

**Minutes**

63<sup>rd</sup> 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  
Environmental Services Department  
7968 San Paulo,  
El Paso, TX 79907  
Cotton Patch Conference Room  
May 14, 2015

1. Welcome and Introductions

Bill Luthans (BL) of USEPA Region 6, and Ana Patricia Martinez, SEMARNAT, welcomed all, to the 63<sup>rd</sup> JAC meeting. A quorum was established.

JAC Members Present	
U.S.	México
Bill Luthans – EPA	M.I. Ana Patricia Martinez – SEMARNAT
Lorinda Gardner – TCEQ	Lic. Joel Aranda - PROFEPA
Michael Baca – NMED	Quim. Araceli Salazar – COESPRIS
<b>**Daniel Hermosillo –DAC Government</b> (passed away)	Salvador Rubalcaba (SR) – Gob. Edo. De Chihuahua
Candice Sifuentes – City of El Paso	Raul de la Fuente, DNA
*Rajesh Bhakta - FMR	**Denisse Varela - NGO
**Elaine Barron, M.D.	Lic. Alejandro Gloria – DE
Alberto Correa, PhD	Ing Vicente López – IMIP
David Dubois, NMSU	Ing. René Franco –DAH
Wen-Whai Li, Ph.D., P.E., UTEP	**Dra. Alba Y. Corral – UACJ
**Christine Ponce-Diaz, El Paso MPO	*Ing. Jorge Hernandez – COCEF
Carlos A Rincon, US EPA	**CANACINTRA
<ul style="list-style-type: none"> <li>• Robert Gray, Alternate for Dr Barron</li> </ul>	
* Alternate	** Not Present

The co-chairs, Mr. Bill Luthans and M.I. Ana Patricia Martinez welcomed the 63<sup>rd</sup> meeting of the Joint Advisory Council. Bill Luthans introduced Arturo Blanco, current Director of

Environmental Justice and Tribes at EPA region 6, based in Dallas. Arturo Blanco will be coordinating the administrative aspects of Border 2020 for region 6 on the American side. The meeting was also attended by Jessica Ibarra of the United States House of Representatives, and Lic. Saul Martinez-Chief of Staff of the Secretary of Urban Development and Ecology of the State Government.

Ana Patricia said on her behalf that soon the process of allocation of federal resources will be reactivated to strengthen the monitoring systems that would include 5 new air quality monitoring stations for the State of Chihuahua,

Bill Luthans presented and asked for approval of current agenda and minutes. The Agenda was approved. Minutes of the 1/22/2015 63<sup>rd</sup> JAC meeting were approved.

## **AIR QUALITY REPORT**

Carlos Rincon presented the air quality report for the first quarter of 2015. It notes that in the case of the pollutant carbon monoxide, the highest record (8 hour average) was obtained at the Ascarate Park monitor with a nearby record of 4ppm, 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) none of the records of the stations of El Paso and Southern Doña Ana County exceeded the American standard of 75 ppb for the fourth highest record in an average of three years. The highest values of the fourth highest record were observed at stations Skyline Park of El Paso and the Desert View Station in New Mexico with values slightly exceeded the 60 ppb.

The behavior of the 8 hour average for ozone stations in El Paso and Doña Ana came in 2012-2014 in the 72 ppb in the first case and 74ppb in the second case; the latter very close the design value of 75ppb. Ciudad Juarez stations have not yet reported ozone for several months.

Regarding the pollutant PM10 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 20 micrograms per cubic meter. The rest of the samplers (UTEP, Ascarate Park and Socorro) period of average below 10ug/m<sup>3</sup>. The American standard is 150 ug/m<sup>3</sup> on 24 hours averages.

In the period from January 1 to April 30 PM10 samplers at UTEP, Socorro and Chamizal peaked within your records that were related to strong winds (52.69, 72.5 and 94.49 ug/m<sup>3</sup> 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/m<sup>3</sup>) and the average of 24 hours (35 ug/m<sup>3</sup>) with records of 11.6 ug/m<sup>3</sup> and 33 ug/m<sup>3</sup> respectively.

Finally, in the case of the contaminant hydrogen sulfide (H<sub>2</sub>S) Cams 36 in the Lower Valley in El Paso has been recording environmental concentrations lower during the first quarter of this year; you have a maximum record of 102 ppb above the 80 ppb Texan standard with 4 exceedances for the 30 minute average recorded in only 1 day. Comparatively in 2014 they had 12 days of exceedances with 30 minute averages.

## **AIR QUALITY MONITORING DATA AND ITS VALIDATION IN THE STATE OF TEXAS. TCEQ.**

The Texas Commission on Environmental Quality (TCEQ) is responsible to collect, integrate, validate, report and publish air quality data from a variety of monitors locate in the State; Including continuous gas analyzers, non-continuous manual samplers and meteorological sensors. For each one of those quality control operations are done, automated calibration, non-automated calibration and weighing filters are made.

For these operations the TCEQ is supported by a robust computer system, very complex features. Allowing you to be collecting every day, every hour, and every 15 minutes data provided by a network of more than 700 scanners and sensors located throughout the State of Texas, which ranks as the largest network of environmental monitoring in the United States. The TCEQ is based on at least three systems: AUTOGC, LEADS, and TAMIS.

The AUTOGC system manages information from gas chromatographs for environmental organic toxics; the LEADS system automatically collects air quality data from each datalogger and reports the network status, the results of quality control analyzers alerts at high values and communication problems. In turn, it provides data for review and validation by experts from the State. The Division of Air Quality at TCEQ holds electronic logbooks for maintenance activities, calibration, etc. for each site.

TCEQ currently operates with 3,000 people and at least 30 of them daily validate the quality of the data collected.

For data validation operation it used the manual LEADS validation in the case of continuous analyzers and the Excel spreadsheet for non-continuous samplers. During validation failures, incomplete data and missing data were reviewed during quality control checks and that all quality assurance tests have been completed; unusual events, spikes in the data, irregular patterns in data records, and temperature conditions of the stations among others are reviewed. The validator should make a report of any change in the validation and document it.

Later that validated information is emptied on the website of the TCEQ through TAMIS interface, which in turn updates the GeoTAM system, which is an information system and spatial representation of the monitors in the State of Texas. After the process, the same information is transmitted to the EPA in the form of a database with delimited text files.

## **AIR QUALITY MONITORING AND DATA VALIDATION IN DONA ANA COUNTY, NEW MEXICO. NMED**

The air quality monitoring program in the State of New Mexico is in under the Office of Air Quality, which depends on the area of Environmental Protection Department of the Environment of New Mexico (NMED).

The Office of Air Quality consists of four departments: Planning, Operations, Permits and Enforcement.

In the Operations section you are attached to Monitoring and Quality Control sections. The first is an administrator which is supported by a specialist in instrumentation and field operators. The Quality Control Section is headed by an administrator Assurance (QA), and auditor of (AC) a specialist in data management and AC lab coordinator.

The Monitoring Manager is responsible for administering the program, to provide training for technicians, provide equipment and supplies, conduct annual reviews of the stations and then every five years and update operating procedures.

The Station Operators perform the operation and maintenance of measurement sites; equipment calibrations performed every 4 months and maintain sites within operational limits, in terms of accuracy and zero deviation checks and flow. They are also responsible for repairing monitors and document all activities at stations, in support of quality assurance.

The Quality Assurance sections through the auditor's functions include auditing precision gas analyzers annually and semi-annually particulate samplers and meteorological sensors; evaluate location criteria, update the PC and communications equipment, data and document review.

The data management specialist is responsible for collecting, reviewing and editing data; report the results of accuracy and precision and send that data to EPA.

The Laboratory Manager QA must maintain primary standards, transfer standards certify, pass the tests to ensure the new equipment and data transfer times.

The Quality Assurance Project Plan is a requirement by EPA for American cities in order to meet compliance with federal air quality standards.

In that report responsibilities should be documented, activities and actions of personnel in charge of stations. Ensure scientific and legal integrity of the data and specify the operating procedures for each of the teams.

The system for data acquisition available to NMED is supported by a network of 10 air quality stations in southern Doña Ana County consists of personal computers, a virtual data logger EnvidasFW operating with software, modems, one database generated with calls every time and near real time.

The Envisat ARM system allows data validation and publication of these on the NMED website.

## **TECHNICAL SUPPORT FOR AIR QUALITY MONITORING AND SINAICA SYSTEM STATUS IN MEXICO. INECC**

The INECC is a decentralized agency of SEMARNAT and one of its functions is to advise and support states and municipalities, continuously and permanently in the activities of air quality monitoring.

The INECC offers municipalities the necessary technical support for the evaluation of the general condition of air quality stations and ancillary facilities; performance evaluation of measuring instruments and the development of technical logs operation, maintenance and calibration. It also conducts training of technical staff and advises on the installation and commissioning of the stations.

For the selection of suitable location sites of air quality measuring stations, it is based on historical weather and climate information; topographic maps, emission inventories, dispersion modeling, traffic patterns, land use, population distribution and monitoring data. With this information it is possible to identify sites for the final installation of one or more stations.

The INECC also performs audits of the analyzers supported by a mobile unit and has a laboratory where a pattern of ozone and transfer standard for calibration of flow meters in high volume.

Monitoring systems in the country show some shortcomings due to a number of factors, these include: lack of staff, lack of training of technical personnel and additional personnel with the operation and maintenance of the stations, insufficient financial resources, lack of quality control programs and lack of traceability of measurements tasks.

The SINAICA INECC system has been collecting information on air quality of the 3 automatic stations in Ciudad Juarez since 2004. The process involves the conversion of data generating stations to a text format supported by TCEQ staff and sending via ftp to SINAICA.

To this end the INECC designed a software to recognize the data format of the 3 Juarez stations; however, due to the characteristics of the coding program, the absence of information from any of the three stations made it impossible for the system to generate a database. This situation occurred in 2012.

For purposes of improving communication through a permanent connection to the internet, SINAICA recommends using ADSL modem and sending data in a format known as ESC, EMC, Envidas, etc. or a standardized format as the XLM.

It is finally noted that in February 2016 the INECC-SINAICA have established a unique integration system, publishing and consultation of data from monitoring networks in the country, which manages various air quality data formats, setting standards for receiving raw and validated data, validation of raw data online, information for mobile devices and a children's section.

## **STRATEGIES TO ENSURE FUNDS FOR OPERATIONS STATIONS IN CIUDAD JUAREZ/ MUNICIPALITY OF CIUDAD JUAREZ/EPA**

The air quality monitoring network in Ciudad Juarez began operating in 1991 through an EPA fund allocated annually for the operation of the network by the City of El Paso, Texas. It is supported indirectly and to some extent by providing equipment, supplies and technical assistance.

In September 2014, before the end of the fiscal year the City of El Paso decided not to apply for the EPA funding of monitoring operations. This caused the Juarez network to run out of the supply parts and spare parts essential for the operation.

In response the monitoring data network subcommittee for the Paso del Norte basin was instructed by the JAC co-chairs to identify options for fundraising in order to continue the Juarez air quality measurement.

After several meetings of the subcommittee some administrative and institutional strategies have been suggested which will be submitted to the authorities of the City of Juarez for analysis. Among these are the creation of an environmental fund and an environmental trust. In the first case, the Constitution is an internal agreement that does not require a complex legal scheme that would constitute a contribution of 10 pesos per inspection sticker acquired by vehicle inspection centers; or resources that could be raised through the verification of the import process of used cars.

In the second case, the trust requires a stronger legal framework providing assurance to the participants regarding the management mechanisms and used of funds raised for the program.

## **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 will be reviewed and accordingly to what is stated in the Appendix 1 to Annex V of the La Paz Agreement, with JAC's voting members consent it shall be subject to the JAC co-chair signature.

## **CERTIFICATION AND TRAINING COURSE. TCEQ**

During May 14th and 15th, air quality specialist of the State of Texas offered training to Ciudad Juarez monitoring technicians on Initial Demonstration of Analytical Capabilities (IDAC) certification.

This course was organized by the JAC Data Subcommittee in order to build capacity for the Ciudad Juarez technicians to perform basic maintenance, calibration and data quality assurance.

The IDAC certification is to demonstrate the knowledge and operation of the instruments that make up a typical air quality monitoring station and its operating procedures. During the two days evaluation of technical knowledge in the operation of carbon monoxide and ozone analyzers, Teledyne instrument and calibrator multigas Dasibi 5008 programmable and manual pm10 wedding high volume sample were evaluated.

Eventually the IDAC certification allows technicians to replicate these training courses for technicians interested in the operation of the stations for measuring air quality.

### **CONCLUSIONS:**

- After the training and certification of technicians in IDAC, data validation training will be request of TCEQ at the Austin office.
- Coordination with the INECC will be established for training and technical support in the installation of new monitoring stations for the State of Chihuahua.
- An approach will be taken with COLECH (Colegio de Chihuahua) concerning the intention of that institution to participate in the validation of air quality data.
- Strategies for fundraising for the monitoring network will be presented to the authorities in Ciudad Juarez.
- The draft resolution on the monitoring network will be revised for co-chairs signature within one month.