

## Minutes

84th Meeting of the Joint Advisory Committee for the Improvement of Air Quality in the Ciudad Juárez, Chihuahua / El Paso, Texas / Doña Ana County, New Mexico Air Basin

<b>Virtual Meeting: October 20, 2022</b>	
JAC Members Attending (*Alternate ** Not Present)	
U.S.	México
Guy Donaldson, US EPA	Daniel López Vicuña, SEMARNAT
David Ramirez, TCEQ	*Lili González, PROFEPA
Armando Paz, NMED	**COESPRIS
**City of Las Cruces	Francisco Gomez, SDUE de Chihuahua
Jason Sarate, City of El Paso	Brenda Nava, CANACINTRA Juárez
*John Moore, Freeport-McMoRan Copper and Gold	Lic. Cesar Diaz, Dirección de Ecología de Ciudad Juárez
Larry Olsen, DrPH, Citizen	*Ing. Alberto Nicolas López, IMIP
Alberto Correa, Capítulo Paso del Norte	Rene Franco, Franco y Asociados
*Stan Engle, NMSU	Dra. Alba Yadira Corral, UACJ
Wen-Whai Li, Ph.D., P.E., UTEP	*Fernando Ortiz, NADB
Claudia Valles, El Paso MPO	
Carlos A Rincón, US EPA - Liaison	Biól. Gerardo Tarín, SEMARNAT- Liaison
Eugenia (Gina) Posada, TCEQ - Liaison	

**Welcoming Remarks and Message from EPA Copresident. – and Monisha Harris EPA, Deputy Director, Office of International Affairs (OIA)**, Guy Donaldson introduced Ms. Harris. She has served in the office of the Operations Division offering support. She has been the Federal Advisory Committee Director and provided national policy oversight and leadership for the agency’s management program, which consist over 20 advisory committees and has served as a Product Manager in the office of pesticide program where she provided leadership and regulatory activities. She holds a Master of Public Administration from American University and a Bachelor of Science of public management from Florida A&M University.

Ms. Harris greeted everyone. She is new to the role of Deputy Director for Bilateral and Regional Affairs and EPA of International Travel Affairs. She has worked for the agency and is familiar with committee responsibilities that are similar to the JAC and worked to find environmental solutions. She thanked JAC members for their continued leadership and engagement in the AQ committee. EPA has a long history working with Mexico on a range of environmental issues both globally and regionally. Including the transboundary pollution, in this case air pollution. Bilateral cooperation is key to solving transboundary pollution issues in Ciudad Juarez, El Paso and Doña Ana County with the shared air basin. By working together, reasonable solutions can be found. She acknowledged all the wonderful work being done. Lowering ozone precursors, emissions as well as emissions of CO and bringing levels of pm10 and 2.5 within standards. The work and initiatives have improved AQ and improved health outcomes in the community. She thanked everyone.

Copresident Donaldson thanked Ms. Harris and he commented on the Inflation Reduction Act passage. He is excited of the new changes happening in the US side soon. This passage will be providing new tools to address air pollution issues.

**Welcoming Remarks and Message SEMARNAT Copresident and Bobby Janecka, TCEQ Commissioner.** Daniel López greeted everyone. He announced there was quorum at the 84<sup>th</sup> meeting. He hoped that the next meeting can be in person and network once again. This session should be presiding in Las Cruces, NM. He introduced Commissioner Janecka.

Commissioner Janecka of TCEQ welcomed everybody. He mentioned even when virtually this gathering brings renewed commitment to common objectives. He welcomed Ms. Harris and mentioned her leadership and experience will improve the work. Each perspective enriches the discussion to improve air quality and better guides joint endeavors in the Paso del Norte. This is a time-tested platform of partners that allows to bridge silos of public and private sectors, federal, state, local and tribal nations. It brings Mexican and US stakeholders into a permanent dialogue. Paso del Norte holds the junction of three major transportation routes to north America. The Paso del Norte is the second busiest port of entry in heavy duty truck traffic. Although the benefits of US/Mexico trade spread widely throughout the United States many of the costs associated with the flow of goods, including air pollution are born by border communities. He reflected on the JAC's accomplishments, shortcomings and many opportunities that lay ahead. Information exchange through the AQ reports, is a useful tool to foster the one air basin perspective of the three-state area. However, he mentioned integrating real time air quality data and health risks communications across our sister cities and jurisdictions is pending. The JAC has consolidated as a forum to highlight air quality science by leading researchers at UTEP, UACJ, NMSU and other universities such as today, his alma matter UT Dallas are active members and continue to be at the forefront in their fields. However, members of the public in the past have voiced the need to improve this forum so they can better express their concerns and demand action from member institutions. He stated the JAC is actively working on improvement. He mentioned the enhancing capabilities with monitoring network expansion and reliable funding for operation maintenance through the binational air quality fund, but also with the use of new technologies. The binational low-cost sensor project complements regulatory data by involving academia and communities. Allowing for localized monitoring and improving coverage in a context of limited resources. He stated the need to accelerate the pace to reach adequate network density in Ciudad Juarez and continue working to establish robust binational quality assurance and control for air quality data. He mentioned reliable air quality data will improve the effectiveness of air improvement projects in the region and allow to better protect public health with timely warning and communications. Regarding pollution reduction efforts more needs to be done. While material realities,

institutional arrangements and jurisdictions greatly differ all breathe the same air and must collaborate for meaningful improvements to occur. This requires creating truly binational programs that result longstanding financial barriers for projects that improve significant benefits such as replacement of old diesel engines on both sides of the border, improving efficiency of brick kilns, and addressing the air quality impacts, of regular export vehicles to Mexico. National and State programs on both sides of the border also need urgent adjustments to increase the shared resources to go to border communities and respond to their unique environmental management challenges. He saluted the reactivation of the Pro Aire in Chihuahua like the State Implementation Plan in Texas and commenced sideway transport in Juarez like the ambitious actions they are taking under this effort. He offered support in this process because of the recent nonattainment designation for 8 hr. ozone for El Paso County, policies that might be appropriate for affecting change in the US or MX, only basins are not well suited for multi-jurisdictional regions, such as Paso del Norte. He mentioned complex problems heightened by jurisdictional mismatches require that all participate and innovate in finding the solutions that will work for the region and its residents. This is also the case with some State programs and we are working to fix it. The geographical location in development pattern of far west Texas ensures that eligibility and selection criteria translate into chronic underfunding for that region; often in the detriment of those who needed it the most. In resolving these challenges, he invited all members to stay true to the JAC, to the spirit of collaboration. It is no easy feat to change policy and even legislation to address the unique conditions of the border region, but until we do so the impact will fall short of collective responsibility for 3 million people that call this border community their home. He called for this group to maintain the ambitious strategic vision that sets apart the JAC a successful example for binational management of shared resource, the air we all breathe. He thanked everyone.

Copresident López mentioned that this model has been a space to share the challenges of air quality during many years in the Paso del Norte region. An example of coordination and inter institutional between the two countries. The challenges continue and the discussions too to overcome these new challenges. He thanked Commissioner Janecka for his words.

### **Approval of Agenda and Previous Meeting Minutes**

Copresident Donaldson was informed by Ms. Posada the approval of minutes occurred via email by all JAC voting members.

### **Public Comments on Agenda**

Stan of NMSU corrected the agenda. There was a typographical error in “NMSU”  
Dr. Corral and Olsen approved the agenda.

### **Discussion of Public Comments & JAC Member Comments**

No public comments.

Copresident López invited all to visit the JAC website where agendas and other information can be found.

Copresident Donaldson introduced Dr. Carlos Rincón

### **[Air Quality Report for the Paso del Norte](#) by Dr. Carlos Rincón, USEPA**

Copresident Donaldson stated high wind events are to advise people to stay indoors. He recognized that natural events cannot be controlled. It is to manage the exposure to high wind and dust events.

Marisse Textor asked what actions are taken to address the ongoing high H<sub>2</sub>S challenge.

Dr. Rincon mentioned Border 2025 Goal 2 – Water Task Force and JMAS technology addresses the odor of the WTWP.

Dr. Corral asked what is the status of the monitoring stations in the other points of Ciudad Juarez; she is concerned about the data that is above the average since the station is located in an area not so polluted.

Dr. Rincón mentioned the binational fund committee has more information and will be presenting later in regard to the placement of a new station. Other areas are going to be covered by SEMARNAT/INECC México and the state of Chihuahua. The group is trying to get other private entities to assist with funding. Soon there will be greater coverage.

Copresident López presented Stan Engle.

### **Mesonet Weather Station Project Expansion by Stan Engle, NMSU**

David Ramirez asked what kind of distance regarding quality assurance (QA) so you can factor in ground influences on the shorter stations' vs ten-meter stations.

Stan Engle mentioned QA is only done for sensor errors or sensor faults. The 3-meter data is primarily used for agricultural purposes. So, they are aware that as wind speed gets closer to the ground it starts seeing surface roughness changes to the wind speed. The 10-meter wind is preferred true weather station Mesonet station for the forecasters. They are upfront about wind speed being at 3meters, so anybody that uses it will be slower compared to 10- meter. The first tier one has not been installed. Those will be labeled as 10-meter.

Copresident López asked what is the ratio between the 3-meter station vs the 10-meter station.

Stan Engle mentioned they have not gotten to that process.

Copresident Donaldson introduced Dr. Lary.

### **MINTS-AI: Sensing in Service of Society by Dr. David Lary, UT-Dallas**

Copresident Donaldson asked what is the size of the sensors?

Dr. Lary mentioned it measures from the COVID size to point one micron to ten microns. It gives a size distribution. The next generation of them will go to higher sizes to have the mold and pollen size fraction. They used some made by Pierra Systems South Korea, what distinguishes these sensors from others is that they calibrate machine learning before they leave the factory. They have a very carefully constructed chamber where basically each sensor has a whole array of them put in at one time, is put thru its pacers and relative to reference sensors so each sensor is originally calibrated machine learning against the reference and if it does not pass that process, it not sold or chipped. He reported a valuable experience with them. They used another brand but it was difficult to calibrate.

Sergio Vasquez requested the name of the company.

Dr. Lary suggested there is sense in partnering because together more can be done and utilize that is already there. The name is Pierra Systems.

Sergio Vasquez stated the program deployed 48 sensors in Ciudad Juarez and El Paso but using Purple Air.

Dr. Lary mentioned the difference from the purple air is closer to the one micron and it is more frequent, they are calibrated before they leave the lab. Purple air can be useful.

Eddie Moderow asked how the work fits with the regulatory regime. How long do the sensors last in the field?

Dr. Lary mentioned these sensors are not cheap. They cost about \$3,000 USD. How they fit with the regulatory framework is that they give some insight where further examination is required. It is good to have a yearly refresher. It is good to have multiple sensors to get a buddy check system in place.

Copresident López introduced Martha Caballero.

#### **[Update on Chihuahua ProAire 2022](#) by Martha Caballero, SDUE**

Copresident López stated the work done by the state and municipalities is much appreciated.

#### **45 Minute Break**

Copresident Donaldson introduced Ricardo Gutiérrez.

#### **[Co-processing of Scrap Tires in Cement Kiln](#) by Ricardo Gutiérrez, GCC**

Dr. Correa stated he used to work with CEMEX in 2004. That is when the recycling of tires started. When loading the tires to the rotary kiln, the temperature of the limestone was not in the area. The tire melted and formed a crust of tar that carbonized and closed the oven's capacity. So, it was necessary to develop a series of processes to modify the chemical conditions, the temperature, the tire load, to eliminate this occlusion in the rotary kiln. Do you have this kind of problem?

Ricardo Gutiérrez stated the tire is destroyed more at the entrance of the oven, not in the tower. The rotation of the oven allows to throw that crust. Raw flour control is particularly important.

Julio Enriquez, General Manager of the plant mentioned that the tire enters the first meters of the oven and the adjustment that was made at the beginning of the fluxes, which is the part of the iron, with that we guarantee that we will not have a greater quantity of iron and avoid the ring formation. Adjustments to the temperature setting on the heater and oven to suit the operation were made. It took time but after months it was mastered.

Copresident López introduced Dr. Mayra Chavez and Frida Toquinto.

#### **[Update on Low-Cost Sensors](#) Study by Dr. Mayra Chavez, UTEP and Frida Toquinto, UACJ**

Dr. Lary mentioned machine learning does these corrections. It is good to include community. Pressure and temperature in your correction. The correction will be specific to each sensor. He provided a link to a document to help with these corrections.

Patricia de la Cruz mentioned this was an excellent binational collaboration.

Nicolas Lopez mentioned that the traffic data has a new infrastructure in the city and the pandemic makes the previous data somewhat invalid, but it is being used. If you tell us which places interest you, we can prioritize counts in that area and provide them.

Ms. Frida Toquinto mentioned she will be in calling him for those.

### Reports from Subcommittees

1. **Report from [Binational Air Quality Fund](#)** (no questions for the committee)
2. **Counterpart for El Paso County to be identified in Mexico** - Dr. Rincon has been working with Copresident Lopez.
3. **Inflation Reduction Act (IRA) is coming soon.** Funding is coming to states, academia, NGO. For example, a good proposal would be what Commissioner Janecka mentioned previously regarding real time data to reduce the risk of pollution in the airshed.
4. **Ethylene Oxide** open house meeting in Santa Teresa scheduled for November 1, 2022, at the War Eagles Museum in New Mexico from 4:00 to 7:00 pm.

### Public Comments

No comments by the public.

### Highlights and Consensus Items

Copresident Donaldson mentioned the IRA and challenges with ozone levels in the area have been climbing. The committee needs to turn the attention to issue and work on it. He mentioned being please with the progress of the Binational Fund. The low-cost sensors study is also progressing well and having good pm data. He appreciated the presentation on scrap tires and knowing private entities look for solutions and have good sustainable approaches to their business. He stated working with cements plants and burning scraps is not easy. He found remarkably interesting the presentation from UT Dallas. He mentioned sensors are not a regulatory standard, but it is another way to improve understanding and they can provide information. It really helps to get a better picture. He appreciated all the work from TCEQ and the coordination to hold this meeting. He congratulated the interpreter for all her challenging work.

Copresident López thanked the entire team that prepared the material, the presentations, the link, Gina who was nervous about the technical problems that most of us were having. Also, to Margarita for the interpretation. He turned to Commissioner Bobby Janecka's comments and mentioned that this is a space for dialogue, challenges, and goals. Also, as Guy mentioned the challenges in the report that Carlos presented on ozone problems. The expansion of the meteorological network must inform us well, and where the emissions are being generated such information can provide this type of analysis. The committee and the Paso del Norte basin have the potential for technical and scientific means. He mentioned that he likes to see the work of the studies presented and the binational collaborations. He mentioned that they are essential elements to identify the problems. He thanked those who direct the students to do these types of projects that are associated with real life. Let us continue with this strength that the JAC must restore these challenges and establish regulatory monitoring actions. Invite the low-cost monitoring group to the next session, the providers of this equipment sell it as a substitute to the regulatory stations, which is not the case, but they are already here, and we must use them for what is required, and we must discuss it. Each time the meteorology issues are being solved with this type of measurement. The issue of processing must be shared with other forums. He mentioned the scheduled call with Carlos to define the El Paso County counterpart in Mexico and begin the official process for the seat at the JAC. The presentation by SDUE work might need support and this forum might be the space for it. He thanked everyone.

**Establish Next Meeting Date and Adjourn-** Next meeting will be hybrid. Ciudad Juárez City Council will host the meeting in person and TCEQ will be providing a link for those who would like to attend virtually. The meeting date is for February 16, 2023. 59 participants attended the virtual meeting.