

Minutes
 40th 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, El Paso, Texas
 Thursday February 28, 2008

1. Welcome and Introductions

Bill Luthans (BL), EPA Region 6, welcomed all to the 40th meeting of the JAC. Ana Maria Contreras (AMC), SEMARNAT, also welcomed all to the meeting. A quorum was established. John Garza, P.E. was introduced as a new member representing the City of El Paso.

JAC Members Present	
U.S.	México
Bill Luthans - EPA	Ana Maria Contreras V. - SEMARNAT
Victor Valenzuela - TCEQ	*Adriana Peña for Dr. Enrique Suarez – SADEC
**Elaine Barron, MD	*David Abdo Villalba - Edo. de Chih.
Tom Ruiz - NMED	**Ing. Baltazar Granillo - CANACINTRA
Wen-Whai Li, P.E., PhD	Alba Y. Corral A., PhD. – UACJ
*George Pinal for Bob Currey	Ing. Rene Franco - MEM
Luis Ito - EP Electric	**Araceli Salazar – COESPRIS
Mariana Chew – Sierra Club	Sergio Zepeda - Delegado PROFEPA
John Garza – City of El Paso	**Rafael Corral, PhD – CCSD
Robert Ardovino – Sunland Park, NM	**Daniel Terrazas – Cd. Juarez – DNA
* Alternate	** Not Present

2. Presentation and approval of current agenda

The Agenda was accepted with minor modifications to the order of presentations. The minutes were approved.

3. Message from the Co-Chairs

Bill Luthans (BL) presented a plaque to Jesus ‘Chuy’ Reynoso, formerly Air Program Director at the former El Paso City-County Health and Environmental District (EPCCHED). Chuy worked at EPCCHED for 39 years 9 months in the EP Air Quality program. He was one of the founding members of the Paso del Norte Air Quality Task Force and the JAC involved with drafting the document which officially created the JAC. He was involved in expanding the air monitoring program in Juarez and El Paso. Chuy’s contributions and effort helped bring EP into attainment of the NAAQS. Chuy commented it has been a long road to air quality improvement and finally attainment. He was proud to be involved in the effort that brought EP into attainment of the NAAQS when many cities in the State of Texas were going the other way. The friendships he has made

along the way will not be forgotten. Finally, Chuy thanked everyone for all their support after almost 40 years (39 yrs. 9 months to be exact) of public service. He'll be in the background and available as things proceed & as the cities grow.

Ana Maria Contreras (AMC) indicated there will be training by the municipio on monitoring, emissions inventories, and vehicle verification technology. All this is part of a national effort supporting developing of the national air monitoring networks & emissions inventories.

4. Public Participation

Manuela Holguin, representing a Northwest Juarez community, indicated 3 years ago she sent SEMARNAT a letter regarding the ASARCO issue. The group promoted the continued closure of the smelter. Since then her group has not received any response from SEMARNAT even though this group went to Austin to protest the facility during permit renewal meetings held by the TCEQ. The group is aware the permit renewal has been provided, but nothing has been done by SEMARNAT to support its request for support.

Bill Addington, Sierra Club, mentioned the layer of air pollution he sees every day he visits the city. While there is good work being done on the JAC he sees very little progress toward improving air quality which is affecting the health of children & the elderly. There is little promotion of mass transit or movement of freight to rail modes. With growth of Ft. Bliss all he sees is continued degradation of air quality. BA sees the permit renewal by TCEQ to be politically motivated. BL responded that the JAC seeks to be informed on air quality issues and control strategies. Its fair to note that in the 1990's EP didn't meet the NAAQS for PM, O₃, and CO. The City of EP has achieved considerable improvements to be considered for redesignation of all 3 standards for which it has been in nonattainment. Some activities include improved fuel standards, improved fuel feedstocks such as those used by Sun Metro, improved transportation nodes, etc. & we need to be more diligent to assure these numbers stay low.

5. JAC Discussion on Public Comments

No Comments were provided.

6. Air Quality Report

Victor Valenzuela presented the air quality report. There were no exceedances or violations of the CO standard in either El Paso or Juarez in 2007. There have been 2 CO exceedances of the NOM (11ppm in an 8-hr average) in Jz in 2008. No CO exceedances have occurred in EP to date in 2008. Juarez had 2 exceedances in 2007 of the 110ppb 1-hr O₃ average at CAMS 663. EP had 1 8-hr O₃ exceedance in 2007; Juarez had 0 exceedances comparing to the US 8-hr NAAQS. Mexico does not have an 8-hr O₃ NOM. The proposed new 8-hr O₃ standard, which is not final, may bring EP into nonattainment requiring new controls. 8-hr O₃ concentrations in EP seem to be inching upward since 2005. There have been high PM₁₀ concentration days, but no exceedances as reported by the 6-day Wedding samplers between July-Dec 2007. PM_{2.5} TEOMS reported several high particulate days in EP. There have been several exceedances of the PM_{2.5} standard in Doña Ana County as measured by the non-continuous Partisol sampler located at SPCY. 3-year running averages indicated a downward trend in PM_{2.5} concentrations. There continue to be many days where the 30-minute average H₂S standard is exceeded. However, the numbers of exceedances continue dropping year after year since 2005.

7. Presentations

A) JAC discussion on ASARCO permit renewal process

-Victor Valenzuela, TCEQ Region 6, read the following statement:

The Office of the General Counsel has issued a DRAFT order with regard to the February 13, 2008 decision by the TCEQ on ASARCO's permit renewal. The DRAFT order calls for modifications to the draft permit, and thus serves as guidance to staff in finalizing the permit. Please visit the TCEQ web page at www.tceq.state.tx.us

The Hot Topics section provides a link to downloadable documents that include the Executive Director's report to the Commission regarding permit renewal and the Executive Director's response to comments. The specific link for this page is http://www.tceq.state.tx.us/agency/ed_report_permit20345.html .

Among the various reports that are available are modeling and toxicology documents that may assist readers in reviewing specific information related to the permit renewal. On the DRAFT order, I would like to call special attention to item 5(B), which requires ASARCO to site additional monitors. Monitoring locations shall be coordinated by TCEQ staff with the cooperative efforts of ASARCO and officials from the City of El Paso, the State of New Mexico and Mexico.

Finally, in the DRAFT order, item 4 – please note that ASARCO may not start up operations at the El Paso facility until all requirements in the Executive Director's report and the DRAFT order have been completed in the timeframes specified, and the Executive Director has certified in writing full and satisfactory completion of all those items.

Robert Ardivino asked if setting up fence-line monitors was an adequate consideration of concentrations of pollutants coming from the facility given the height of the stacks. Bill Luthans responded there are several issues that need to be addressed not only including dispersion of pollutants but possible impacts to visibility at Class I areas such as Guadalupe Mountains & Big Bend National Parks. TCEQ considers placement of the monitors is a collaborative event. AMC indicated Mexico will be very involved as a collaborator in siting monitors.

-Summer Luciano, staffer for Sen. E. Shapleigh, presented a ppt and asked the JAC members to join in the effort to oppose the opening of smelter. No action taken

-Ana Maria Contreras Vigil read the following statement from SEMARNAT:

SEMARNAT respects the sovereignty of the US in order to resolve this problem. Additionally and considering this issue falls under the jurisdiction of the State of Texas, SEMARNAT will also respect decisions made by the authorities of the State of Texas. However, considering the need to at all times protect public health, SEMARNAT requests that the TCEQ monitor the operating conditions at the (ASARCO) smelter and guarantee the proper operation of this facility.

Continuous ambient air quality monitoring in all cities should be undertaken & the public should have real-time air quality data around the facility. SEMARNAT also recommends that the documents reviewed by TCEQ (in approving renewal of the ASARCO operating permit) be thoroughly reviewed by the JAC, and corresponding recommendations be submitted with the purpose of assuring compliance with all environmental requirements stated by the TCEQ for granting the permit renewal.

SEMARNAT recommends a resolution be submitted on behalf of the JAC which includes this list of recommendations.

-Bill Luthans, EPA R6, commented on Title V permit requirements indicating TCEQ was the lead on this. He added that ASARCO has operated in the past under a minor permit under Texas law which is based on the fact that ASARCO, having operated since the late 1800's, is grandfathered under provisions of the Clean Air Act. It has not come under federal review based on Title V, and ASARCO will be classified as a Major Source of air pollution under this section of the Clean Air Act. This is a federal permit delegated to TCEQ & EPA has responsibility for reviewing this permit as well as assuring compliance with all federal requirements. The Order issued by TCEQ may not cover all requirements listed under a Title V permit and long-range emissions have yet to be reviewed.

EPA is in process for finalizing a new lead (Pb) standard which should take place later in 2008 and the Title V permit will also need to address this. There is a process required to get ASARCO fully permitted and EPA will assure all federal permit requirements are met prior to allowing the plant to start up. Having said that and in response to all the requests to deny a permit, there are very few provisions of the clean air act which would deny the issuance of a permit when a facility complies with all provisions of the permit for which it applies. The smelter will be required to invest in quite a bit on emissions control equipment and must make this decision prior to moving forward with starting up.

Mariana Chew commented that several entities of the Mexican federal government have already stated a position against the reopening of the facility. The SRE & Federal Legislature have both commented substantially against issuance of this permit and re-opening of the smelter. The State & local government officials as well as the community in general have stated their opposition to the plant. ASARCO, has shown it is not a responsible actor by burning hazardous waste at this facility and not reporting it. It has stated comments that Juarez is the source of lead emissions across the region.

AMC reiterated this is the position of SEMARNAT and she will work closely with all federal institutions providing technical information to those entities so they make informed comments.

-John Garza, P.E., City of EP representative on the JAC, read a statement from the Mayor of EP indicating the city's opposition to re-opening of the smelter. No action taken.

-Ignacio Legarretta provided recommendations on some items that may be part of the resolution:

- The JAC review the TCEQ Order and assure compliance by ASARCO of all points identified therein;
- Air quality monitoring data should be conducted by an accredited entity and made available to the public in as close to real-time as possible;
- Undertake an analysis of the ASARCO facility regarding soil conditions pertaining to metals contamination and make available to the public all information obtained; and
- Undertake a public health study of residents living in the region around the smelter.

-An environmental group from Jz complained to AMC for not responding to their request to be updated on activities of the MX government re: the smelter. No action taken.

-Representatives from Sierra Club asked if toxic compounds were measured at the smelter or are contemplated to be measured. This issue evolved from a request to the TCEQ, which was denied, that these compounds be measured & included in the emissions data from the smelter. Others from GTLO (Get the Lead Out) indicated continued requests for information were denied by the Commission. They were advised to read the TCEQ report located on the agency website.

-RESOLVED: BL stated the JAC was established to provide recommendations to the National Coordinators established under the La Paz Agreement. Bill will develop a resolution essentially stating that the JAC expects all appropriate protocols be followed in regards the TCEQ commissioner's draft order and all permit requirements specified under Title V. Bill Luthans will submit a 1st draft within 2 weeks for review by JAC members. This resolution will be forwarded to the US & MX representatives to Border2012. The resolution will state that the JAC urges all regulatory agencies involved ensure and report back to the JAC the full compliance with all applicable requirements and we work to fulfill a collaborative process specified in the TCEQ Order.

B) Project Summary: HVLP paint gun exchange program.

Pam Aguirre reported the El Paso Hispanic Chamber of Commerce & Border Quality Campaign recently completed the Great Border Trade-Out of used Low-Volume High Pressure (LVHP) exchanged for new High-Volume Low Pressure (HVLP) paint spray guns.

The grant included the following participants:

- Hispanic Chamber of Commerce- Ms. Terri Reed
- City of Juarez Environmental Dept.- Ing. Daniel Terrazas
- TCEQ - Pam Aguirre, Small Business & Local Government Assistance, &
- Home Depot

Project goal:

Decrease VOC and particulate emissions in the El Paso/Juarez air shed through the voluntary exchange of traditional paint guns for more efficient, less polluting HVLP spray guns

Overview:

- Project funded by a \$75,000 EPA Border 2012 grant plus local matches
- 9 workshops were conducted in both El Paso & Juarez
- Regulatory compliance training was provided the participants to the workshops
- Hands-on training using HVLP spray guns was provided
- There was an exchange of old air atomization spray guns for new HVLP spray guns.

Accomplishments:

- 250 HVLP spray guns distributed
- 250 + old air atomization spray guns collected and taken out of use
- 7.53 Tons of VOC's no longer emitted to El Paso/Juarez Air shed
- 11.02 Tons PM no longer emitted to Air shed
- 3,011 gallons of paint saved by using new HVLP spray guns
- \$451,687.50 – Amount of cost savings to small businesses due to application efficiency / less paint required
- \$19,750.00- Value of paint guns distributed to program participants
- 320 pounds of aluminum recycled from old conventional spray guns

Basis for Calculations

- Air atomization spray gun = 40% transfer efficiency rating
- HVLP spray gun = 65% + transfer efficiency
- Change in efficiency= 25%
- Total Gallons of Annual Paint Usage = 12,045
- Average weight of VOC per gallon = 5 pounds
- Average Weight of Solids per gallon = 7.32 pounds
- Average Cost per Gallon of Paint = \$150.00 (based on cost for Automotive Coating)
- Average Cost per Paint Gun = \$79.00 (Based on Home Depot Retail Price)

Tons of VOC Reduced

- 12,045 (gallons of paint) X 25% (efficiency change between conventional & HVLP) X 5 (average lbs. VOC per gallon) divided by 2000 = 7.53 Tons of VOC reduced.
- Tons of PM Reduced
- 12,045 (gallons of paint) X 25% (efficiency change) X 7.32 (average weight of solids/particulate per gallon of paint) divided by 2000 = 11.02 Tons of Particulate Matter reduced

Paint / Dollars Saved

- 12,045 (gallons of painted used) X 25% (transfer efficiency change between conventional & HVLP) = 3,011 gallons saved
- 3,011 gallons saved X \$150.00 (average cost per gallon of paint, based on Automotive Paint) = \$451,687.50 annual savings for small businesses

C) Cd. Juarez PM10 monitoring network expansion:

Cd. Juarez recently initiated operation of the expanded PM₁₀ air monitoring network as part of an initiative of the new Municipal Administration. Victor Valenzuela reported that several years ago the TCEQ donated to Cd. Juarez several PM samplers. Over the years the samplers have been refurbished and deployed. 8 Wedding samplers were deployed in Juarez with the others transferred to Chihuahua City. The city recently activated the equipment which operates on a 6-day cycle. TCEQ purchased new motors and brushes to provide continued operation of this network for at least 2 years.

D) Chemiresistor - a portable, low-cost chemical sensor to detect and monitor VOCs – developed by Sandia National Labs & promoted by the BNSL. Alberto Correa, PhD, Director of the Chemiresistor Project Development Team at the BNSL discussed the technology behind this product.

Background on the BNSL

- The BNSL is the only industrial incubator at the US-Mexico border region;
- Promotes commercialization of U.S. and Mexican advanced technologies;
- Activities are focused on the U.S.-Mexico Border region (10 border states);
- Offices are located in Santa Teresa, NM, El Paso, TX, and Matamoros, Tamaulipas;
- New offices in Monterrey and Hermosillo by the end of 2008;
- 8 of the 10 states represented in the Board
- Funded by the US Department of Commerce, the states of New Mexico, Tamaulipas and Nuevo Leon, FUMEC, UTEP, and in-kind contributions from private companies;
- 8 companies currently incubating in the BNSL
- 5 projects are located in the state of Tamaulipas
- 1 project in the state of Nuevo Leon (The City of Knowledge)

Unique platform based on Bi-National Partnering

- Major Emphasis on Pre-commercialization
 - New Business Incubation
 - Mentoring
 - Financial Services
 - Technology Development
 - Marketing
- Business/Technology Acceleration
- Industrial Partnering by establishing collaboration agreements for applied R&D projects
- Observing business models the early phases of pre-commercialization involve extensive cash flows which do not generate revenues

Chemiresistor Technology

- Traditional methods for monitoring sites that may be contaminated with toxic chemicals can be expensive, time consuming, and misrepresentative of in-situ conditions.
- Sandia National Lab developed a micro-sensor monitoring system that can be used to monitor and characterize VOCs.
- It is a micro-chemical sensor that employs an array of Chemiresistors packaged in a unique, waterproof housing designed to protect the sensor from harsh environments.
- The array of sensors is calibrated to provide "training sets" for pattern recognition of various chemicals and chemical mixtures.
- The sensors have been tested in the laboratory and field, and unique characterization methods were developed that utilize contaminant transport models and time-dependent, in-situ sensor data.
- The device can be used with a hand-held multimeter to provide manual screening analyses, or with a data logger to provide long-term remote monitoring capabilities.
- The sensor system consists of an array of miniature sensors, called Chemiresistor that can detect volatile organic compounds (VOCs).
- Each Chemiresistor is fabricated by mixing a commercial polymer dissolved in a solvent with conductive carbon particles.
- The ink-like fluid is deposited and dried on wire-like electrodes on a specially designed integrated circuit.
- When VOCs are present, the chemicals absorb into the polymers, causing them to swell.
- The swelling changes the electrical resistance that can then be measured and recorded.
- The amount of swelling corresponds to the concentration of the chemical vapor in contact with the polymers.
- The process is reversible, and the polymers will shrink once the chemical is removed, reverting the resistance to its original state.

Chemiresistor Applications

- Tens of thousands of sites containing toxic chemical spills, leaking underground storage tanks, and chemical waste dumps will require characterization and long-term monitoring to reduce health risks and ensure public safety.
- Over a million underground storage tanks containing hazardous (and often volatile) contaminants are being regulated by the EPA, and the tanks require some form of monitoring to detect leaks from the tanks and pipe network.

Detection Limits

- The detection limit of Chemiresistor sensors for a given analyte is typically 0.1% of the saturated vapor pressure of the analyte. Below this concentration, the Chemiresistor

may not respond to the presence of the chemical. In these low-concentration environments, pre-concentrators may increase the apparent sensitivity of the Chemiresistor.

- Pre-concentrators that have been developed at Sandia consist of a micro-hotplate that is coated with a special sorbent. The sorbent absorbs VOCs, even in very low concentrations. After a prescribed loading period, the micro-hotplate is heated rapidly to desorb the accumulated chemicals. The micro-hotplate pre-concentrator is placed face-to-face against the Chemiresistor array so that the concentrated plume of VOC vapor is then detected by the adjacent Chemiresistor. The plume is allowed to diffuse out of the package through slots adjacent to the pre-concentrator.

Competitive Advantages

- | | |
|--|---|
| - Reliable | - Reproducible |
| - Reversible process | - Sensitive |
| - Fast response | - Long lasting |
| - Low price | - Affordable |
| - Available | - Allows multiple sites tested simultaneously |
| - Wireless - remote continuous testing | - Air applications have been developed |

Dr. Correa provided a questionnaire to the JAC & audience to obtain comments on their opinion of this product.

F) El Paso carbon monoxide State Implementation Plan

The TCEQ recently adopted the CO SIP as submitted. The following summary was provided.

At the September 5, 2007, agenda, when the proposed El Paso CO Maintenance Plan SIP was before the dais, the commission received oral comments on the possibility of removing the oxygenated fuel program. Subsequently, the commission requested that the public be given an opportunity to comment on the potential removal of the oxygenated fuel program as a control measure as part of the public comment period for the proposed maintenance plan. The comment period began on September 7, 2007 and concluded on October 18, 2007.

A public hearing was held in El Paso on October 16, 2007. Nine comments were received during the comment period. Five comments favored repealing the oxygenated fuel program while four comments supported retaining it.

At the commission's January 30, 2008, agenda, the El Paso CO Maintenance Plan SIP revision was adopted retaining the oxygenated fuel program as a committed control measure and with no substantive changes made from the proposed maintenance plan. The El Paso CO Maintenance Plan SIP and request for redesignation to attainment were then sent to the EPA for its action. Air Quality Division staff have been directed to further study the efficacy of the oxygenated fuel program to determine if removal of the program would jeopardize continued maintenance of the CO NAAQS. The study is underway. After completion, staff will make recommendations to management. The submitted maintenance plan and background information may be found at: <http://www.tceq.state.tx.us/implementation/air/sip/jan2007ep.html>

BL commented that there are unintended consequences surrounding expanded use of ethanol as a biofuel and he looks forward to seeing the outcome of the TCEQ's research. AMC asked how long it would take for the TCEQ to make a determination on further use of oxyfuels during the wintertime. VHV responded the while its difficult to come up with a date-specific, it is possible that in 6 months the TCEQ will have researched this issue to make a reasonable

determination on further use of oxyfuels during winter months or perhaps by the start of the next oxyfuels season. Regarding the CO maintenance SIP VHV indicated once the Commission forwarded the request for redesignation to EPA then EP would be considered in attainment of this pollutant. BL added that once the request from TCEQ is received, EPA will publish a Federal Register notice for public comment prior to moving forward with official designation of EP as an area in attainment of the CO NAAQS. Then the maintenance plan kicks in.

8. JAC Subcommittee Reports and Discussion

PM - Alba Corral, Ph. D., Chair

- No comments provided

-Mobile Sources - Ing. Daniel Terrazas, Chair

- No comments provided due to absence.

-Data - Mariana Chew, MPA, Chair

- Provided comments regarding ASARCO and the Camino Real landfill.

-Emerging Issues - Bob Currey, Chair

- George Pineda indicated that apparently ASARCO was the primary emerging issue. On another end Victor Valenzuela reported that a group of JAC members are working with farmers in the Valle de Juarez to grow jatropha plants. Jatropha oil is used to produce biodiesel. Jatropha oil does not compete with other feedstock used for production of biodiesel. This may lessen the demand on other feedstock such as corn, soy, and other vegetable oils currently used to produce biodiesel. The purpose of promoting the regional cultivation of a biofuels is to help local farmers make use of their soils which are generating diminishing returns of current crops such as cotton due to soil deterioration and salting. Land is irrigated with "black" (or sewage) water In the Valle de Juarez, & this has accelerated the deterioration of soils. Jatropha and Castor bean plants both grow on marginal soils and their financial return is comparable to current crops.

Ways and Means – MVC Silvia Castro, Chair

No comments provided.

9. Observations and Comments from the Public

No comments provided.

10. Highlights and consensus items of the meeting.

BL committed to develop and circulate for review a draft resolution regarding ASARCO which encourages the regulatory State & Federal Agencies to stay diligent on develop of ASARCO's compliance with the TCEQ order and any other federal programs, continue to provide an opportunity for public involvement, and establish a method of encouraging public access to data.

AMC added that in the interim we await BL's draft resolution, SEMARNAT will review all documents on ASARCO located on the JAC website. Carlos Rincon commented on the midterm revisions for the Border 2012 program, & the JAC will be a major participant regarding the Air aspect of B2012. Another aspect of the B2012 program is a document on greenhouse gases which will be available to all JAC members for review.

Mariana stated her appreciation to BL for his involvement in the ASARCO issue and his leadership

on this issue.

Rene Franco recommended forming a subcommittee that can form as the ASARCO smelter moves toward re-opening. The subcommittee can track compliance with the TCEQ Order as well as compliance with any Federal operating permits that may be required. The group can also participate in siting the monitoring equipment per wording in the Order. BL replied that he will incorporate into the resolution integration of JAC members as participants in this process which allows exchange of information and dialogue between ASARCO and citizens of this community. Gerardo Tarin added the JAC has the Pro-Aire and the Data committee that can be involved. RF requested that a committee form specifically to work w/ ASARCO & the regulatory community.

11. Next meeting May 22, 2008 in Cd. Juarez, Chih.

12. Adjourn