

Minutes

65th 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

**Presidencia Municipal de Juárez, Chihuahua
Calle Francisco Villa No. 950 norte**

Alternate Location:

**City of El Paso Environmental Services
7968 San Paulo, Cotton Patch Conference Room, El Paso, Texas**

January 21, 2016

1. Welcome and Introductions
Bill Luthans (BL) of USEPA Region 6, and Ana Patricia Martinez, SEMARNAT, welcomed all, to the 65th JAC meeting. A quorum was established.

JAC Members Present	
U.S.	México
Mark Hansen – US EPA	M.I. Ana Patricia Martinez (APM)–SEMARNAT
Lorinda Gardner – TCEQ	**Lic. Joel Aranda – PROFEPA,
Michael Baca – NMED	Sr. Eloy Corral Banda – COESPRIS
** DAC Government	Lic. Maurilio Ochoa Millán – SDUE Gob. Edo. de Chihuahua
* Jason Sarate– City of El Paso	Lic. Viridiana Vázquez - CANACINTRA Juárez
John P. Quinn - FMI	Lic. Alejandro Gloria - DE
Elaine Barron, M.D.	**Ing Vicente López – IMIP
**Alberto Correa, PhD	M en C René Franco –DGAH
David Dubois, NMSU	Dra. Alba Y. Corral – UACJ
Wen-Whai Li, (WWL) Ph.D., P.E., UTEP	Ing. Joaquin Marrufo – COCEF
**Christine Ponce-Diaz, El Paso MPO	Lic. Brenda Ríos Prieto - SEMARNAT
Carlos A Rincon, (CR) -US EPA	Biól. Gerardo Tarín (GT) SEMARNAT
* Alternate	** Not Present

The co-chairs Mr. Mark Hansen (MH) and in I. M. Ana Patricia Martínez (APM) welcomed the meeting No. 65 of the Joint Advisory Council.

Next was the introduction of the Mayor of Ciudad Juarez, Lic. Javier Gonzalez Mocken who hosted the JAC meeting. Lic. Gonzalez Mocken said during his welcome that the issue of air quality will always be a point of debate in the world, fortunately in this border it has this committee working on solving the problems of air quality in this region in for some time, and it is of great interest to the municipality to facilitate the work of the JAC for great achievements and participate in public policy to ensure better quality of life. He appreciates the work that has been carried out within the Committee, where it is clear that as long as there are agreements between the different governmental spheres, the benefit is for citizens.

Later Lic. Alejandro Gloria (AG) thanked the authorities - Ana Patricia Martinez and Mark Hansen, Lic. Brenda Rios Prieto, State Delegate of SEMARNAT and other federal, state and municipal officials.

Mark Hansen thanked the unconditional support the Committee has received from the Municipality, and hopes to continue working with those involved in environmental issues.

Report on the Environmental Fund for the Municipality of Juarez

AG noted that since the beginning of this administration, improvement of the environment has been an essential and fundamental issue; It has led to the creation of a trust fund thanks to the resources obtained by inspection sticker, resource which it will be invested to ensure the continuous operation of projects aimed at improving air quality.

He also mentions that in the administration of President Enrique Escobar Serrano, 400,000 pesos were awarded for the acquisition of technical infrastructure, and now with Javier Gonzalez Mocken, will continue in order to provide a better quality of life for Juarez.

The infrastructure consists of a system of communication with the air quality stations, which will provide real information to the public. For this reason it is necessary to have the support of the authorities for the training of technical personnel monitoring. Asks Mark Hansen USEPA support to realize this training data validation and thus be able to inform the public air quality in real time.

Public Comments:

There was no public comments.

Paso del Norte Air Quality Report

Carlos Rincon presented the air quality report with data from January-December 2015. In the case of carbon monoxide, the largest fourth highest record value of the average

of 8 hours occurred in the monitor at Ascarate Park, followed by the monitor at the Chamizal, both in El Paso Texas. The two monitors recorded values well below the Mexican standard which is 11 ppm and American standard is 9.5 ppm. Data from the stations in Mexico are not reflected in the report because the data has not been validated; currently there are efforts in this direction.

In the case of ozone, the graph of the fourth highest value of the 8-hour average ozone concentrations shows in six monitors in El Paso and five monitors in New Mexico. Ozone season runs from May to October of each year.

None of the monitors with the fourth highest value exceeded the US standard 75 ppb. The fourth highest value occurred in Desert View monitors and UTEP, with approximately 72 ppb. None of this information has yet to be validated, but usually these values are confirmed. Juárez stations have not reported ozone for several months.

The design value for Ozone monitors in the Paso del Norte basin has shown a downward trend in the period 2013-2015. The design value in the case of El Paso was 71 ppb and Dona Ana County 72 ppb. In the period 2011-2013 the value of design for Doña Ana County is located just on the edge of compliance.

For PM_{2.5} pollutant monitors none exceeded the 24 hours El Paso average or the hourly average in the period from January to December 2015. The highest was recorded in the report of the Chamizal monitor. And as for the monitors located in New Mexico the highest average of 24 hours did not exceed the threshold of 35 ug / m³; Desert View had a record of 18.4 on 16 October.

Regarding compliance with federal standards for PM_{2.5}, it shows that El Paso is currently in compliance with such regulations based on the monitor data El Chamizal, which qualifies as a regulatory official site.

The annual average American standard is 12 ug / m³ according to a series of calculations involving daily concentrations over a period of three years, ending with a design value for each mobile period of 3 years.

The design value for the annual average of the most recent period (2011-2013) was 11.6 and for the previous period was 10.8 ug / m³. In late May 2015, the EPA issued a statement to TCEQ stating that the requirements had been met.

Similarly El Paso is in compliance with 24 hour averages, which is also based on a period of 3 years and 98 percentile concentration of each year. The standard is 35 ug / m³ and the last two design values in El Chamizal have been 31 and 30.

Regarding the performance of PM₁₀, the highest average of 24 hours was recorded in El Chamizal at 364.96 ug / m³ which corresponds to the value reported during the May meeting.

Regarding Hydrogen Sulfide the number of days with exceedances of 30 minutes has been declining with 3 violations of state standard of 80ppb during 2015.

ProAire planning in the state of Chihuahua (Daniel Lopez, DCA)

Ana Patricia Martinez said the state of Chihuahua has three major basins that are Ciudad Juarez, Ojinaga and the Municipality of Chihuahua, areas where air quality monitoring networks have been installed and a few days ago the approval was achieved to implement in state territory the Management Program to Improve Air Quality known as the (ProAire), which will strengthen this strategy statewide.

DL says the Proaire is an instrument for the Management of Air Quality combining the efforts of the three levels of government, industry, academic and social sectors to improve air quality. In formulating a program of agreed objectives and targets based on an assessment of the air quality in which designed strategies, measures and actions are set.

According to the Mario Molina Center in Mexico 67 airsheds exist. The goal is that by the end of 2018 all air basins of the country have a ProAire. Currently, there are 13 ProAires aimed at protecting the health of 46.1 million. Seven ProAires are under development; at the end 20 ProAires will be in place and a total of 33 air Basins will be covered.

To develop the ProAire it is necessary to form a Core Committee, whose role will be to develop, implement and monitor the implementation of the measures and actions of the ProAire; ensure the participation of stakeholders and promote meetings to monitoring and evaluate the ProAire. Local government is responsible for forming the core of the ProAire Committee (CNP).

The stages in the development of ProAire involve the following components: To characterize the study area, diagnose air quality, update the inventory of emissions of criteria pollutants, review cases that affect population health effects, make a diagnosis on the current status of communication and education in the field of air quality, propose measures and actions and to identify financial sources.

In the case of the Chihuahua ProAire there are 900,000 pesos budgeted and it already has a consulting firm. On November 13, 2015 the contract was finalized and it will take 6 -12 months to process the contract.

To date there has been progress in a first preparative meeting between DGGCARETC and Consulting Group and a first contact via video on November 30 between the staff of the Secretariat of Environment of Chihuahua, the DGGCARETC and the Delegation of Semarnat

The consulting firm has already requested some initial information from the State to have a first diagnosis, like information on general aspects of the study area, have information regarding the monitoring air quality networks, etc.

The following steps will conduct a sensitization workshop with different local and federal actors (proposed for 11 and 12 February) and to hold a meeting to start the formal work of the ProAire and Core Committee (late February).

Ana Patricia Martinez requested of Mr. Maurilio Ochoa, Secretary of SEDUE his leadership to make a success of this program and called for the appointment of state liaisons to work with the consulting firm in the development of Chihuahua ProAire. Lic. Maurilio Ochoa then appointed Lic. Alfredo Ruiz, Director of Ecology, to monitor the program.

Implementation of Air Quality Standards for Ozone (Carl Young, EPA)

The October 1, 2015 the EPA sets tighter limits for tropospheric ozone at 70 ppb, based on extensive scientific evidence on the effects of ozone on health and welfare. October 26 was published in the Federal Register.

These stricter limits have a primary and a secondary standard which are identical; the primary standard seeks to improve the protection of health, particularly in risk groups such as children, the elderly, people with lung diseases such as asthma and those who work outdoors. The new standard will also improve forest health, plants and ecosystems.

Current levels of ozone were established in 2008 at 75 ppb for the 8 hour standard. In 2015 it changed to 70 ppb. It is taken as an exceedance overcoming this 4th highest average value of 8-hour averaged over 3 year period.

In October 2016 it is expected to have recommended State designations and that these take effect from December 2017. In December 2018 the standard tax in 2008 will be revoked. Compliance plans must be submitted in December 2020 (for moderate and higher ranking). For Marginal is December 2020 (to comply in three years); Moderate is December 2023 (to comply in six years); **Seria**/grave December 2026 (to comply in 9 years); Severe is December 2032 (to comply in 15-17 years) and Extreme (to comply in 20 years).

Regarding the new standard 70 ppb design values for concentrations of tropospheric ozone, bordering American states that have a design value of 71 ppb and higher are found in all California counties bordering with Mexico; some counties in Arizona, Doña Ana County, New Mexico and El Paso Texas.

In the case of El Paso and Doña Ana County, the design values for the new standard could be achieved if the environmental ozone trend concentration continues to be low (currently stands at 71 and 72 ppb respectively).

Sur Wastewater Treatment Plant. Ing Jessica A. Hernandez (BECC)

The cogeneration project of the South Treatment Plant consists of the acquisition of equipment and improved sludge treatment system for the capture of biogas and its use in cogeneration 1.35 megawatts.

Currently the North WWTP sludge is pumped to the South WWTP, where they are combined and sent to anaerobic digesters for treatment. Approximately 550 m³ per day of sludge are led South WWTP.

In the process of sludge approximately 11,817 m³ / day of biogas is generated. The biogas is captured and used to heat generation by the two digesters and the remainder will be used for cogeneration.

The cogeneration system includes systems washed, dried and blown to ensure the quality of biogas, and two generators with a capacity of 675 kW each, have a total generation capacity of 1.35 MW.

Environmental and human health expected results from the project are: the installation of 1.35 MW of new generation capacity for renewable energy; the generation of about 7.43 gigawatt-hours (GWh) of electricity in the first year of operation (equivalent to the annual consumption of more than 1,000 households or about 50% of the annual energy consumption of the South WWTP); reduce the emission of approximately 11,563 metric tons / year of carbon dioxide equivalent (CO₂e), 3.72 metric tons / year of sulfur dioxide and 12.4 metric tons / year of nitrogen oxide.

In the planning process of this project a monitoring campaign generating gas (records two years) was performed; feasibility studies and basic engineering were developed; the CRE permit application and technical feasibility CFE was handled; Biogas analysis was performed; the development of civil engineering, mechanical and electrical and definition of contractual scheme and funding strategy.

The project cost is 61.7 million pesos.

Solid Waste Cogeneration. Ing. Gustavo Nunez (GCC)

Grupo Cementos de Chihuahua (GCC) Samalayuca has co-processed in the last 10 years about 170 thousand tons of waste in the form of whole tires, tire crushed walnut shell and sawdust, among others.

In 2004 an agreement was signed to clean up the Juarez municipal collection center, between GCC and agencies of the three levels of government (as well as the USEPA) under the auspices of the Bi-National Border 2012 program. Since then to now GCC has been the final fate of 9 million scrap tires.

The FROEE (Fraction Residual Organic Energy Efficiency) is an alternative fuel made from industrial, commercial, service and / or household waste (waste plastics, textiles, paper, cardboard, wood, etc.).

The objective of this project is to have an alternative fuel based on waste, ecological and sustainable. In a first step the infrastructure for receiving, crushing, screening, storage and injection FROEE the preheater / calciner will be established. For this stage the support of CONACYT was taken through the Program of Incentives for Innovation 2014.

The infrastructure consists of a power receiving equipment, a primary crusher (100MM), a densimetric separator and a secondary crusher (30MM).

In FROEE project is increasing regional environmental infrastructure for waste management and the co-processing of industrial waste will generate economies in the region. FREE use does not affect atmospheric emissions and complies with applicable regulations. In 2014 the project received the State Prize for Science, Technology and Innovation.

In a second step the infrastructure is projected to have a reception area, a feeder bin, transportation system, buffer hopper, metering scales, and a blower.

CANACINTRA Project for installation of solar panels. Lic. Viridiana Vazquez (CANACINTRA Juárez)

The project involves the installation of a system of solar panels on the CANACINTRA building in Juarez, with the support and efforts of Milec Electronics and Flextronics company. This project is the first nationally developed project by a business chamber in which it has a consolidated electricity savings through solar panels.

The equipment has a remote monitoring system that allows the tracking performance of the PV system through an interface that makes it possible to display Watts generated by reason of time, generates graphs and issues reports savings achieved through the use of this type of energy and environmental advantages of the system through a calculation of the compensation of carbon emissions in tons, by an equivalent to planting trees.

Investment in this project was budgeted at: 500,000.00 approximately and through various efforts it was possible to reduce it to \$ 229,137.10 pesos. Consumption in pesos for November was \$ 7,600.00 and \$ 4,000.00 for January. Cost reduction in electricity consumption from the installation of solar panels is about 40%.

EPISD and UTEP - curricular Air Quality Resources for schools in Paso del Norte. Elaine Hampton, Ph.D. (UTEP)

This curricular resource project in air quality are educational modules on the subject of air quality in the context of border.

Through these modules, third graders know the problems of pollutants such as particulate matter and ozone. In fourth grade students learn about air pollution caused by burning hydrocarbons from fossil fuels; explore the sensation of breathing in conditions of respiratory problems and develop a plan to improve air quality around your school. The fifth graders use learning experiences to explore the generation of wind, solar and biofuels, then making multimedia presentations and disseminate in their school. The sixth graders measure temperature changes in the ambient air in the presence of CO₂ to understand the greenhouse effect and climate change elemental basis; create public service announcements on climate issues for the news channel of the school and their families.

The seventh graders use scientific databases of cities with high levels of air pollution, to examine the relationship between income, education and health. Propose reasons why the environmental conditions and poverty affect health. Eighth grade students explore the causes of temperature inversions and data sources used to find the main sources of pollution that affect local air quality.

High school students learn to identify the sources of air pollution, the chemical behavior of these pollutant compounds and then explore options for reducing chemical pollutants in the air.

Finally, students of environmental sciences using wind data to identify trends and wind direction that may affect air quality. They use scientific data to understand how our actions affect our neighbors in Mexico and develop solutions to improve regional air quality.

This project was financed with funds from the EPA, UTEP and EPISD.

The next meeting was scheduled for May 12, 2016 in the Cotton Patch conference room at the Environmental Services Department of the City of El Paso, Texas.