

## Minutes

37<sup>th</sup> Meeting of the

Joint Advisory Committee for the Improvement of Air Quality in the  
Cd. Juárez, Chihuahua / El Paso, Texas / Doña Ana County, New Mexico Air Basin  
El Paso Metropolitan Planning Organization-EPMPO, El Paso, Texas  
Thursday April 12, 2007

### 1. Welcome and Introductions

Bill Luthans (BL), EPA Region 6, welcomed all to the 37<sup>th</sup> meeting of the JAC. Ana Maria Contreras (AMC), SEMARNAT, also welcomed all to the meeting.

JAC Members Present	
U.S.	México
Bill Luthans - EPA	Ana Maria Contreras V. - SEMARNAT
Arch Clouse - TCEQ	C. Martin Bermudez M. - Delegado PROFEPA
Silvia Zanella - EPCCHED*	MVZ Silvia Castro A. - Edo. de Chih.
Tom Ruiz - NMED	Quim. Ma. Araceli Salazar M. - COESPRIS
Jim Parks*	Alba Y. Corral A., PhD. - UACJ
Mariana Chew - Sierra Club	Quim. Pilar Leal - MEM*
Luis Perez - EP Electric*	Ing. Baltazar Granillo - CANACINTRA
Elaine Barron, MD	Adriana Peña - SADEC*
Jessica Gamez - UTEP*	
* Alternate	

### 2. Presentation and approval of current agenda

The Agenda was accepted with minor modifications. The minutes were approved.

### 3. Message from the Co-Chairs

Bill Luthans mentioned that El Paso has made progress on complying w/ the NAAQS for O<sub>3</sub>, CO and PM<sub>10</sub>. The 8-hr O<sub>3</sub> standard has never been violated. El Paso has moved to have EP designated in attainment of the CO standard, and EPA is working on this request. This is a process issue and more needs to be done on the Maintenance Plan more specifically related to the transportation sector. EPA is under a consent decree to review and revise the 8-hr O<sub>3</sub> standard and hopes to propose a new standard in the fall with hopes of promulgating a new rule by the spring of 2008. Early indications are EPA is looking at a range between 60-80 ppb which could potentially put EP back into nonattainment of the 8-hr O<sub>3</sub> standard. A question was asked as to the possible design value for El Paso. TCEQ will provide more information at upcoming meetings.

Ana Maria Contreras stated she is interested in determining if there could be any impact to Mexico should it wish to promulgate new rules for the O<sub>3</sub> standard. Asked if Mexico was developing an 8-hr O<sub>3</sub> standard AMC indicated that Mexico hasn't touched on this issue yet. SSA is in charge of

looking at air quality standards and this is a theme that hasn't been extensively looked into.

AMC announced an upcoming workshop taking place next week in Cd. Juarez regarding the Smartway transportation systems currently being promoted by both countries. Discussions will cover technology currently available to reduce fuel consumption in the transportation sector.

#### 4. Public Participation

No comments were provided.

#### 5. JAC Discussion on Public Comments

No Comments were provided.

#### 6. Air Quality Report

Victor Valenzuela presented the air quality report. Hydrogen sulfide data was unavailable for the meeting due to technical issues in the server where data is obtained. However H<sub>2</sub>S continues to be a problem at the site where it is measured as indicated by hourly data which can be viewed by the public. To recap, 2006 had 2800 exceedances of the H<sub>2</sub>S standard (80ppb / 30 minutes average) for a monitor located at a property fence-line. This monitor is located roughly 3/4 mile east of the nearest possible source.

In 2007 to date, no CO exceedances have occurred in El Paso or Juarez. No exceedances of the 1-Hour Mexican ozone standard (110 ppb) occurred. The 8-hr ozone standard has not been exceeded in El Paso, and there were no exceedances of the 3<sup>rd</sup> highest 8-hr O<sub>3</sub> average to cause a violation of the standard. Mexico currently does not have an 8-hr O<sub>3</sub> standard. There were no exceedances of the PM<sub>10</sub> standard using non-continuous samplers. In 2006 there were multiple exceedances of the PM<sub>10</sub> standard observed by the TEOMS continuous monitors, but all occurred during high-wind events.

A question was raised regarding use of the TEOMS for reporting PM air quality. BL indicated this was a precision issue. The issue is whether the TEOMS are accurately and reliably reading the aerosol mass. TEOMS tend to report PM values higher than the FRM. Perhaps we can add this topic to the next meeting.

#### 7. Presentations

##### A) Natural Events Action Plan. A preliminary sketch of the program.

Archie Clouse discussed the first steps in developing a Natural Events Action Plan for El Paso. The purpose of a NEAP is to set the groundwork to have El Paso redesignated as an area in attainment of the NAAQS for PM<sub>10</sub>. The NEAP has been approved for implementation by the TCEQ. Currently actions are underway to develop a community notification system when natural events are possible. A natural event is primarily a high wind event which entrains large amounts of dust. Particulate matter concentrations may reach well over 1000 micrograms / cubic meter (µg/m<sup>3</sup>). The PM<sub>10</sub> standard is an average of 150 µg/m<sup>3</sup> in a 24 hour period. If an environmental agency develops a NEAP it is possible to remain in attainment of the NAAQS given the elevated PM<sub>10</sub> concentrations were not caused by anthropogenic sources but by a natural event.

El Paso City County Health and Environmental District (EPCCHED) has developed a brochure distributed to meeting attendees. The brochures describes health effects (both long and short-

term) which may occur due to exposure to elevated concentrations of particulate matter. The brochure also describes actions one may take to reduce exposure to elevated PM levels. TCEQ and EPCCHED are currently developing this program for deployment in the community.

B) Bi-national / Tri-State Regional Transportation Efforts - El Paso MPO

George Pinal, Long-Range Regional Planning Specialist - EPMPO, presented current and proposed projects under development by the Multi-Regional Transit and Commuter Committee. The Bi-national / Tri-state (Multi-Regional) Transportation Plan proposes construction of roadways connecting the Paso del Norte area to the Columbus / Deming, New Mexico area toward the West and Las Cruces, NM toward the North. The Regional Mobility Plan proposes development of major transportation roadways connecting the primary roads South of Juarez to multiple Ports of Entry at Fabens, Santa Teresa, and the 3 current POEs in the City of El Paso.

Tools currently used for transportation planning include:

Transcad

VISSIM/ VISUM

Border Wizard

Bridge Queuing Analysis Tool (BQAT)

Trans-border Travel Demand Model which examines Passenger & Commercial vehicles

MPO will obtain desegregated demographics for Cd. Juarez the Instituto Municipal de Investigación y Planeación (IMIP) of Cd. Juarez, Chih, Mex. IMIP is the equivalent to the El Paso MPO in terms of modeling and urban planning.

The purpose of the Regional plan is to improve the movement of (primarily) commercial traffic into the U.S. from the interior of Mexico bypassing traffic congestion in both El Paso and Cd. Juarez.

Camino Real Corridor- Border Improvement Plan - Ricardo Domnguez, Project Manager - El Paso MPO, discussed the BIP. The EPMPO has undertaken initiatives to improve the flow of traffic and reduce air pollution emissions from mobile sources throughout the Paso del Norte region. Elements include improving the following POEs - Ports of Entry: Santa Teresa, Paso Del Norte, Stanton, Bridge of the Americas (BOTA), Zaragoza, and Tornillo/Guadalupe. The BIP also considers the following variables: Passenger Vehicle Data, Arriving and Departing Commercial Vehicle Volumes, Commercial Vehicle Surveys, Pedestrian data, and inspection service times at existing (passenger and commercial) queues, Dedicated Commuter Lanes (DCL), and FAST. The following analytical tools and analyses are used: Bridge Queuing Analysis Tool, Queue lengths, Arrivals, Average Expected Vehicle Delay, Transborder Truck Trip Travel Models, POE Capacity Analysis, Build out/ Queue Impact Scenarios using different technologies.

Using these tools the MPO is attempting to develop strategies to reduce bridge wait times, improve the flow of traffic throughout the region, and with improved movement help the regional economies expand without deteriorating air quality.

C) Cd. Juarez Vehicle Emissions and Vehicle Importation into Mexico

Rodolfo Lacy - Mario Molina Center in Mexico City - presented a report on The Cd. Juarez Vehicle Emissions Measurement Campaign. In Mexico more than 28 million persons live in urban areas with degraded air quality. More than 70% of all air pollution comes from mobile sources. By 2009, new rules on vehicle imports will open the doors to a major influx of new and used vehicles which may exacerbate air quality degradation in México. In Mexico, new policies allowed a surge in imported vehicles between 22 November 2005 to 23 August 2006 of over 1.285 million used vehicles all of which were over 10 years old. Of this group, 37% are passenger vehicles, 43% are

minivans, and 20% are pick-ups.

Cd. Juarez has air quality problems due primarily to used cars which come predominantly from the North. Cd. Juarez currently reports over 450,000 vehicles registered in this city. Due to the geographic features of the region, pollutants become trapped within the Paso del Norte air basin which encompasses all the communities in this region. The vast majority of imported vehicles have high mileage and are technologically obsolete. Many have had the catalytic converter removed and are not designed to be analyzed using the OBD-On Board Diagnostic- equipment albeit Cd. Juarez has implemented a vehicle emissions verification program. It is one of very few Mexican communities which have deployed remote (vehicle emissions) sensing technology as part of a mobile source emissions reduction program.

The Cd. Juarez vehicle emissions testing campaign took place between 2-7 April 2006. The objective of the study is to develop a profile of vehicle emissions in the Cd. Juarez fleet by Make, Model, age, and locale of origin. An RSD-3000 remote sensing device installed in a mobile unit was deployed. This RSD measures CO, CO<sub>2</sub>, HC, and NO<sub>x</sub>. These pollutants are measured alongside vehicle speed and acceleration. A digital photo of the tested vehicle's license plate is also taken. 2,513 vehicles were tested.

## **Results**

**Unregistered Vehicles.** Data indicate that among the major problems discovered are an extreme level of illegally transiting vehicles. Over 17% of vehicles observed by the RSD had no registration or license plates. Upon further examination, most had a Customs document which does not provide an expiration date and allows free transit throughout the Cd. Juarez area without requiring any type of State registration. This issue alone is allowed due to lack of rules in this regard. Such unregistered vehicles may be imported using the "salvage" description as long as the engine does not start and the vehicle is towed into the country. Mexican Customs reports that up to 85% of vehicles imported into Mexico are classified "salvage" and apparently many of those vehicles are functional.

## **High Emitters.**

Vehicles which are registered with the State and monitored by the RSD-3000 emit 50% more NO<sub>x</sub>, 50% more hydrocarbons (HC), and 38% more CO compared to vehicle emissions measured using the same device in Mexico City in 2005. American-registered vehicles emitted 23% more NO<sub>x</sub> and 21% more HC compared to vehicle emissions measured using the same device in Mexico City in 2005.

## **Inefficient Combustion / Low Fuel Mileage**

63% of vehicles imported into Mexico through Customs in the Cd. Juarez area are Vans, Mini vans, Pick-up's and SUVs. These are vehicles typically known to have low fuel mileage and may consume 3x more fuel than smaller more efficient vehicles manufactured in 2005.

## **No Emissions Control Equipment**

2% of vehicles registered with the State have been inspected in compliance with rules governing the "fiscal stoplight" and none had the vehicle verification sticker prior to being permanently imported into Mexico. The "fiscal stoplight" is a mechanism used by Mexico to inspect vehicles entering the country. A computer randomly selects which vehicle must be inspected by a Customs agent (regardless of country of origin).

## **Diesel Vehicles**

203 buses were observed during this study. Cd. Juarez buses emit less pollution than those in

Mexico D.F. perhaps due to the current vehicle verification program which prohibits the operation of diesel fueled vehicles with ostensibly visible emissions. However, the study authors do not consider 203 buses to be a statistically significant number.

### **Conclusions**

- Vehicles in Cd. Juarez generate higher emissions than vehicles circulating in Mexico D.F.
- Current legal, administrative, and informational mechanisms possessed by the Mexican government to control the environmental and health impact from massive importation of used vehicles into the country are insufficient.
- The Agreement developed by SEMARNAT published 3 Nov, 2006 is deficient in that rules governing vehicle emissions will continue to be incongruent with those developed in the U.S.
- The recent decision to open the border to the importation of used vehicles which are 10 years old & greater will impact air quality improvements made nationwide during the past 10 years.
- This event places at risk the automotive industry, public health in congested metropolitan regions, and the physical health of pedestrians and people in old, minimally maintained vehicles.
- Based on Mexican Customs data, for each 2 new vehicles sold in Mexico, 3 vehicles 10 years and older are imported into Mexico.
- Mexico may suffer a phenomena similar to what occurred in Peru where the national automotive industry, for all intents and purposes, disappeared and roughly 80% of all vehicles circulating on the nation's streets originate in either the U.S. or Japan.
- In 1992, Peru decreed the free importation of vehicles from the U.S. which by 2004 63% of the entire vehicular fleet transiting the streets of this country were imported, used vehicles.

#### D) Oxygenated Gasoline in Cd. Juarez. Updates on Mexico's Regulations on oxyfuels distribution.

Gerardo Tarin presented a letter developed by the ProAire oxyfuels subcommittee to PEMEX requesting the distribution of oxyfuels during winter months in Cd. Juarez. PEMEX has responded to requests for oxyfuels distribution by indicating the current conditions in Cd. Juarez do not warrant oxyfuels distribution. No violations of the CO NOM have occurred in Juarez in over 4 years. However, oxyfuels distribution did help reduce the number of CO exceedances that occurred. A comment was made that with oxyfuels and due to elevated oxygen content, the fuel has less BTUs, has reduced fuel mileage, and therefore more fuel needs to be consumed to travel an equivalent distance and more HC emissions are emitted in that process. The ProAire oxyfuels committee will continue to hammer out this issue.

#### E) Regional Reforestation Initiative

Victor Valenzuela reported on an initiative to reforest the Anapra, Chihuahua / Anapra & and Sunland Park, New Mexico region. Over 2000 Eldarica Pine trees were planted in these 3 communities in early February and early March.

For the Anapra, Chihuahua project, the West Texas Urban Forestry Council purchased 1,000 trees at a cost of \$1,800 from the Texas Forest Service. Several Cd. Juarez governmental agencies assisted in crossing the trees into Mexico and the community group "Las Hormigas" ("the Ants") distributed them during a weekend in early February. Several students from the UACJ participated in this event.

For the New Mexico project, the New Mexico Environment Department purchased 1,000 trees from New Mexico Energy and Minerals Department at a cost of \$52 / 50 trees. The trees were delivered to JAC member Robert Ardovino who worked with GASP (Grassroots Action Sunland Park) a local community group to distribute them to the community. Each family receiving a tree was asked to complete an adoption certificate and provided with instruction on how to care for their tree.

All of the communities are impacted by elevated particulate levels caused primarily by unpaved roads and open burning. During the wintertime particulate levels reach over 1,000 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) during several hours in the early evening. It is hoped that the trees will grow and drop their needles onto the soil thereby stabilizing the sandy finely ground soil which easily becomes entrained by vehicular traffic and elevated wind events. In 10 years the trees should grow to be at least 20 feet tall and will also act as wind breaks. Each tree's extensive surface area due to the sticky pine needles may also help trap PM which is floating aloft thereby reducing PM concentrations.

Finally, this project is done for all the children in the region, some of whom have respiratory health problems, and will benefit from efforts to reduce their exposure to elevated PM concentrations.

F) Cd. Juarez Vehicle Verification Program

The report was not presented and rescheduled for the following JAC meeting.

G) Recap of the Air Policy Forum Meetings held 10-11 April

Sue Stendebach, EPA, and Ana Maria Contreras provided a recap of the Air Policy Forum meetings held in Cd. Juarez the previous 2 days. Sue reviewed the purpose of the APF which is to reduce emissions to achieve attainment of the NAAQS along the U.S.-Mexico border. The Plan includes 2 Interim Objectives which 1) Define a baseline for emissions reductions - completed; and 2) Define reduction strategies and AQ exposure objectives for 2012 completion.

Under Interim Objective we have 4 priorities:

Priority 1: Improved information exchange and outreach; real-time monitoring, health surveillance and compatibility;

Priority 2: Cross-border approach to AQM in transboundary airsheds throughout the border region;

Priority 3: Reduction of PM via reduction from diesel sources and availability of ULSD in border region;

Priority 4: Capacity-building through workshops and training, to include inventories, I&M Programs, and market based mechanisms; and finally

Regional and Local Priorities.

Specific projects and activities have been undertaken under each Priority to achieve the goals of this Interim Objective which will become the Border Air Quality Implementation Strategy. The BAQIS is Integrated, Focused, and results driven.

Several topics are identified in regards Airshed Management. The main issues are:

-Define binational airsheds.

-Define air pollution control strategies, critical zones.

-Binational electricity policies for the airsheds. (Energy generation, efficiency and potential cross border mechanism to be involved in utility planning). We would like to be more involved in emissions control planning.

-Harmonize data. (Emission inventories, meteorology, land use, air quality data, etc.) and obtain real-time air quality data.

- Harmonize control strategies (regulations)
- Develop Local (binational) agreements for economic incentives to reduce emissions and control air pollution. How do we pay for all this?? Cross border economic incentive programs, clean investment funds, financial support, etc.

Activities that can be undertaken to improve air quality management:

Amend the La Paz Agreement on extension of airsheds.

Meetings / workshops to define steps to define airsheds. This is not easy to do.

Provisions that recognize political boundaries on airshed

Work with the Border Governors' Conference

Awareness of basic issues / concepts. Persons/organizations who take political decisions on these issues.

The 2<sup>nd</sup> priority is Capacity Building.

-We can build capacity in operating SLAM (State & Local Ambient Monitoring) systems in communities in Mexico.

-Form a group of experts that can inform different audiences about air quality, beginning with the most vulnerable groups to educate and train them.

-Create an academy of air quality so that we have a group of experts available to answer questions.

-Use emissions inventories to develop capacity.

-Build capacity for monitoring systems. This is training, outreach to citizens and officials.

Ana Maria discussed developing research on the current state of the air quality monitoring networks along the U.S. - Mexico Border. Air quality modeling, Emissions Inventory Development. Mexico is currently developing a rule/regulation regarding air quality monitoring networks which addresses collecting and archiving air q. data. This includes installing air monitoring networks in regions of the border which should start considering deployment of such equipment. Mexico will start to develop EI's in regions of Mexico which currently do not have EIS and integrate these data into the national EI. Mexico will develop the CEMA program and provide financing to install this equipment.

Regarding transportation sector initiatives are strengthening legal and administrative mechanisms on vehicle importation. Mexico will promote the paving of roadways. Mexico will strengthen legal mechanisms in support of vehicle verification programs and provide financing to help these programs develop. Mexico will promote the Smartway transportation system. Mexico will promote clean diesel initiatives including biodiesel and cleaner motor vehicle fuels.

## 8. JAC Subcommittee Reports and Discussion

PM - Alba Corral, Ph. D., Chair

Dr. Corral mentioned the fine work in completing the tree planting initiative. The brickmaking initiative continues moving forward and records are being kept to determine continued use of this technology. UACJ will develop a MOU with the City of Juarez to improve access to air quality data especially the recently deployed PM10 network. The 7 samplers are collecting more dust on the outside than inside.

Mobile Sources - Ing. Ives Figueroa, Chair

1) Cd. Juarez is committed to operation of the Vehicle Verification program for both commercial fleets and private passenger vehicles.

2) In conjunction with the BECC Cd. Juarez would like to develop a dynamometer-based vehicle

emissions testing program.

3) The City will develop a widely spread meteorological network which integrates data from a broader group met-towers. Perhaps we can plan a meeting with the UACJ - Civil engineering department to begin integrating air q. data and meteorology.

4) We are developing a modeling effort to determine the impacts of oxygenated gasoline to reduce CO emissions to improve the justification for requiring oxyfuels during the winter months.

Data - Mariana Chew, MPA, Chair

Mariana reported that the committee needs to determine what exactly this subcommittee should do. No members have offered to participate in activities of this subcommittee. Calls for assistance and participation go unanswered. There has been some data on work that has been done to date, but this work needs to be updated.

Some items that evolved from the APF meetings this week include Defining the airshed / basin – considering the specific definition provided in the previous Appendix to Annex V. We would like to be involved in developing the Cd. Juarez EI by working w/ SEMARNAT to see how this can evolve. Perhaps there are methods of how to flesh out how to obtain information from the PM10 network and also get the network working.

Emerging Issues - Bob Currey, Chair

Archie Clouse discussed issues developed by Chuy Reynoso, EPCCHED, regarding penalties for violations of the oxyfuels standard in El Paso. It appears the fines are insufficient and the repeat violators continue operating without improvement. AC is convinced that this penalty matrix needs to be revised. What AC offers is to have enforcement people in Austin to modify Penalty Calculation Worksheet to see if it can be modified to strengthen penalties. The # of repeats are not significant, but 3,4,or 5 repeat violations need to be revisited and fines progressively strengthened.

Ways and Means -  
No Chair available.

9. Observations and Comments from the Public  
- No comments were provided.

10. Highlights and consensus items of the meeting.

-Interest in the NEAP from UACJ and Cd. Juarez ecology Dept are promising to help reduce exposure to conditions which may cause health conditions to deteriorate among the most sensitive in our community.

-We need to take a 2<sup>nd</sup> look at the technical issues regarding oxyfuels and provide objective data.

-Preparation for the National Coordinators meeting needs to continue including actions evolving from the APF.

-We need to provide continuity regarding the importation of used vehicles into Mexico.

-AC considered it important to identify those members that have not attended meetings and not sent alternates in their stead and we should fill vacancies if those members do not attend on a consistent basis.

11. Establishment of next meeting date  
August 9, 2007 in Juarez.

12. Adjourn