

Minutes

64th Meeting of the Joint Advisory Committee for the Improvement of Air Quality in the
Cd. Juarez, Chihuahua / El Paso, Texas / Doña Ana County, New Mexico Air Basin
The NM Farm and Ranch Heritage Museum
Organ View Terrace Room
4100 Dripping Springs Rd
Las Cruces, NM
September 24, 2015

1. Welcome and Introductions

Bill Luthans (BL) of USEPA Region 6, and Ana Patricia Martinez, SEMARNAT, welcomed all, to the 64th JAC meeting. A quorum was established.

JAC Members Present	
U.S.	México
Bill Luthans (BL)– EPA	M.I. Ana Patricia Martinez (APM)–SEMARNAT
Lorinda Gardner – TCEQ	**Lic. Joel Aranda – PROFEPA,
Michael Baca – NMED	Quim. Araceli Salazar – COESPRIS
** DAC Government	*Ing. Sergio Acosta Del Val, (SAdV) –Gob. Edo. De Chihuahua
Elda Hefner Rodriguez– City of El Paso	**Lic. Viridiana Vazquez G. CANACINTRA Juarez,
John Quin - FMR	*Cesar Diaz – DE
Elaine Barron, M.D.	**Ing Vicente López – IMIP
**Alberto Correa, PhD	**Ing. René Franco – DAH
David Dubois, NMSU	Dra. Alba Y. Corral (AYC) – UACJ
Wen-Whai Li, (WWL) Ph.D., P.E., UTEP	Ing. Joaquin Marrufo – COCEF
**Christine Ponce-Diaz, El Paso MPO	**Dr. Enrique Suarez y Toriello, FEMAP
Carlos A Rincon, (CR) -US EPA	**Biol. Gerado Tarin T (GT)– SEMARNAT
* Alternate	** Not Present

The co-chairs, Mr. Bill Luthans and M.I. Ana Patricia Martinez welcomed the 64th meeting of the Joint Advisory Council. Bill Luthans announced he was going to retire sometime in the near future.

He also mentioned it had been a privileged working with the border air program, and mentioned there is more work needed to be done with the new federal standards changes coming in October 2015. Bill Luthans introduced Mark Hansen, Associate Director of Air Program, who has been designated by USEPA to take over as the US Federal Chair, starting at the next JAC (65th) meeting,

Introductions were made by all those who attended the meeting:

Approval of the JAC 64th Public Meeting Agenda and minutes of the 63rd JAC Public Meeting:

Bill Luthans presented and asked for approval of current agenda and minutes. The Agenda was approved. Minutes of the 5/14/2015 63rd JAC meeting were approved.

An open discussion of the NCM presentation by Alba Yadira Corral whom along Dr. Wen-Whai-Li (WWL,) are the JAC representatives to the Air Policy Forum; Alba Yadira mentioned a few highlights at the JAC-meeting: continuation on projects and topics such as ambient air quality monitoring stations, privately funded vehicular fleet for transport at cargo Ports of Entry, to speed up crossings and reducing wait times at the bridges, brick kiln projects, State of Chihuahua Pro-Aire and mechanisms for assuring sustainable sources of funds to carry out those and future projects among others.

Public Comments:

James Stalker from Regional Earth System Predictability Research Inc. commented on lack of funding and suggested to find more effective ways to find funds for monitoring. Perhaps by priorities and invest on strengthening those.

AIR QUALITY REPORT

Carlos Rincon presented the air quality report for the second quarter of 2015. It notes that in the case of the pollutant carbon monoxide, the highest record (8 hour average) was obtained at the Chamizal monitor with a record above 2ppm, well below the American standard of 9.0ppm. They only have data for 6 CO monitors in El Paso. New Mexico does not measure this pollutant and Juarez stations have not reported data for several months.

As for the ozone pollutant (8 hour average) showing a few exceedances at UTEP and Skyline Park in El Paso and Southern Doña Ana County exceeded at Chaparral, Desert View and La Union at the American standard of 75 ppb for the fourth highest record in an average of three years.

The behavior of the 8 hour average for ozone stations in El Paso and Doña Ana came in 2012-2015 in the 71 ppb in the first case and 72 ppb in the second case; the latter below the design value of 75ppb. Ciudad Juarez stations have not yet reported ozone for several months.

Regarding the pollutant PM 2.5 only four data monitors for El Paso were presented; the highest 24 hour average was recorded in the sampler Chamizal with a concentration slightly more than 30 micrograms per cubic meter. The rest of the samplers (UTEP, Ascarate Park and Socorro) period of average below 12 ug/m³. The American standard is 35 ug/m³ on 24 hours averages.

In the period from January 1 to August 30 PM10 samplers at UTEP, Socorro and Chamizal peaked within your records that were related to strong winds (123.23, 72.5 and 118.39 ug/m³ respectively) The State of Texas has the EPA to consider these high records as exceptional events.

For the pollutant PM 2.5 historical records of the Chamizal monitor located very close to the design value of the annual average (12 ug/m³) and the average of 24 hours (35 ug/m³) with records of 11.2 ug/m³ and 34 ug/m³ respectively.

Finally, in the case of the contaminant hydrogen sulfide (H₂S) Cams 36 in the Lower Valley in El Paso has been recording environmental concentrations slightly above from last year during the second quarter of this year; you have a maximum record of 141 ppb above the 80 ppb Texan standard with 16 exceedances for the 30 minute average have been recorded.

UPDATE ON THE CREATION OF THE JUAREZ MUNICIPALITY ENVIRONMENTAL FUND TO INCLUDE REVENUE BY EACH EMISSION VERIFICATION DECAL

Cesar Duarte presented on behalf of Lic. Gloria.- Juarez 's Status of AAQMN.-

- **3** continuous Ambient Air Quality Monitoring Stations, measuring concentration of contaminants: Ozone (O₃), Carbon Monoxide (CO) Weather units for Temperature, wind velocity and direction.
- **12** High Volume Particulate Matter (PM10) units of them 3 are located at each of the Continuous AAQM Stations and the other 9 are distributed throughout the City,
- Currently the 3 AAQMN Stations are not collecting and sending air quality data due to: One of them (2030 Club) had to be slightly moved out of its current installation and the electrical system has not been installed; the other two lack of gas tanks, or due to analyzer's calibration needs, of the 12 High Volume manual PM10 units, 10 of them are working well, and because the one that was at the 2030 club is being moved along with the continuous unit, it lacks electricity collection, which quite soon such problem is being solved, as the City Air Quality program has been authorized by the Mayor of Juarez to activate the Environmental Fund,
- As of August 26th, the Environmental Fund it has an income and an output account line authorized by the Juarez Mayor, receiving 5.00 Pesos per each Vehicle Inspection Decal and fund the support needed for operating the Juarez's AAQMN

PROGRESS ON CARRYING OUT VEHICLE EMISSION TESTS AT THE JERONIMO-SANTA TERESA PORT OF ENTRY.-By Dr. Carlos Rincon and Cesar Duarte presented on behalf of Lic. Gloria.-

The City of Juarez, State of Chihuahua Ecology (Environment) and Legal Council officials along with Carlos A. Rincon and Gerardo Tarin as Mobile Sources JAC Work Group team members, are in communication with PROFEPA authorities both at State of Chihuahua Delegate office and at Mexico City's headquarters

RESOLUTION FOR THE AIR QUALITY DATA NETWORK IN CIUDAD JUAREZ/ JAC SUBCOMMITTEE

The JAC Data Subcommittee prepared a resolution on the monitoring network for Ciudad Juarez and submitted for consideration by the co-chairs with the purpose of issuing a recommendation to the parties and members of the JAC:

- Improve the air quality measurement
- Seek funds to ensure its operation
- Certify the technicians in charge of the monitoring network to have operation procedures, maintenance and calibration harmonized
- Build capacity in the municipality to have scientifically and legally reliable data
- Improve the capacity of the monitoring network to measure more pollutants in areas not currently served.

The draft resolution has a signature date of 09/24/2015 as it is consistent and agrees to language and mandate stated in the Appendix 1 to Annex V of the La Paz Agreement, all JAC's voting members came into consensus in heaving the Co-chairs proceed with signature to the Spanish and English versions correctly reflect and correctly translate the English and Spanish documents, Carlos Rincon was tasked to follow with M.I Ana Patricia Martinez and William L. Luthans,

El Paso-Ozone Photolysis Rate Characterization for the Paso del Norte (PDN) Airshed

UTEP study done by Dr. Rosa Fitzgerald

The main objective of the study was to measure hemi-spherically integrated spectrally resolved solar photon flux between the wavelengths of 300 and 700 nm (actinic flux), and use the measured actinic flux to improve air quality simulations. Photolysis is the main driver of ozone production and this factor defines the significance of this research work.

- Actinic flux has been measured during the summer of 2015 in the Paso del Norte Airshed, UTEP location.
- The actinic flux has been used to calculate photolysis rate coefficients for nitrogen Dioxide (NO₂), ozone (O₃) and formaldehyde (HCHO).
- The improved photolysis rate coefficients have been integrated into a photochemical air quality model (CAMx), and simulations for a selected summer 2015 ozone episode have been performed in an attempt to improve on air quality forecasting.

Conclusions:

- The model simulation for the Base case under-predicts ozone but all cases follow faithfully the overall trend of the experimental ozone results.
- The case that performed best was the P10 case. It is observed that as the photolysis rate coefficients for all the species are raised by 10% the NO₂ concentration decreases, and it appears that the NO decreases even faster, causing the Ozone to increase its concentration (in some places up to 14 ppb), in closer agreement to the experimental values.
- The ‘ozone column case’ shows a slight increase in surface ozone, which is not visible in the scale chosen for the graph, which was selected to exhibit all cases. It is evident that it would be necessary to perform further studies and to develop a multi-variate methodology that optimizes the photolysis rate coefficients not only for ozone, but also for NO₂ and formaldehyde. This will result in an improved methodology.
- For the July 2 analysis, the morning case study, the Hysplit analysis shows the transport of air masses from west Texas towards western states, causing the July 1 ozone episode disturbance based in the El Paso-Juarez region, to move towards the west, as observed in the July 2 graphs.
- This was a pilot study, and further studies are needed. P10 shows promising results and demonstrates that optimizing the photolysis rate coefficients will improve the accuracy of air quality simulations and forecasting capability.

Comments to the 2-Year B2020 Goal 1 (Air Quality) Action Plan. - Carlos Rincon expanding on M.I. Ana Patricia Martinez and Dra. Alba Yadira Corral’s (AYC) earlier in the agenda briefing and power Point presentation, he (CR) reported next steps in updating the current version of the APF - JAC’s air quality two year action plan by heaving the two JAC Goal 1 representatives: “AYC and WWL,” work and consent on edits (if any) to the action plan prepared for the NCM, then CR and GT will schedule work sessions with each of the JAC official members and get their input and consensus on an updated version of the two year action plan, reckoning that it’s a living document that could always be updated during an official JAC meeting, including inputs by our partners and stakeholders within the NM-TX-Chihuahua border area,

Next meeting is scheduled for January 21, 2016 in Ciudad Juarez, Chihuahua. Alternative location for the U.S. is at Environmental Department Services, Cotton Patch Conference Room, 7968 San Paulo, El Paso, Texas 79907.