Correction	TransCAD processing of MOBILE factors

Mobile Source Emission Reduction Strategies (MOSERS)

H-GAC will take emissions credits for the following Transportation Control Strategies. Emission benefits will be modeled directly in the travel demand model, or a documented post-process methodology will be used.

	Strategy	Category	Modeled	Post-processed	Year(s) Credited
a.	Intersection Improvements	TCM		x	2007
b.	High Capacity Transitway	TCM	x		2007
c.	Port Projects	TCM	x		2007
d.	Park-n-Ride Lots	TCM	x	x	2007
e.	Computerized Traffic Management System	TCM		x	2007
f.	Arterial Traffic Management System/Signals	TCM		x	2007
g.	Bicycle/Pedestrian facilities	TCM		x	2007
h.	Clean Cities/Clean Vehicle Commitments	VMEP		x	2007
i.	Vehicle Scrappage	VMEP		x	2007
j.	Smoking Vehicle/Clean Air Action	VMEP		x	2007
k.	Commute Solutions	VMEP		x	2007
l.	Regional Computerized Traffic Simulation System	VMEP		x	2007

MOBILE Model

H-GAC will use the following MOBILE model input parameters in the conformity analysis.

	Parameter	Details	Data Source
a.	Emission Model Version(s):	MOBILE6.2	EPA
b.	Emission Model Runs:	Years 2005, 2007, 2010, 2015, and 2025	
c.	Time Periods:	24 1-hour timeperiods	H-GAC
d.	Pollutants Reported:	VOC, NOx, CO	
e.	Calendar Dates:	AD: August 30; ROP: November	
f.	Vehicle Class:	EPA 28 classification	EPA
g.	Functional Class:		
h.	Temperatures:	Min., Max., Ambient; for each time period/county	TCEQ
i.	VMT mix:	By timeperiod, by roadway category	TTI
j.	Speed:	2.5-65 mph	

k.	Vehicle Registration:	Year 2003	TxDOT
l.	I/M Program:	ASM/OBDII	
m.	RVP:	7.1	
n.	Low Sulfur Diesel:	15 ppm	
o.	Local Area Parameters:	Seasonal adjustment factors	TTI
p.	Strategies:	RFG, I/M, Tier2, TxLED	
q.	Meteorological data:	humidity, temperature, barometric press.	TCEQ

Project Listings

A roadway listing, including all projects that change roadway capacity (new roads, widenings, roadway removals, etc.) will be provided in addition to the following:

CMAQ Projects

H-GAC will include a spreadsheet in the conformity document showing status of funded CMAQ projects, including; emission reductions for each project, amount of funding for each project, and implementation dates.

Non-Federal Projects

H-GAC will identify all projects in the MTP and TIP that do not receive federal funding (local initiatives, private ventures, etc.).

Exempt Projects

H-GAC will identify exempt projects in the TIP according to the specifications outlined in the Conformity Regulations (§93.126).

Conformity Consultation Committee

Meeting Summary

Thursday, November 4th, 2004, 10:45 – 11:45
5th Floor Transportation Conference Room
H-GAC, 3555 Timmons, Houston, TX

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1. PARTICIPANTS

Charles Airiohoudion – TxDOT
Graciela Lubertino – H-GAC
Karl Pepple – H-GAC
Chris Van Slyke – H-GAC
Jeff Taebel – H-GAC
Shelley Whitworth – H-GAC

Via phone:
Brian Bochner - TTI
Jose Campos - FHWA
Rebecca Dennison - FHWA
Mark Hodges – TxDOT
Anusuya Kanthasamy - TCEQ
Margie McAllister – TCEQ
Mary McGarry-Barber - TCEQ
Dennis Perkinson - TTI
Peggy Wade - EPA

2. DEMOGRAPHIC MODELING

Jeff Taebel of H-GAC provided a summary of the demographic modeling.

H-GAC uses two modeling sources for these forecasts. The first is a regional econometric model acquired from REMI, Inc. The REMI model is a nationally established model that considers the economic interaction between the region as a whole and the rest of the nation. This model also looks at how each county's demographic profile will change with time. This model was used to develop forecasts of county-level growth in population, employment, and households. The second source is the UrbanSim model, developed at the University of Washington. This model is designed to help metropolitan areas study interactions between land use and the transportation network. UrbanSim was used to allocate the county-level results to smaller units of geography.

The most recent demographic forecasts were prepared in May of 2003. The forecast covers the eight-county nonattainment area. The horizon year of the forecast is 2025. Two growth scenarios were modeled – a moderate growth scenario based on the historic growth factors encompassed in the REMI model, and an aggressive growth scenario which assumes increased growth in the region's energy sector. The aggressive growth scenario is used for the travel demand modeling work. Results presented in this summary are from the aggressive scenario.

The Houston-GalvestonTransportation Management Area is expected to add an additional 3 million residents by the year 2025 (Table 1). Approximately 2 million of those additions will be in Harris County. Fort Bend and Montgomery will be the fastest growing counties in the region.

Table 1: Estimated Growth in the Aggressive Scenario

	Households	Jobs	Population
2000	1.6	2.2	4.7
2025	2.7	3.5	7.7

Note: Results are in millions

There were no issues raised with the demographic modeling performed for the conformity.

3. TRAVEL DEMAND MODELING

Chris Van Slyke of H-GAC provided an overview of the travel demand modeling (TDM) process used for this conformity.

H-GAC used the Emme/2 travel demand model for the conformity work. The traditional 4-step travel demand process was utilized: trip generation, trip distribution, mode split, and trip assignment. The speed model is run post-process.

The TDM process utilized in this conformity is the same as the process used in the prior conformity – the same steps and the same models are used. The only differences are in the inputs. The network is now divided into 3000 traffic analysis zones (TAZs). Updated demographics were used.

No issues were raised with the TDM modeling on this call. Results of the TDM modeling will be presented on a future call.

Handout: revised Pre-Analysis Consensus Template

Revised Pre-Analysis Consensus Template

H-GAC Pre-analysis Consensus Plan for Transportation Conformity

Oct-04

Purpose of Analysis

Check Those That Apply and Provide Brief Explanation:

- [x] New Metropolitan Transportation Plan (demographics, horizon year, etc.)
- [ ] Modify Existing Metropolitan Transportation Plan
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VMT Adjustments:	H-GAC will adjust the forecasted VMT to TxDOT's HPMS for all roadway facilities based on a 1.02167243 validation error (TTI, May 2003) and seasonal adjustment factors.

State Implementation Plan

Applicable SIP:	Mid-Course SIP, proposed Summer 2004	
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a. VOC:	89.74 tons/day	
b. NOx:	175.49 tons/day	
c. CO:	n/a	
d. PM:	n/a	
Rate of Progress	2005	2007
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h.	Temperature/Humidity Correction	TransCAD processing of MOBILE

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c.	Time Periods:	24 1-hour timeperiods	H-GAC
d.	Pollutants Reported:	VOC, NOx, CO	
e.	Calendar Dates:	AD: August 30; ROP: November	
f.	Vehicle Class:	EPA 28 classification	EPA
g.	Functional Class:		
h.	Temperatures:	Min., Max., Ambient; for each time period/county	TCEQ
i.	VMT mix:	By timeperiod, by roadway category	TTI
j.	Speed:	2.5-65 mph	
k.	Vehicle Registration:	Mid-Year 2004 (latest available)	TxDOT
l.	I/M Program:	ASM/OBDII, except in 3 rural counties	
m.	RVP:	6.8	
n.	Low Sulfur Diesel:	15 ppm	

o.	Local Area Parameters:	Seasonal adjustment factors	TTI
p.	Strategies:	RFG, I/M, Tier2, TxLED	
q.	Meteorological data:	humidity, temperature, barometric press.	TCEQ

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Exempt Projects

H-GAC will identify exempt projects in the TIP according to the specifications outlined in the Conformity Regulations (§93.126).

Conformity Consultation Committee

Meeting Summary

Tuesday, November 16, 2004, 1:30 p.m.– 2:30 p.m.
5th Floor Transportation Conference Room
H-GAC, 3555 Timmons, Houston, TX

---

1. PARTICIPANTS

Charles Airiohoudion – TxDOT
David Gao – H-GAC
Ranga Kandalam – H-GAC
Graciela Lubertino – H-GAC
Karl Pepple – H-GAC
Chris Van Slyke – H-GAC
Shelley Whitworth – H-GAC

Via phone:
Rebecca Dennison - FHWA
Heather Evans – TxDOT
Ken Gathright – TCEQ
Chris Kite - TCEQ
Margie McAllister – TCEQ
Edmund Petry – METRO
Kimberly Slaughter – METRO
Peggy Thurin – TxDOT
Bill Zeiss – H-GAC

2. VMT ADJUSTMENTS

The HPMS adjustment remains the same as was used in the SIP: 1.045142441. However, the seasonal adjustment factor differs from what was used in the SIP, due to the latest available data being incorporated into the development of the seasonal factor. The new seasonal factors are:
- Conformity Attainment Demonstration years: 0.98301 (what was used in the SIP: 0.99315)
- Rate of Progress years: 1.00562 (what was used in the SIP: 1.01038)

After discussion, the group agreed to use the proposed numbers.

3. EMISSIONS MODELING

This discussion focused on the order of modeling for conformity, as compared to how the SIP was developed.

SIP Modeling:
- POLFAC used with MOBILE6 to generate emission factors
- RATEADJ used for I/M programs, ATP, and to apply TxLED benefits
- IMPSUM and SUMALL were used to total and summarize results

- post-process adjustments were used to apply TCMs, motorcycle rule, VMEPs, diesel idling and temperature/humidity corrections

Conformity Modeling:
TTI developed a new version of RATEADJ that can correct for the temperature/humidity adjustment earlier in the process. The issue is where to apply these adjustments in the modeling process. The Conformity will be using slightly different programs for applying the post-process adjustments, as H-GAC does not run the EPS-2x photochemical preprocessor module that TCEQ used to apply these adjustments in the SIP.

After discussion, the group concluded that the adjustments should be made as post-process adjustments, with the other post-processing steps.

4. TCMS AND VMEPS

An update of the VMEP progress to date was provided and discussed. The documentation methodology is similar to that used in the previous conformity. H-GAC plans to take credit for VMEPs in the conformity analysis.

A list of TCM projects, including substitutions, was also distributed to the group. H-GAC plans to demonstrate timely implementation of the TCMs in the upcoming conformity. There was a discussion about the timing of the TCM substitution process. It was anticipated that the TCM substitution process would conclude before the end of the agency review period. As such, the updated list of TCMs will be used in this conformity analysis.

Conformity Consultation Committee

Meeting Summary

Wednesday, February 2, 2005, 10:30 a.m. – 11:30 a.m.
5th Floor Transportation Conference Room
H-GAC, 3555 Timmons, Houston, TX

1. PARTICIPANTS

Kari Hackett – H-GAC
Graciela Lubertino – H-GAC
Karl Pepple – H-GAC
Roland Strobel – H-GAC
Chris Van Slyke – H-GAC
Shelley Whitworth – H-GAC

Via phone:
Jose Campos - FHWA
Roland Castaneda - TCEQ
Rebecca Dennison – FHWA
Heather Evans - TCEQ
Mark Hodges - TxDOT
Margie McAllister – TCEQ
Edmund Petry – METRO
Dennis Perkinson - TTI
John Sweek – FTA
Peggy Wade – EPA
Bill Zeiss – H-GAC

2. VMT SUMMARY

The following table of VMT was provided for the call:

		SIP (MVEB)	Conformity
2005-ROP	VMT	142067256 miles	141108501.3 miles
	NOx	257.3 T/d	246.52 T/d
	VOC	104.2 T/d	104.5 T/d
2007-ROP	VMT	148552482 miles	141957582 miles
	NOx	210.0 T/d	197.06 T/d
	VOC	90.0 T/d	88.35 T/d
2007-AD	VMT	146019214 miles	142386002.7 miles
	NOx	186.13 T/d	180.67 T/d
	VOC	89.99 T/d	88.69 T/d
2010-AD	VMT		149858304.1 miles
	NOx	186.13 T/d	145.6 T/d
	VOC	89.99 T/d	71.9 T/d
2015-AD	VMT		167141953.8 miles
	NOx	186.13 T/d	80.09 T/d
	VOC	89.99 T/d	50.97 T/d
2025-AD	VMT		
	NOx	186.13 T/d	
	VOC	89.99 T/d	

During discussion, it was noted that there appeared to be a discrepancy in the conformity VMT as compared to the SIP VMT, even considering the seasonal factor differences. This discrepancy will be clarified on the next call.

3. INTERPOLATION

The question arose about whether a network had to be developed for every year, or if networks could be developed for only the attainment year and final horizon year and interpolate the intervening years. The argument was that if the attainment year and the final horizon year were shown to conform, then the intervening years should conform as well. This would facilitate documentation and review. Although VMT and emissions would be interpolated, a specific list of projects would be generated for each interpolated year.

After discussion about the rules that apply to the interpolation of networks, it was decided that actual networks would be used in the conformity analysis rather than applying an interpolation methodology.

4. EMISSION FACTOR DEVELOPMENT

Emission factors were developed based on the following. Unless stated here, settings match what went into the SIP.

ROP material that changed:

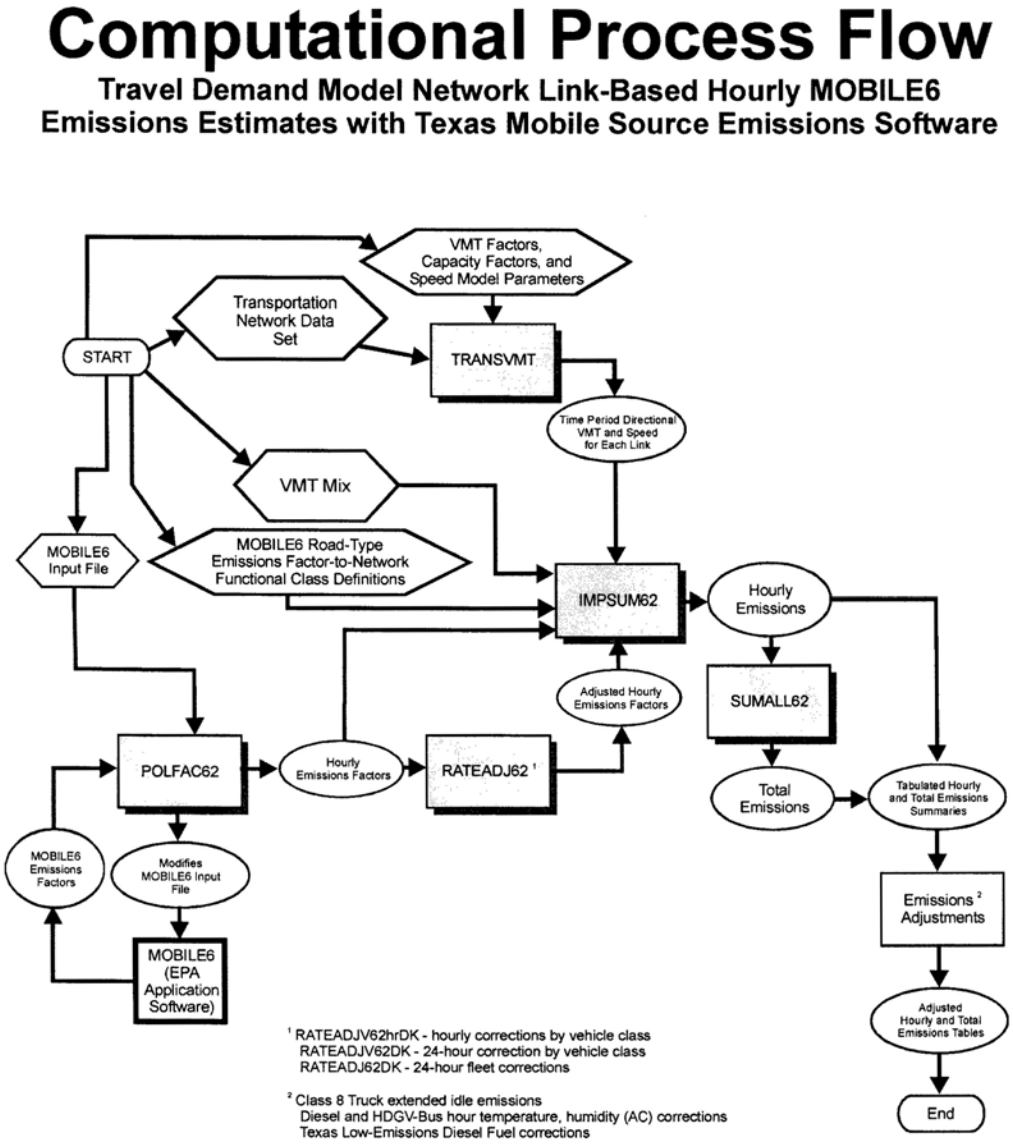
1. Travel demand model data: The conformity run has an updated project list, as compared to what was used in the SIP.
2. Registration distribution: the modeling for the SIP utilized a 2003 registration distribution, whereas the conformity utilized a 2004 registration distribution.
3. Seasonal VMT adjustment factors: The conformity number is slightly different than the SIP as it includes one year of newer data.
4. Removal of I/M in rural counties: Neither an I/M nor an ATP program were modeled in the rural counties for any year.

AD material that changed:

1. Travel demand model data: The conformity run has an updated project list, as compared to what was used in the SIP.
2. Registration distribution: the modeling for the SIP utilized a 2003 registration distribution, whereas the conformity utilized a 2004 registration distribution.
3. Seasonal VMT adjustment factors: The conformity number is slightly different than the SIP as it includes one year of newer data.
4. Removal of I/M in rural counties: Neither an I/M nor an ATP program were modeled in the rural counties for any year.
5. TxLED calculation: For the SIP modeling, TxLED was taken out in the RATADJV step of the modeling. Further modifications were done by TCEQ to account for the temperature/humidity correction, diesel idling, and motorcycle corrections. The order in conformity differs than the SIP, as it takes advantage of new TTI software that allows the straightforward calculation of these adjustments in post-processing steps. The process changed as explained below:

SIP	Calculation	Conformity
POLFAC was used to run MOBILE6 to produce emission factors (WITH rural I/M program)	Produce emission factors	POLFAC was used to run MOBILE6 to produce emission factors (WITHOUT rural I/M program)
RATADJ was used to combine the effects of all modeled programs into a single set of emission factors for each county	Combine effects of ATP and I/M programs	RATADJ was used to combine the effects of all modeled programs into a single set of emission factors for each county
RATADJV	Apply TxLED adjustment	Post processed – see ADJ3 below
IMPSUM	Apply hourly emission factors to travel demand data	IMPSUM
SUMALL	Summarize hourly results	SUMALL
TCEQ used a photochemical pre-processor module to reallocate the 3.4% of emissions to counties, based on the inverse regional VMT distribution (see section 3.5.3.3 in AD SIP)	Post process:	TTI utility ADJ1: Adjust for extended idling emissions (3.4% of county hourly emissions). These are summed, and reallocated to counties to each hour based on the inverse regional VMT distribution.
Develop (based on Environ/SWI reports) and apply hourly temp/hum correction factors to diesel vehicles, temp/hum/AC correction to HDGV-Bus categories using a special module of the photochemical preprocessor (See section 3.5.3.1 of AD SIP)	Post process	TTI utility ADJ2: Develop and apply hourly temp/hum correction factors to diesel vehicles, temp/hum/AC correction to HDGV-Bus categories (same methodology as used in the SIP – based on Environ/SWI work)
Apply January 15, 2005 motorcycle rule using following EPA guidance	Post process	TTI Utility ADJ3: Apply January 15, 2005 motorcycle rule following EPA guidance.
Use photochemical pre-processor to remove effects of I/M program in rural counties	Post process	TTI Utility ADJ3: Adjust for TxLED, following same methodology as in the SIP

The change is that the post process steps are performed using TTI utilities rather than a photochemical pre-processor. The process is illustrated in the flowchart below:



Source: TTI, 2004

The TCEQ anticipated that different programs might be used for ht post process adjustments in the SIP, as is evident on page 3-63 of the AD SIP:

> When governmental organizations need to demonstrate conformity to the MVEB, they will not be developing photochemical modeling inventories and therefore will not apply these necessary speciation and time-shift steps. Consequently, the 2007 MVEB for the 8-county HGB area will start with the Wednesday, August 30 onroad inventory as received from TTI in CDT format. Then, adjustments for the federal motorcycle requirements, I/M program revision, temperature/humidity NOx correction, and TCM/TERP/VMEP will be applied outside of EPS2x, but in a manner consistent with the descriptions included above. Table 3.5-48, *2007 Attainment Demonstration Motor Vehicle Emissions Budget for HGB,* summarizes this approach. The appropriate reference is noted for each inventory description/adjustment. The slight differences between the 8-county NOx,

> VOC, and CO totals in Tables 3.5-47 and 3.5-48 are due solely to the manner in which the EPS2x system converts text-based, nonspeciated inventory data in CDT into a binary, gridded, and speciated format in CST appropriate for photochemical model input. [*highlighting added for emphasis*]

After discussion, the group agreed that the proposed methodology would be appropriate for use in conformity.

5. PUBLIC COMMENT PERIOD

The announcement of the public comment period will go out February 6, 2005. The comment period will last until March 31, 2005. A public workshop will be held Saturday, February 12, 2005, from 9:30 a.m. to 11:30 a.m. The public hearing will take place the evening of March 30, 2005. Comments will be replied to prior to the document being taken to TAC and TPC.

The comment received from the group was to ensure that the Draft RTP and Draft TIP were available at the same time as the Draft Conformity Analysis.

Conformity Consultation Committee

Meeting Summary

Friday, February 4, 2005, 9 a.m. – 10 a.m.
5th Floor Transportation Conference Room
H-GAC, 3555 Timmons, Houston, TX

1. PARTICIPANTS

Charles Airiohuodion - TxDOT
Kari Hackett – H-GAC
Graciela Lubertino – H-GAC
Karl Pepple – H-GAC
Chris Van Slyke – H-GAC
Shelley Whitworth – H-GAC

Via phone:
Jose Campos - FHWA
Chris Kite – TCEQ
Jacqueline Lentz – City of Houston
Edmund Petry – METRO
Dennis Perkinson – TTI
Kimberly Slaughter - METRO
John Sweek – FTA
Peggy Thurin - TxDOT
Peggy Wade – EPA
Bill Zeiss – H-GAC

2. VMT SUMMARY

		SIP(MVEB)	Conformity
2005-ROP	VMT	142067256 miles	139,893,105.7 miles
	NOx	257.3 T/d	246.52 T/d
	VOC	104.2 T/d	104.5 T/d
2007-ROP	VMT	148552482 miles	145,660,931 miles
	NOx	210.0 T/d	203.11 T/d
	VOC	90.0 T/d	90.26 T/d
2007-AD	VMT	146019214 miles	142,386,002.7 miles
	NOx	186.13 T/d	180.88 T/d
	VOC	89.99 T/d	88.70 T/d
2010-AD	VMT		149,858,304.1 miles
	NOx	186.13 T/d	145.6 T/d
	VOC	89.99 T/d	71.9 T/d
2015-AD	VMT		167,141,953.8 miles
	NOx	186.13 T/d	80.09 T/d
	VOC	89.99 T/d	50.97 T/d
2025-AD	VMT		209,186,139.3 miles
	NOx	186.13 T/d	39.62 T/d
	VOC	89.99 T/d	40.76 T/d

The table above was distributed for the call. This file has the discrepancy corrected, which accounts for the change in VMT from the call on Wednesday. The problem was caused by an input into the TRANSVMT program for the ROP years.

3. EMISSION ADJUSTMENTS IN OUTLYING YEARS

Issue #1: Applicability of TCM, TERP, and VMEP credits to years beyond 2007. Should credit for these programs be taken, it would be for no year beyond 2007. Discussion centered on the goal of these programs, which was to produce emission reductions prior to and including the year 2007. While benefits of these programs would likely extend beyond the year 2007, no credit would be claimed. The group agreed with this.

Issue #2: Do the idling, temperature/humidity, motorcycle and TxLED adjustments need to be applied to the years 2010, 2015 and 2025? Group response: yes, to maintain consistency between the Attainment Demonstration years.

4. DOCUMENTATION STRUCTURE

Issue: Can the number and content of appendices differ from that listed in the TWG documentation structure? The Travel Demand section has sufficient documentation of the modeling in the text to negate the need of an appendix on travel demand modeling. Group response: yes.

Conformity Consultation Committee

Meeting Summary

Monday, March 7, 2005, 3 p.m. – 4 p.m.
5th Floor Transportation Conference Room
H-GAC, 3555 Timmons, Houston, TX

1. PARTICIPANTS

Charles Airiohuodion - TxDOT
Kari Hackett – H-GAC
Graciela Lubertino – H-GAC
Karl Pepple – H-GAC
Chris Van Slyke – H-GAC

Via phone:
Jose Campos – FHWA
Heather Evans - TxDOT
Mark Hodges - TxDOT
Barbara Joy – consultant to H-GAC
Anusuya Kathasamy - TCEQ
Chris Lindhjem – consultant to H-GAC
Margie McAllister - TCEQ
Edmund Petry – METRO
Dennis Perkinson – TTI
Kimberly Slaughter - METRO
John Sweek – FTA
Peggy Wade – EPA
Bill Zeiss – H-GAC

2. EMISSIONS RESULTS

The Executive Summary was distributed for the call, as well as Tables 13 and 14 of the main conformity document.

Summary of Emissions by Year

Analysis Year	VOC Emissions (tons/day)	VOC Budget (tons/day)	NOx Emissions (tons/day)	NOx Budget (tons/day)
1990 Baseline	321.700	--	391.10	--
2005 ROP	104.025	104.20	243.52	257.30
2007 ROP	89.660	90.00	199.48	210.00
2007 AD	89.813	89.99	184.68	186.13
2015 AD	50.870	89.99	75.81	186.13
2025 AD	40.510	89.99	38.27	186.13
2010 (8-hour Alternate Emissions Test)	71.900	89.99	140.80	186.13

Table 13 of Main Document

ROP	NOx (tpd)	VOC (tpd)
2005 Unadjusted emissions	246.48	104.499
2005 VMEP credits	-2.96	-0.474
2005 Final numbers	243.52	104.025
2007 Unadjusted emissions	203.08	90.260
2007 VMEP credits	-3.60	-0.600
2007 Final numbers	199.48	89.660

Table 14 of Main Document

(units in tpd)	2007		2010*		2015*		2025*	
	NOx	VOC	NOx	VOC	NOx	VOC	NOx	VOC
Unadjusted	205.080	90.800	149.92	71.92	80.09	50.97	39.62	40.73
Idling	0	0	0	0	0	0	0	0
Temp/Humidity	-7.580	0	-4.96	0	-2.31	0	-0.67	0
Motorcycle/TxLED	-5.850	-0.010	-4.16	-0.02	-1.97	-0.10	-0.68	-0.22
VMEP	-3.600	-0.600	- - -	- - -	- - -	- - -	- - -	- - -
TERP	-3.000	- - -	- - -	- - -	- - -	- - -	- - -	- - -
TERM	-0.366	-0.377	- - -	- - -	- - -	- - -	- - -	- - -
Final Emissions	184.680	89.813	140.80	71.90	75.81	50.87	38.27	40.51

*: The VMEP, TERP and TERM programs are designed to generate emissions benefits prior to and for the attainment year. No credits were taken for these programs after the year 2007.

The analysis has been refined as a result of the TTI and H-GAC review (Item 4). This refinement accounts for the changes in the emission numbers from the last call. The ROP years pass the budget tests with the use of the VMEP program. The 2007 AD analysis utilizes VMEP, TERP and TERM credits to pass the budget.

Barbara Joy, consultant to H-GAC, described how the TERM benefits were calculated. The appropriate formula out of the MOSERS manual for signalization improvements was utilized in the calculation. Emission factors from the 2007 AD run were used in the calculation. The analysis looked at the 1,541 intersections improved by the City of Houston. These projects are already completed. More intersections are scheduled for completion in 2005, but credit for these was not taken. Data counts from these projects were used as inputs into the MOSERS formula.

Chris Lindhjem, a consultant to H-GAC, described how the VMEPs were analyzed. The same methodology was used in the conformity analysis as appeared in the SIP. The changes are due to the acquisition of more recent data on these projects.

As a result of the TTI and H-GAC review of the input files, an incorrect pathway was found in the emission factors of the 2007 AD run. Correcting this pathway led to an increase in the 2007 AD emissions. As a result, TERP and TERM credits were applied to the 2007 AD analysis. The group discussed the appropriateness of only claiming TERM credits in 2007. After discussion, it was decided that TERM credits should be applied to the ROP years as well. H-GAC will calculate TERM benefits with the appropriate ROP emission factors and apply them to the ROP years.

3. ROP CLARIFICATION

At issue is the TxLED analysis for 2005. The conformity utilizes the TxLED program in the 2005 analysis year. The TCEQ Commissioners could potentially take action on this program to delay the program start date. The current start date is April 1, 2005. The start date could be delayed by six months. Whatever action the TCEQ Commissioners take on this program, the effective date of their action will be before April 1, 2005. The question arose as to whether or not credit should be claimed for this program for 2005.

The group concluded that since the TxLED program only affects NOx values, and the 2005 ROP analysis passes the NOx budget whether or not the TxLED program is utilized, an appendix should be added to the conformity document. This new appendix will document the run that was made without TxLED to demonstrate that the 2005 analysis year meets the NOx budget even without the TxLED program. The new appendix will be number 9.20.

4. TTI REVIEW

TxDOT suggested that H-GAC provide all the computer files used in the analysis process to TTI for an independent review. H-GAC conducted a simultaneous review of the files. The only major change resulting from these reviews was to the 2007 AD year. Other years changed very slightly. H-GAC appreciates the support from TxDOT and particularly TTI in proofing these input and output files.

5. PUBLIC COMMENT PERIOD

The refinements to the analysis were all posted on the H-GAC Web site the morning of March 2, 2005. Originally, the public comment period was scheduled to close at the end of business on March 31, 2005. This would have only allowed 29 days for public comment on the refined material. Thus, H-GAC will extend the comment period to the close of business on April 1, 2005. After discussion of the changes made to the conformity, the group agreed with this extension.