Minutes
29th 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
Presidencia Municipal, Cd. Juarez, Chihuahua
22 March, 2004

Welcome and Introductions
Sergio Sanchez (SS) and Bill Luthans (BL) welcomed all to today's meeting. welcomed and introduced each of the members on the Mexican side of the JAC.

JAC Members Present:

Mexico
Ing. Sergio Sanchez - Co-Chair, SEMARNAT
Lic. Jose Mario Sanchez , PROFEPA
Ing. Jose Treviño, SEMARNAT-Delegación Chihuahua
Ing. Ives Figueroa - State of Chihuahua Ecology Department
Biol. Alma Leticia Figueroa - Cd. Juarez Ecology Department
Ing. M.C. Gilberto Velazquez, UACJ
Ing. Rene Franco - MEM
Dr. Enrique Suarez, FEMAP
Ing. Gustavo Cordova, COLEF/CCDS, Chihuahua

United States
Mr. Bill Luthans, Co-Chair, Environmental Protection Agency
Mr. Arch Clouse - TCEQ
Dr. Carlos Rincon - Environmental Defense
Mr. Bob Currey
Mr. Hank del Rio, alternate for Mr. Jesus Reynoso, EPCCHED

Presentation and approval of current agenda
-The agenda was approved.

Approval of minutes of the Dec., 2003 JAC meeting
The minutes were approved.

Announcements
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Consent Agenda and Written Updates - Agreements and Pending Old Business:

-The Brickmakers Technical Commission will begin an analysis of the ongoing EP Electric brickmakers project to consider if any next-steps can be recommended.

-Carlos Rincon is developing a white paper on cross border emissions trading.

-Next steps on the Cd. Juarez PM_{10} Air Quality Monitoring Network need to be discussed.

-Next steps on the One-Basin Resolution need to be developed.

-No new information was submitted.

Regular Agenda

A. Air Quality Report

-Victor Valenzuela (VV) presented the Air Quality report for the 3rd quarter 2003 (Q3-2003) which consisted of 92 sampling days. There were no exceedances of the 1-hr O_3 standard in either city (EP, DAC, or Jz). The trendline for Juarez was lower indicating consistently lower daily 1-hr maximum averages than in EP or DAC. Trendlines for the other cities drop following seasonal trends. All the daily trends tracked each other fairly well. BC asked how many times the TCEQ "cried wolf" by calling an ozone action day. Without giving a specific number VV indicated there were several OAD's called.

Re: PM_{10} 6-day sampling, 16 ambient monitoring days occurred. There was 1 sampling day in DAC where PM_{10} concentrations reached 169 □g/m^3 for the 24-hr average on 7/26. Met data indicate elevated max. wind gusts and hourly averages. Most of the 6-day PM_{10} values reported in EP (12) and DAC (11) were in the good range (0-54□g/m^3). 13 sampling days were in the moderate range in Juarez. PM_{10} TEOMs continuous monitors indicated 4 days exceeded the NAAQS in both El Paso and DAC. 2 of the exceedance days in each region were in the Unhealthy range; the other 2 in the Unhealthy for Sensitive Individuals range.

$PM_{2.5}$ TEOMs monitors indicate no exceedances of the standard in either jurisdiction (EP or DAC). Trendlines for $PM_{2.5}$ were downward for Q3-2003. The trendline for El Paso indicated higher daily maximum averages compared to DAC.

Dr. Wen-Whai Li (WLI) commented on the continuous monitoring data where we report exceedances of the standard yet EP would be considered in attainment. VV offered to provide a more thorough reply at the next JAC meeting.

EB added that Dr. Li's comment was relevant since if you have high PM events associated with high ozone events, respiratory distress symptoms may be triggered. So while air quality values may be below the

standard there are still many people with poor respiratory function who are impacted by high wind and high PM levels. VV indicated that during high wind events (which is what was usually the cause for the elevated PM values) clouds of dust are picked up from the surrounding desert and blow through El Paso. The dust cloud may be several hundred square miles in area. BL added that from an air quality planning perspective it is difficult to develop a SIP and control measures addressing entrained dust from the surrounding region. Such is the reason for removing high wind events from the NAAQS equation in regards (Re)designation issues.

AC added that one way to protect the public health before high wind events occur is by forecasting for high wind days and providing a public advisory indicating high dust concentrations may develop over the region and those with respiratory health problems should attempt to stay indoors. That in fact is what we are working on to develop with the Paso del Norte PM & CO forecasting system. **BL asked that we include a report for the next JAC meeting indicating how high wind events figure into the NAAQS equation.**

DAC continues operating a NCAMS (non-continuous ambient monitoring station) for $PM_{2.5}$ in Sunland Park and Las Cruces. Data for Jan-Sept, 2003 indicate the majority of the time $PM_{2.5}$ concentrations are in the good range as reported by the 3-day sampling network.

At the last JAC meeting there was a request for Air Quality Trends. We were able to pull up 3 year averages for PM_{10}. For all intents and purposes, PM10 trends were dropping during the 1990's. Since 1999, PM_{10} concentrations have been on the upswing. CO trends have been dropping especially after oxyfuels were introduced and continue to drop. O_3 concentrations also are on a decline when one observes a 3 years average sampling period.

B. Wintertime oxygenated gasoline program

-El Paso's wintertime fuels program calls for addition of an oxygenate to the gasoline distributed throughout El Paso in order to reduce start-up carbon monoxide emissions. Jesus Reynoso provided a report on this year's program and enforcement activities. The control period runs from October 1 - March 31. The standard remains the same - 2.7% oxygen content by weight. EPCCHED identified 366 facilities and 1926 samples were taken. The first round of sampling found 23 violations. 1 violation was found during the 2^{nd} round of sampling. This is the 1^{st} time a violation has been reported on the 2^{nd} round of sampling. A follow-up round of sampling will take place between January and March as this program closes for the season. An effort was made to obtain fuels from Juarez, but a problem w/ US Customs prevented the crossing of the fuel samples into EP due to new security concerns on the border since gasoline shipped in containers is considered a hazardous material.

Carlos RIncon (CR) commented on the revisions to the oxygenated fuels standard for Mexico as it relates to Juarez. The request for changing the 2.7% oxygen content by weight requirement in fuel distributed in Juarez is still being drafted. As soon as the motor vehicle manufacturer's association of Mexico agrees with this request, the request needs to go thru the legislative process. It is then published in the Federal Record (Diario Oficial) of Mexico.

MGG added that the NOM-086 related to fuels establishes certain fuel blend requirements. The law does not specify a specific value, it states that the oxygen content may be up to 2.4% by weight. Perhaps by the end of Q1-2004 the updated Regulation will be established.

C. Cd. Juarez PM10 Monitoring Network

-Gerardo Tarin (GT) reported that Cd. Juarez has begun expansion of the PM_{10} monitoring network. Recently the Cd. Juarez Ecology office refurbished several Wedding and Anderson Hi-Vol PM_{10} samplers donated by the TCEQ. The network has added 3 samplers with deployment at Babicora, and Anapra. Anapra has two samplers. Future samplers will be installed near the Cementos de Chih. facility in the city's south side, near Jilotepec, and in Waterfill. Given current financial resources, 7 samplers have been able to be refurbished and 3 deployed. Juarez has 5 PM_{10} monitoring sites with a total of 7 PM_{10} samplers currently deployed. The justification for this expanded network is obvious. 50% of the city's roadways are unpaved with the greatest amount of unpaved roads are in the city's west side. We also would like to support ambient monitoring efforts undertaken by NMED in regards PM emissions generated in the Anapra region which may be impacting Sunland Park. Babicora is a region of high growth. Almost all the urban growth is headed in a SE direction and expansion of the monitoring network is necessary and assists in conducting any future respiratory health studies.

Jesus Reynoso added that while unpaved roads are a major contributor to PM air pollution problems, another factor is the excessive amount of open burning of residential refuse and the expansion of brickmaking operations along the border. Chuy asked if anything being done to control emissions from the brick kilns and open burning. Lic. Jose Mario Sanchez, Delegado for PROFEPA, indicated refuse burning does not take place to any significant degree. The major problem to which Chuy refers is burning of wood and other materials for home heating. During warmer seasons this usually drops. Trash burning is almost nonexistent because of the city-wide solid waste collection system currently in place. CR added that in the Juarez emissions inventory, emissions from open burning are perhaps the smallest percentage contributor of all emissions in Juarez so the Pro-Aire plan does not pursue this source emission.

D. Cd. Juarez Brickmaking Industrial Complex

-Biol. Alma Leticia Figueroa provided a report on the inauguration of a Brickmaking Industrial Complex in the southside of Juarez which took place on November 28, 2003. At this site brickmakers will have an opportunity to operate the very low polluting brickkilns which are proven to reduce total emissions by over 80%. The Complex covers approximately 4 hectares, has a frontage of 80 meters and extends back several hundred meters and is located at the entrance to the Cd. Juarez Landfill.

Initially the complex should house at least 50 kilns. EPElectric has offered to construct 40 kilns and Applied Science labs of Albuquerque will be constructing at least 10. There are various supply depots where raw materials will be delivered. Each kiln will have a driveway for access by vehicles which will take the bricks to market. Water storage facilities for making mud bricks are provided. There will be facilities for personal hygiene as well as eating areas. The object is to provide a facility where brickmakers may obtain raw materials at a lower price and improve their operating margins as well as eliminate pollution sources near their own residences.

EB commented that since the brickmakers are working at this facility and their kids and families are not nearby, which is the case with current brickkilns, children will not be impacted with smoke emissions from the kilns. EB also commented about past efforts to install natural gas and propane gas infrastructure at the kilns. AF responded that the costs to install a natural gas infrastructure was excessive and previous experience indicates the brickmakers are not willing to change their fuels of choice. AF added that efforts are underway to convince 40 brickmakers who have kilns next to their home in any of the brickmaking neighborhoods, to tear down their kiln and agree to relocate their operations to the new neighborhood.

MGG commented that this technology is great and she hopes other regions in Mexico are able to take advantage of these kilns developed in Cd. Juarez.

E. El Paso Community Toxics Monitoring Network

-Patricia de la Cruz, TCEQ Community Air Toxics Monitoring Network (CATMN) Manager reported the TCEQ operates a network of ambient air pollution monitors designed to provide information on certain pollutants. The Mission of the CATMN is tso determine potential community exposure and long-term health effects, to identify sources of targeted compounds, and to assess trends. This presentation addresses gaseous toxics not PM. CATMN (which consists of an auto-gas chromatograph, carbonyl cartridges, and polyurethane foam samplers) has 5 sites in EP (Womble, Ascarate, Chamizal, Sun Metro, and UTEP). It targets 88 VOC species. Data indicate downward trends for Benzene. CATMN monitors near Womble report elevated benzene levels above the Annual Effects Screening Level (ESL) of 1ppbV. A PAH (Polycyclic Aromatic Hydrocarbons) Sampling Network measures the aerosol phase generated by the combustion process. A PUF (Polyurethane Foam) sampler is deployed at Sun Metro to collect PAH samples which are then compared to ESLs. The highest species at this site contain phenanthrene and pyrene. However, the new sampling method indicates phenanthrene concentrations exceed the annual ESL of 50 mg/m^3 by a factor of 3. Earlier trends on this component indicate annual concentrations lower than the ESL. Pyrene levels at Sun Metro were all much lower than the annual ESL of 50ng/m^3.

The PAMS network also includes an automatic gas chromatograph (auto-GC) and carbonyl samplers. Data collected assists in understanding ozone formation, track VOCs, NOx, and other trends. The sampling network allows the TCEQ and EPA to assess the feasibility and need for long-term or extensive toxics and photochemical monitoring. This equipment helps assess if pollutants are a contributing factor to health problems and assess temporal variations of pollutants. Carbonyl samplers consider carbon compounds of C1-C9. Chamizal-based carbonyl samplers report formaldehyde (HCHO) levels are highest at this location. Most likely these are vehicle exhaust emissions most often generated at the international bridge located just 500 meters east of this site. Levels are comparable to other cities in Texas and are below the ESLs for this component. Data obtained by the auto GC indicate benzene and 1,3 butadiene appear to be on a downward trend.

Elaine Barron indicated she is concerned with the lack of linkage between EPA and NIOSH as well as other Federal agencies associated with human health and other groups concerned about respiratory health. We need to track respiratory and other types of disease, identify if clusters are developing, and develop

intervention programs if problems exist. What are we going to do about this?? Because of the competition for federal dollars, so many problems go unreported because there is little communication between the parties working on the same projects.

Dr. Li asked that since Patty reported on the gaseous toxics if she would be returning to present something on metals such as lead, arsenic, etc. Patty replied she could return to present on this topic since this data is collected, but not reported on the Internet. Dr. Li indicated UTEP is collecting Pb, As, Cr, Cd, Cu, etc. on soil samples. A question was asked if emissions are higher from cars or gasoline stations given most gasoline in cars comes from the gas stations. It would appear that vehicles generate more emissions due to the area-wide extent of vehicle emissions.

G. SINAICA national meeting on Mexico's air quality monitoring network.

-Cd. Juarez Ecology office recently participated in a national forum on development and deployment of Mexico's National Air Pollution Information System. Gerardo Tarin, Director of the Regulatory Program for the Cd. Juarez Ecology Department, reported SINAICA (Sistema Nacional de Informacion de la Calidad del Aire) is in process of integrating data from the continuous air quality monitoring stations throughout Mexico into a single server in Mexico D.F. Each station reports to SINAICA via file transfer protocols and such data is then reported on the nation-wide reporting network. Recently there was a national meeting to discuss the nation-wide air quality monitoring network operated by several communities. The purpose of the meeting was to discuss strategies on ambient monitoring, quality assurance / quality control, etc. Juarez operates a website at www.ecologia.gob.mx where all the air monitoring data is reported. Since integration into the LEADs air q. monitoring network, Juarez has achieved great advances in reporting its local air quality monitoring data on a near real-time basis and making it available to the public. The SINAICA website is located at www.sinaica.gov.mx where one can obtain most of the country's monitoring network information.

7. Observations and Comments from the Public

Elaine Barron commented that the JAC write a letter to the Mayor, the Governor of Chihuahua, and other elected leaders to mention the efforts Alma Leticia Figueroa has done to improve the quality of the environment in Juarez. EB added we need to support Alma for standing up against parties that intend to pollute the environment.

8. Highlights and consensus items of the meeting.

Bill Luthans provided a summary of the highlights.

1) On Air Q. report we'll provide some focus on PM monitoring regarding how measured results are related to the standard, and how exceptional events relate to the standard.
2) Carlos was going to work with the PI's on the Juarez Air Quality/Respiratory Health studies and invite the speakers to present their results.
3) TCEQ would present something on metals monitoring in regards toxics.
4) SEMARNAT and EPA as well as the JAC will draft a letter in support of Alma Leticia Figueroa for her outstanding work she's done in Juarez and indicate we need to do more.

5) TCEQ will provide an update on the redesignation issue.
6) EB will try to have the Clean Air Act Advisory Committee and National Environmental Justice Advisory Committee to meet in the PdN area to learn about air quality.

9. Establishment of Date for the next meeting
-Thursday March 25, 2003 in El Paso. Later changed to Monday March 22, 2003 in EP.

10. Adjourn