SOUTHEAST TEXAS PHOTOCHEMICAL MODELING TECHNICAL REVIEW COMMITTEE

Meeting Summary
June 20, 2007

H-GAC Offices
3555 Timmons Avenue
Houston, Texas

Members & Guests Present:
Jane Laping, Ken Gathright, Jordan Smith, Graciela Lubertino, Christine Smith, Bruce Davis, Steve Kilpatrick, Erik Snyder, Soontae Kim, Ron Thomas, Mark Estes, Jim Smith, Dick Karp, and Tom Tesche, Kathy Singleton and Jan Stavinoha via telephone.

SIP Planning & Implementation Update – Kathy Singleton (TCEQ)
Kathy gave a verbal update. She indicated that the SIP package including a request for reclassification to severe was sent to EPA on June 15, 2007. Kathy indicated that currently a time line is being developed and the present activities are modeling of new episodes.

Jane Laping representing GHASP & Mothers for Clean Air, asked about the timing for activities associate with a reclassification to severe. Kathy responded that the attainment date for an area classified severe is June 15, 2019, and the submittal date for a SIP revision is June 15, 2010. Erik Synder with EPA, indicated that he expects there to be further discussion between TCEQ and EPA Region 6, EPA-RTP & EPA-HQ regarding the reclassification request. Erik indicated that in the case of the San Joaquin reclassification request to extreme, California was granted 8 to 11 months to re-submit their SIP. Bill Wehrum's letter recommended TCEQ re-submit no later than June 15, 2010. Presumably, this 3-year period was to accommodate the modeling of new 2005 and 2006 episodes. A question was raised concerning the modeling attainment year for a severe area and whether an earlier year would be considered given the statutory language to "attain as expeditiously as practicable." Jim Smith indicated that for a severe area, 2018 is the modeling attainment year. Jane asked another question about any changes in requirements associated with the reclassification to severe. Erik indicated that since the HGB area had been severe-17 for the one-hour NAAQS, with the "anti-backsliding" provisions, the HGB area was already under "severe" classification requirements, including one-hour off-set ratios and major source definitions. Additionally, the ROP benchmarks of 3%/year emissions reduction will be assessed to the attainment year. Another question was asked about the necessity of a public hearing on the reclassification, and Erik responded that one would be required. Another question was asked about a Mid-Course Review, and Erik indicated that a Mid-Course Review appears to only have been a provision of the one-hour requirements.

H-GAC Update – Graciela Lubertino, PhD (H-GAC)
Dr. Graciela Lubertino indicated that H-GAC is currently accepting comments on their transportation conformity plan out to 2035 (http://2035plan.org). Graciela was asked about the RFP dates, which she indicated were 2012, 2015, 2018, etc. Graciela was also asked about the light-rail which is scheduled to begin in 2015. Graciela responded that currently a rapid transit

bus route is being developed, which will be converted to the light-rail route in response to ridership, and more information on the light-rail plans can be found on the Metro website (www.ridemetro.org).

EPA SIP Related Update – Erik Snyder (EPA)
Erik gave a verbal update. Erik indicated that the Bill Wehrum letter was in response to a letter from Kathleen White, TCEQ Chairman, asking what needed to be included in the SIP. The Wehrum letter indicates that the SIP package needed the bump-up request plus a recommendation and justification for a new submittal date, no later than June 15, 2010.

With regard to the litigation remanding the 8-Hour Implementation Rule (Phase I), Erik indicated that on June 8th the court reaffirmed that subpart 2 areas (e.g., HGB & DFW) need to submit SIPs by June 15, 2007, maintain or adopt anti-backsliding measures, and address emission fees from point sources in areas that do not attain by their one-hour attainment dates. In addition, due to the potential effect the litigation could have had on subpart 2 areas, EPA will not be taking action on non- or late submittals until August 15, 2007.

Regarding the litigation of the HGB one-hour SIP brought by environmental groups, Erik indicated EPA is filing their response with the court today (June 20, 2007) and oral arguments have been set for September 7, 2007. Erick indicated that the issues being addressed in this litigation are the requirements of section 110(l) to provide reasonable notice and public hearing when the rules are changed (e.g., the 90% to 80% change in NO_X reduction for major sources), the lack of a modeled attainment demonstration, and the inappropriate application of weight-of-evidence.

A number of folks asked Erik questions about the one-hour requirement concerning nonattainment emission fees (Section 185(b)). Erik indicated that the fees of $5000/ton would be on the emissions in excess of 80% of permit allowables for major sources. In the HGB area, major sources are those which emit 25 tpy of VOCs or 25 tpy NO_X. Steve Kilpatrick, with DOW, questioned whether the fees were applicable to NO_X, since the statute seems to only mention VOCs. Erik seemed to indicate that it could be applicable to NO_X. Steve also indicated that the $5000/ton fee in 1990 dollars was approximately $7000/ton in today's dollars. There was also a question as to whether Texas has authority to collect the fees.

Erik was also asked about the status of the proposed new NAAQS, and indicated it was due out today. He indicated that if he heard he would let us know.

Summary of TexAQS II Workshop/Rapid Science Synthesis Meeting – Mark Estes (TCEQ)
Mark presented a fairly extensive summary of the recent TexAQS II Workshop and Science Synthesis Meeting. (Note: Mark's presentation is available on the SETPMTC web-site: http://www.tceq.state.tx.us/implementation/air/airmod/committee/pmtc_set.html).

During Mark's discussion about the results from the Solar Occultation Flux (SOF) measurements, he was asked about the appropriateness of comparisons between the SOF measurements and the emissions inventory (presumably the 2004 EI), which for VOC species show large differences. Mark indicated that by multiplying the SOF measurement by the cross-

sectional extent of the plume and the wind velocity, the flux in units of mass per unit time is determined which is comparable to the rate of emissions in mass per unit time.

During Mark's discussion comparing ethene (C2H4) concentrations measured in 2006 with those in 2000, he was asked whether the ~40% decrease was only in Harris county. Mark indicated that it was an average reduction for the HGB area.

During Mark's discussion comparing formaldehyde (HCHO) concentrations measured in 2006 with those in 2000 (note: HCHO also looks to have decreased by ~40%), he was asked about the number of HCHO monitors in 2000 as compared to 2006. Mark indicated that he felt there were a suitable number of ground sites as well as aircraft that monitored HCHO in 2000 to support the appropriateness of the comparison.

2005/2006 Meteorological Modeling Update – Dick Karp and Dr. Jim Smith (TCEQ)
Jim presented some meteorological modeling evaluations comparing modeled Kv's and PBL depths with observed PBL depths, and modeled cloud fraction versus satellite observed clouds. (Note: Jim's presentation is available on the SETPMTC web-site: http://www.tceq.state.tx.us/implementation/air/airmod/committee/pmtc_set.html).

During Jim's discussion of the cloud fraction versus satellite observed clouds, he was asked what exactly the satellite cloud cover indicated. Jim stressed that this comparison of modeled cloud fraction and satellite observed clouds is fairly qualitative. The satellite-observed clouds are GOES IR imagery, which is interpreted to be a surrogate for clouds. Jim was also asked about the difference between the vertical levels of the satellite observations and the modeled cloud fraction. Jim indicated that as he understood it, the satellite observed clouds are the reflection from the cloud tops and there is no indication of the actual vertical level of the cloud tops.

Dick presented meteorological modeling evaluations for the May 19 to June 3, 2005 episode. These evaluations included comparisons between modeled and monitored air temperatures, wind speed and direction, and PBLs. In addition, Dick showed forward trajectory plume plots using modeled and monitored winds for selected days of the episode. (Note: Dick's presentation is available on the SETPMTC web-site: http://www.tceq.state.tx.us/implementation/air/airmod/committee/pmtc_set.html).

Jim Smith pointed out that the color coding on the plume plots of red trajectories for primarily VOC emissions and blue trajectories for primarily NO_X emissions is a little misleading, as many of the red trajectories are from petrochemical locations where there is also notable NO_X emissions.

2005/2006 Emissions Modeling Update – Ron Thomas (TCEQ)
Ron presented an update on the emissions modeling for the 2005 and 2006 modeling episodes. The major updates were the availability of the 2005 STARS data extract, preliminary analyses of the May-June 2005 hourly Special Inventory data, an update of the hourly CCEDS data incorporation, and the inclusion of flash emissions from oil & gas production facilities. (Note: Ron's presentation is available on the SETPMTC web-site: http://www.tceq.state.tx.us/implementation/air/airmod/committee/pmtc_set.html).