

Second Meeting of the  
JOINT ADVISORY COMMITTEE ON AIR QUALITY IMPROVEMENT FOR  
CD JUAREZ, CHIHUAHUA \ EL PASO, TEXAS \ DOÑA ANA COUNTY, NEW MEXICO  
FEBRUARY 18, 1997  
UNIVERSITY GYMNASIUM  
CD. JUAREZ, CHIHUAHUA

JAC Members present:

For the United States of America:

Dr. Elaine Barron - an El Paso physician, member of the Texas Water Development Board, and former Chairman of the Paso del Norte Air Quality Task Force (PDNAQTF);

Mr. Archie Clouse - Air Program Director for the Texas Natural Resource Conservation Commission - TNRCC Region 6;

Mr. John Cordova - Engineer for the City of El Paso, Texas;

Dr. Carlos Rincon - Border Air Program Director for the Environmental Defense Fund (EDF);

Mr. Tom Martin - Environmental Manager for ASARCO;

Mr. Danny Vickers - President of EDM International and Chairman of the PDNAQTF;

Ms. Cecilia Williams - Chief of the Air Quality Bureau of the New Mexico Environmental Department (NMED);

Mr. Jerry Clifford - Deputy Regional Administrator for EPA - Region 6

For the United Mexican States:

Biol. Maria del Pilar Lopez Marco- Delegada Federal for the Procuraduria Federal de Proteccion al Ambiente;

Dr. Rosalba Rojas Martinez - Director of Environmental Health Effects Section for the Secretaria de Salud;

Ing. Jose Treviño Fernandez - Environmental Department Director for the State of Chihuahua;

Ing. Oscar Ibañez Hernandez - Director of the Department of Urban Development and Ecology for CD Juarez, Chihuahua;

Dr. Enrique Suarez - Executive Director for the Mexican Federation of Public Health Associations (FEMAP);

Dr. Hector A Quevedo Urias - Universidad Autonoma de CD Juarez;

Ing. Rene Franco - Representing Environmental Organizations in CD Juarez;

Mr. Angel Peralta Miram - Representing the Business Community;

M. en C. Felipe Adrian Vazquez - Representing the Chihuahua Consultative Committee for Sustainable Development;

Dr. Victor Hugo Paramo - Representing the National Institute of Ecology (INE) for the Secretariat of the Environment, Natural Resources and Fisheries (SEMARNAP).

Dr. Victor Hugo Paramo - welcomed those present and introduced Mr. Jerry Clifford, Deputy Regional Administrator with EPA-Region 6 attending on behalf of Jane Saginaw, RA for EPA-Region 6.

Mr. Clifford welcomed all JAC members and the general public to this second meeting. He mentioned this was his second visit to the area and plans to continue participating in the JAC activities to propose recommendations for the air work group. Significant activity has occurred since the last JAC meeting and a meeting earlier in the month of February between the Paso del Norte Air Quality Task Force (PDNAQTF) and the International Air Quality Advisory Board (IAQAB) of the International Joint Committee (IJC) and the Transboundary Air Pollution Pathways Committee of the North American Commission for Environmental Cooperation. Hopefully, everyone can build on the momentum from the first meeting.

Members of the JAC were invited to provide opening comments.

Mr. Angel Peralta, representing the business community for CD Juarez indicated that as a businessman, he feels there is ample opportunity to work on the JAC for the benefit of business as well as the environment.

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Adrian Vazquez - as the representative of the Chihuahua State Consultative Committee for sustainable development he will continue to strive for environmental projects based on the goals of his organization.

Oscar Ibañez - as a representative of the municipal government for CD Juarez he is very interested in participating at this meeting to work toward recommendations that will improve air quality and the environment in the region.

Dr. Elaine Barron - Welcomed all who have come to this second meeting of the JAC.

Dr. Rosalba Rojas - as Director of Environmental Health Effects Section for the Secretaria de Salud she will bring to the table her knowledge of air quality impacts to human health.

Ing. Rene Franco, President of MEM (Movimiento Ecologista Mexicano) in CD Juarez is interested in working with environmental problems in the area to assist in improving air quality.

Biol. Maria del Pilar Lopez-Marco - PROFEPA- Federal participation on the JAC is part of the process of developing recommendations regarding compliance with environmental regulations.

Hector Quevedo Urias - as a member of the JAC representing the UACJ he looks forward to working to improve air quality in Paso del Norte for the citizens of the community.

Jose Treviño - Ecology Department for the State of Chihuahua - the interest of the state is to conserve and protect the environment for the benefit of all residents of the area.

Danny Vickers - representing the business community, he is very interested in air quality improvement and transportation issues. He brings to the table representation as a member of the El Paso Foreign Trade Commission and represents the Paso del Norte Border Crossing 2000 Task Force. One of the group's main initiatives is to move cross-border traffic more quickly through Customs booths. He indicated that air quality during recent days may turn abruptly for the worse when weather conditions change. This reminds us to work toward improving air quality, improve border infrastructure, and improve cross-border transportation flows.

Archie Clouse Air Program Manager for TNRCC Region 6 - Mr. Clouse is responsible for the daily operations of the air program including monitoring, enforcement, working with the general public and with agencies in Mexico. We all have a vested interest in working toward air quality improvement. We have a staff at TNRCC dedicated toward working on the Border and on the PDNAQTF. We look forward to working with the JAC to make sure the recommendations made get to the Air Working Group (AWG) and we see real changes to air quality in this area.

Tom Martin - Environmental Director of ASARCO - main focus is to see air quality improvement happen from a practical approach.

Carlos Rincon- Environmental Defense Fund - He is on the JAC on behalf of the Non-Government/non-profit organizations. For the last several years he has worked full time with bi-national environmental groups where his activities deal with bringing more non-profit philanthropical groups into the environmental fold to help improve air quality for those living in this region.

John Cordova City of El Paso Public Works Dept. An engineer and native El Pasoan. The city is committed to improve air quality and make sure programs are initiated and implemented in this airshed.

Cecilia Williams, NM Environment Dept. NM is concerned and interested in air quality issues and how air pollution impacts the citizens of Sunland Park and Santa Teresa. We need to know how air quality is improving in that area.

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Enrique Suarez - Executive Director of FEMAP. His organization is involved in community health issues and looks forward to working on the JAC to move forward with programs and recommendations that will improve air quality and the health of this region's citizens.

Dr. Victor Hugo Paramo then made some adjustments regarding the order of speakers on the agenda.

Beatriz Vera commented she was concerned there was no place on the agenda allowing for public comment prior to the JAC moving forward with recommendations for the AWG. She indicated that at the first JAC meeting the co-chairs stated public input would be part of all meetings and requested adding an item on the agenda allowing public comment prior to finalizing recommendations.

Dr. Paramo responded by identifying several areas on the current agenda where public comment was considered part of the discussion.

Carlos Rincon proposed that item 7 be converted into item 6 to give the public a chance to voice their opinion.

Dr. Paramo moved to the next item on the agenda referring to the minutes of the 11-12-96 JAC meeting.

Adrian Vazquez briefly went over the minutes of the 11-12-96 meeting. Mr. Angel Peralta suggested a modification to that part of the minutes regarding movement/velocity of vehicles in the area. Rene Franco made the proposal to put any and all comments in writing and submit to the co-chairs. Dr. Paramo suggested that recommendations and changes be submitted in writing to Victor Valenzuela, Administrative liaison to the JAC, for modification prior to final approval by the JAC.

Dr. Paramo requested that an item on the agenda regarding an update on legislative initiatives be moved up as the next item for discussion. Ing. Jose Treviño and Ing. Rene Franco made a presentation on a JAC recommendation regarding a proposal to the Chihuahua State Legislature with respect to the Federal Laws on Public Transportation, Transit and Ecology.

Ing. Treviño discussed Article 20 to the Federal Laws on Public Transportation, Transit and Ecology the Chihuahua State Legislature recently approved to require an auto emissions test and decal prior to obtaining a vehicle registration decal. This article establishes that vehicles traveling on municipal and state roads shall comply with environmental norms established by the State. Other points on the legislative decree indicate that vehicles not complying with emissions levels would be required to make necessary improvements to come into compliance with established norms and recommends that vehicles not able to comply with emissions levels would be required to be retired from service. Vehicle diagnostic centers would be under the appropriate jurisdiction. The law will go into effect on April 15 and will enter first into force in Cd Juarez and later will enter into force in the other municipalities across the State of Chihuahua at the discretion of each municipality's governing bodies. This decree is important to the State of Chihuahua and is the first step toward improving air quality across the entire State.

Dr. Paramo provided several positive comments and solicited public input.

Rene Franco indicated he solicited the insight of several key Chihuahua State Legislators in drafting the JAC letter. The issue of requiring a vehicle inspection sticker prior to vehicle registration was based on an expectation that the public would not obtain such an emissions inspection sticker once their vehicle was registered. By requiring the emissions test prior to obtaining the vehicle registration decal there would be greater incentive to address air pollution issues facing the community.

Carlos Rincon commented that the issue of requiring an emissions test prior to obtaining a registration decal is only the beginning of measures the JAC will recommend to improve regional air quality. The JAC has a long way to go to improve air quality from the mobile source perspective. That a resolution was made Nov.

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12, 1996 and a letter drafted by the JAC was well known by the Chihuahua State legislators. This letter is a good beginning and allows the JAC to be on the record with the Chihuahua State Legislature that it is serious about addressing air pollution in the region.

Archie Clouse commented that he agreed totally in principle with the letter addressing vehicular needs for Cd Juarez. He addressed how submittal of the letter to the Chihuahua State Legislature affects the process of the JAC. Initially, the JAC was formed to make recommendations to the AWG, and now his question is how this affects the procedures of the JAC as it proceeds with these types of recommendations and how this coincides with the JAC's rules, procedures and mandates since additional recommendations may move the JAC in a direction that is not within the Committee's mandates.

Danny Vickers responded that his view was to allow the JAC to address issues as quickly as possible and not get too caught up in procedures, rules and regulations. The letter being sent to the Chihuahua Legislature is in the spirit of what the JAC is trying to accomplish without violating some type of rule. If the federal folks are uncomfortable with these actions they should be the ones who indicate so. The local folks should push the JAC to areas into which it should be involved to solve air quality problems and it is better to err on the side of being too aggressive than being too cautious.

Carlos Rincon indicated that at the time the letter was distributed for signature by members of the JAC there were no operational rules and procedures in effect. The letters from the JAC to the Chihuahua State Legislature are attached to a cover letter on EPA and INE letterhead signed by the co-chairs of the AWG (David Howekamp and Adrian Fernandez).

Dr. Elaine Barron agreed with Danny Vickers and added that State and Governmental Agencies are too cautious to move in an assertive manner, but that's what the committee's for. Its a local grassroots effort that is joined to offer ideas and recommendations. It is here to assert itself in areas where we want the committee to make such recommendations and propose solutions to regional air quality problems.

Pilar Lopez-Marcos pointed out she was in agreement with the letter for the Chihuahua State Legislature independent of what was stated that there were no bylaws addressing these issues at the time the letter was drafted. The JAC is going to be a committee providing recommendations to the AWG. All proposals and recommendations that derive from the JAC will need approval by the Co-chairs. She assured the members of the JAC that the letter in no way breaks any mandates or regulations. The legislators were aware of what was coming their way, and she is entirely in support of the letter's contents.

Enrique Suarez also stated his support for the letter to the Chihuahua State Legislature and added that while the JAC may draft letters and recommendations the most important part is in the implementation of those recommendations. He suggested that the committee continue following the course of the letter to assure that the recommendation becomes realized in a program.

Jimmy Clifford indicated his understanding that the goal of the JAC is to make recommendations to the AWG. As such, perhaps the group is entering into a discussion that should be left to the discussion of the bylaws. Making recommendations to the AWG in no way diminishes the proactive nature of the JAC, and there is perhaps a way to do both; be proactive and quick to respond when needed but do so under the charter given to the JAC by the parties who drafted the document creating the Committee.

Dr. Paramo suggested that the JAC forward its letter for the Chihuahua State Legislature to the AWG as one of the Committee's initiatives. The efforts in drafting the letter are worthwhile. What was mentioned earlier is also valid, however, recommendations need to move forward to the AWG according to the mandates established by Appendix 1 to Annex V which officially formed the JAC. Once accepted by the AWG, the letter will be signed under cover of a letter signed by the Co-chairs with added remarks to the effect that it was arriving to the Chihuahua State Legislature shortly after the legislation was approved. However, the most

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important issue here is that the program to require vehicle emissions testing prior to obtaining a vehicle registration is obligatory.

All members were in agreement.

Dr. Paramo introduced the next item on the agenda regarding the draft bylaws and operating procedures for the JAC.

Dr. Carlos Rincon described the draft bylaws document in general and asked those present to provide recommendations regarding the its wording. To date several persons have submitted such recommendations. He suggested that a subcommittee form to finish drafting the bylaws and have a final draft available for the next meeting of the JAC to move the document forward to the AWG.

Biol. Pilar Lopez-Marco congratulated Carlos on the efforts put forth in drafting the bylaws. She suggested there was a need to be flexible in completing the wording of the final document in order that all who have a stake or interest in the manner in which the JAC operates are given an opportunity to comment and submit their recommendations. She indicated that the JAC could use a little more time to draft the bylaws and this should be done by a technical commission (subcommittee) on which she is willing to participate. She recommended that a separate meeting be held to discuss the bylaws. There are many nuances involved in wording a set of bylaws that are thorough and adequately address the many issues the JAC will be discussing.

A bylaws subcommittee was formed composed of Biol. Pilar Lopez-Marco, Dr. Carlos Rincon, Ing. Rene Franco, Archie Clouse, Matt Witosky, Dr. Victor Hugo Paramo, Ing. Luis Raul Cordoba, Victor Valenzuela, Lic. Roberto Fernandez.

Danny Vickers suggested a recommendation to have the subcommittee meet, agree on its wording, allow JAC members to review it, and come to the next meeting prepared to endorse it, modify it slightly, and come to closure on this issue.

Dr. Elaine Barron suggested that the document that is reviewed at the upcoming JAC meeting should be accepted at that time since arduous effort had already been made by Biol. Lopez-Marco and Dr. Carlos Rincon in writing the first draft. All issues should be adjusted and agreed upon prior to coming to the next meeting.

A meeting date for the bylaws subcommittee was then set.

Ing. Oscar Ibañez discussed the integration of the Continuous Ambient Monitoring Stations (CAMS) network and recent installation of phone lines to allow data collected on a real-time basis. The network is expected to include the CAMS managed by the TNRCC, El Paso Local Program, NMED located in Southern Doña Ana County and Cd Juarez. The first lines have already been installed in Cd Juarez and testing will begin to download Cd Juarez CAMS data by the El Paso Local Program. Daily data collected will allow reporting of a Cd. Juarez air quality index as the IMECA (Indice Mexicano de Calidad del Aire) or the PSI (Pollution Standard Index). Several options of reporting the PSI/IMECA were suggested considering the index and air quality standards for each country are different.

Dr. Victor Hugo Paramo made a presentation on the differences in reporting PSI and IMECA by identifying breakpoints between the U.S.-PSI and the Mexican - IMECA. For instance, the US standard for ozone is .12 ppm (parts per million) while in Mexico the standard is .11ppm; thus a small difference exists. Similarly an 8-hr average in carbon monoxide (CO) concentrations is measured to determine the PSI and IMECA. The US standard for CO is 9ppm and in Mexico the standard for CO is 11ppm both based on an 8-hrs rolling

average. Considering that regional air pollution is not at high levels of contamination the standards in either IMECA or PSI are not far apart.

Oscar Ibañez asked if recommendations on human activity were made based on air quality indexes considering that the air quality indexes were different. Perhaps a certain level on the IMECA may show moderate while a equivalent concentration level on the PSI indicates unhealthful and vice-versa. He suggested that perhaps a range on the PSI / IMECA scale can be used as a sort of a buffer to make up for the differences in both country's standards.

Dr. Rosalba Rojas reported that the SSA developed air quality indexes for Mexico directed toward health impacts related to air pollution. A basis of 100 IMECA was used where symptoms on human health related to air quality were not apparent. At 250 IMECA, regardless of the air pollutant measured, the general public may begin to show an air pollution related health impact.

Dr. Paramo iterated that the topic of this conversation was toward recommending to the AWG a method of reporting air quality indexes in Cd Juarez using the IMECA and PSI.

Archie Clouse opined that based on information available he recommended we don't report one air quality standard for the region. With different standards on CO we will never have a correlation. When you think of geographic areas, you want to report air quality indexes representative of pollution in those areas. It makes sense to represent the PSI and IMECA independently based on air quality data derived in each country. He recommended that based on work done by the EP Local Program and Oscar Ibañez, an IMECA as a reporting method for CD Juarez should be made, and with the integration of the CAMS, the data is now immediately available and a daily reporting of air pollution indexes can be done for Cd Juarez just as is done for El Paso. To integrate an area-wide IMECA or PSI does not look like its feasible at this time and will not provide a great benefit. The only difference may be when air pollution concentrations are near the exceedance levels where one country will report moderate and the other will report unhealthful.

Elaine Barron asked if the Juarez CAMS report air quality data in PSI and if there is a mathematical equation to compute the difference between the PSI and IMECA to see the differences and variables that go into each index. Perhaps the CAMS already give us the information to calculate either the IMECA or PSI.

Archie responded that given the differences it may not be worth the effort to calculate an IMECA for El Paso. We're close on several pollutant levels. It is possible to calculate the IMECA from PSI information derived from the CAMS located in Juarez and TNRCC, El Paso and Juarez are currently working with that data. Differences in PSI and IMECA do not provide a great benefit, and nothing will be gained by reporting area-wide IMECA's or PSI's based on airshed wide air pollution indexes.

Dr. Paramo asked if all JAC members were in favor of recommending to the AWG that each country report its own air quality indexes according to each country's standard based on information derived from CAMS located in each country. There was general agreement.

Beatriz Vera raised the issue regarding the upcoming revisions to the particulate matter and ozone standards which will create new criteria from which to calculate a PSI. She also offered to the JAC results of a study Physicians for Social Responsibility currently is conducting regarding a binational air quality health impact study. As a comment regarding reporting of air quality indexes she hoped that given the spirit of the JAC the appropriate parties report air quality data for the entire region with one reporting format instead of two. She realized it is somewhat difficult for now, but would like to see this in the near future

Octavio Chavez indicated he understands the benefit of providing one index to the community, but what should be taken into consideration is that the actual values should be reported. Mexico is familiar with the IMECA. Until the community familiarizes itself with the concept of the PSI and IMECA and their inherent

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differences we can report air quality indexes according to each country's own methods. We don't want to enter into a numbers game where given the differences in standards we confuse the people. We want to give the numbers "face value" and educate the public regarding the concept of air quality index reporting.

Horacio Gonzalez mentioned that from a first pass it may be difficult to report one common air quality index due to differences in air quality standards. In El Paso recommendations are made through the television media that during different times of the year, for instance during the winter, no wood burning public service announcements are made on certain days. How are recommendations regarding human activity going to coincide and how is the public going to be confident about each city's recommendations when different indexes and air quality standards exist?

Oscar Ibañez responded that this issue has been discussed between the appropriate authorities and these recommendations may be made for different parts of the city. In El Paso one single PSI value is reported for the entire community. In Juarez we will inform the community of air quality indexes by zone. What is important is that similar recommendations can be made with minor modifications. To address the no-wood burning issue, in Juarez few people have fireplaces in their homes, however in the outskirts people do burn trash and debris. From this perspective no-burn recommendations can be made. When the El Paso City-County Health and Environmental District issues no-burn recommendations it can give us a call to inform that the recommendation will be made on the evening news, therefore we can make a similar announcement on our television.

Dr. Paramo added that these issues are important and at certain air pollution levels the public should be informed about what to do. As a summary he suggested the JAC submit 3 recommendations to the AWG to 1) continue reporting each country's air quality index; 2) begin developing an air quality reporting instrument to inform the public; and 3) homogenize recommendations regarding human activity with the idea the public should be aware on both sides of the border on what to do when air quality is unhealthy.

This will inform the public of the air quality measurements that are made using current monitoring data.

Oscar Ibañez indicated the sampling protocol for particulate matter which is measured every 6 days. However, the CAMS regularly provide information on nitrogen oxides, ozone, and carbon monoxide.

Dr. Ron Ketter from the UTEP Public Administration Program discussed a proposed International Emissions Reductions Credits Trading Program. He has developed a proposal on an international ERC program to reduce air pollution on both sides of the border with 2 main advantages. It targets funds to the area that can gain the greatest benefit; for instance US companies can invest in Juarez-based businesses to reduce air pollution at a lower cost than investing in the US. Second, an international ERC program creates incentives for US businesses needing to earn credits or reduce air emissions by reducing air emissions at another location thereby allowing expansion at the proposed site. An ERC program can require emissions reductions by 120 units to expand operations at a proposed site by 100 units. It lowers the economic cost of cleaning the air as well as encouraging investment in pollution abatement technologies.

Issues to resolve prior to implementation of such a program are measuring, verifying and enforcing the manner in which credits are generated and used to assure real progress toward cleaning the air. A subcommittee was formed to identify specific projects that can be undertaken to see how such a program would work. Dr. Ketter proposed that the JAC identify a pilot project to determine the use of transborder air quality ERC projects and develop a strategy to select such a pilot project to demonstrate the feasibility of international ERC's in an international environment working through the ERC subcommittee already formed. Road paving projects face different enforcement verification processes than brick kiln projects.

Some of the methods that can be used to invest in cross-border air pollution abatement projects are as follows: 1) Site specific State Implementation Plan Revisions (SSSRs), and 2) Supplemental Environmental

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Projects (SEPs). These may be the best method in which to undertake such as project. Third, the JAC needs verification by the parties to the enforcement of ERC's that investments in air pollution abatement strategies on one side of the US/Mexico border can be credited to the other side of the border, and if not what specific changes are required to allow the use of international ERC's. Companies involved in such projects will require a commitment from the appropriate authorities that credits will be earned when investments are made.

Adrian Vazquez added that an effort is underway on the Mexican side of the JAC to allow an ERC trading program that integrates all the parties involved in such a project. A parallel project is underway to integrate such activities where a pilot project is being sought to accept such investments. Investments in air pollution abatement equipment and credits should be available for all businesses in Juarez, not specifically US business, located in the city where the only credits would be earned in the US.

Pilar Lopez-Marco indicated that the current laws and proposals already contemplate this type of program. A pilot project can be developed where this type of international ERC trading program can come into effect.

Jimmy Clifford asked if this is within the mandate of the JAC and if the JAC was willing to take on such a task. Also, if current rules actually allow such trades in ERC's. Bob Hanneschlager, EPA Reg. 6 Deputy Air Program Director, indicated that rules currently do not allow cross-border trades so this is an issue that needs to be addressed. He asked Archie Clouse if TNRCC rules allow such trades.

Archie Clouse responded that the JAC is trying to change the paradigm. We understand the mechanisms in place in the enforcement arena. What we're (the JAC) trying to look for is a pilot project that brings changes in those laws. We can obtain great reductions at low costs. He recommended that the JAC submit Ron Ketter's proposal with the three steps to the AWG. Until we can get the ball rolling in that direction, nothing will change.

Elaine Barron stated that Archie's comments were admirable because the JAC is making positive recommendations. During earlier discussions on this subject when the EDF was present the Paso del Norte Air Quality Task Force (PDNAQTF), because it is a binational grassroots group composed of citizens from both communities, should be the group that supports such initiatives of the JAC as it moves recommendations to the AWG. Perhaps both governments can give permission to the PDNAQTF to develop the recommendations for pilot projects to allow members of the JAC to feel comfortable about their position as its co-chairs.

Archie Clouse indicated that the State and EPA understand the technical issues such as SEP's and SSSRs and federal enforceability provisions which we need to have in order to make such a program work correctly. We'll need the cooperation of the EPA and TNRCC to move forward on such a project.

Elaine Barron iterated that this is where the PDNAQTF needs to be involved to make such requests at an international level.

Archie Clouse responded that the AWG needs to receive and discuss these recommendations due to the federal enforceability issues. The AWG can request projects. If it wants to take action based on JAC recommendations it can request projects through contractors or universities.

Pilar Lopez-Marco indicated her concern with the legal aspect of this pilot plan. It would be unfortunate to start something so beneficial and have it stopped due to the legal issues in any one country.

Jimmy Clifford added that EPA legal counsel in Washington will want to see a written proposal prior to giving a legal opinion. One option may be to give this recommendation to the AWG. Another option is that there are members in JAC who feel they have extensive experience working with industry in the EP/Juarez area. They should offer examples of proposals for the AWG and to the air quality people to get this started.

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Dr. Paramo indicated his understanding of Pilar's concerns regarding Mexico's rules and possible responses to developing such a program. The problem with the proposals as they now stand is that they are still in the early stages of development and the lack of detail complicates the ability to say that they are viable or not. Perhaps everyone is in agreement on this. If the group can develop a more concrete and viable proposal this would help support such a pilot project. If the recommendations are sent to the AWG the discussion we just had will be repeated and this may possibly take more time than necessary. Perhaps the JAC can submit a more detailed proposal as a more refined recommendation to the AWG to obtain a positive response from that body.

Oscar Ibañez stated he is of the same opinion. If the JAC can develop a more refined recommendation that considers Mexican and US laws this may help the AWG support such recommendations. While this program and project may take time it is important however to submit pilot projects to undertake.

Pilar Lopez Marco stated that there are industries which ask about incentives for business. Such incentives have been available since 1988 and they have not been utilized which is bothersome. The former President of the Republic created a fund to provide tax incentives to industry for installation of pollution abatement equipment, but the fund has not been used. The ERC subcommittee is suggesting pilot plans where we don't have much response from industry. We need to see a pilot project which also utilizes the fund. The law is now more clearly defined, but we need to see which businesses will be interested in being involved in such a pilot plan.

Elaine Barron suggested the JAC look at initiatives proposed by the US and Canada.

Rene Franco - there are industries in Juarez that have invested in pollution abatement that have also increased operating profits.

Dr. Ketter iterated that the concerns raised are valid. A general consensus was reached to determine which problem needed to be dealt with in a general or abstract sense. The ERC subcommittee determined a case-by-case basis should be considered in looking at pilot projects to determine problems, solutions, and legal barriers needed to be overcome before a pilot project can be approached. He considered this approach more conservative where demonstration projects can be done to learn from experience. This may be better than adopting generic policies. This forces scrutiny on the case-by-case basis and less on the abstract.

Dr. Paramo summed up the discussion by stating that the recommendations be more firmly developed prior to forwarding to the AWG.

Carlos Rincon interjected that he supported sending Dr. Ketter's recommendation to the AWG. Where the AWG looks at the feasibility of a pilot project without being specific on a particular project until the joint work plan is developed between the JAC and the Task Force.

Pilar Lopez-Marco suggested that to have a more positive response from the AWG the JAC develop a more complete set of recommendations that adds to the three current proposals. If the ERC subcommittee can better define a pilot project there may be no real issues raised.

Elaine Barron added that both countries need to provide clarification on whether current regulations allow this to happen since this currently doesn't exist. If we can't do that then we're stopped and a pilot project may be an unfortunate exercise.

Archie Clouse indicated that we already know what the answer is. Current rules don't allow the trading of international ERC's so we need to take up the issue one more notch by forwarding Dr. Ketter's recommendations to the AWG.

Danny Vickers added that the initial perception of ERC trading was to allow spending dollars in Mexico in pollution abatement equipment to obtain the biggest return on investment. The mechanisms need to be developed to allow these investments in Mexico to improve air quality at the least cost. The legal issues involved in both countries are quite complicated.

Dr. Paramo summed up the discussion on international ERC trading by offering to report to the AWG the observations suggested by Dr. Ron Ketter which were the following:

- 1) Develop a pilot project using some of the following methods: a) Site specific State Implementation Plan Revisions (SSSRs), and b) Supplemental Environmental Projects (SEPs);
- 2) Develop a strategy to select such a pilot project to demonstrate the feasibility of international ERC trading in an international environment; and
- 3) The JAC needs verification by the parties to the enforcement of ERC's that investments in air pollution abatement strategies on one side of the US/Mexico border can be credited to the other side of the border, and if not what specific changes are required to allow the use of international ERC's.

Next on the agenda was a discussion on an emissions inventory conducted in the Paso del Norte region.

Ing. Luis Raul Cordoba, Sub-Delegado INE-SEMARNAP, discussed work on documents known as Statements of Operation (Cedula de Operation) which describe the general parameters under which industries operate. A report named SNIFF (Sistema Nacional de Informacion de Fuentes Fijas) is derived from the statements currently submitted by 270 Cd Juarez industries, and an emissions inventory is developed. Data has been updated for 170 industries by personnel from the Ecology Department of Cd Juarez. Of the industries currently updated into the SNIFF, 9 industries each generate annually over 50 tons of emissions representing various pollutants. The amount of information received and inputted into the SNIFF has increased compared to previous years.

Ing. Oscar Ibañez next discussed the mobile source emissions inventory which is under Municipal jurisdiction. Cd. Juarez currently is employing an RSD-2000 remote sensing device to measure vehicle tail-pipe carbon monoxide and hydrocarbon emissions.

Danny Vickers reported on the activity of the Border Crossing 2000 Task Force. In particular the BC2000TF drafted a letter for the AWG's approval which, if accepted, be sent to US Rep. Sylvester Reyes regarding support of a Dedicated Commuter Lane Initiative on the international bridges where 20,000 people cross everyday. Those people who are regular crossers could have something like a computer chip installed in their car that identifies that car and its occupants as regular border crossers. He also suggested the banding together of a group to join forces to create an infrastructure to plan projects and ask for operating funds. Laredo, TX efforts to get a dedicated commuter lane on the international bridges involved by bringing in full-time staff. This effort needs to take place locally to make such a program work. There are local entities that both support this effort and are able to provide staff support and there are those organizations which do not wish to involve themselves in long-term projects that may consume time and resources. In essence Mr. Vickers asked that the JAC consider the second proposal perhaps at its next meeting.

Dr. Paramo summed this discussion by recommending the JAC forward to the AWG a letter to US Congressman Sylvester Reyes recommending the creation of a Dedicated Commuter Lane on the El Paso / Juarez international bridges as prepared by the BC2000TF. There was unanimous support that the letter be signed by the JAC Co-chairs.

Dr. Enrique Suarez discussed an study conducted by a firm from Utah, El Paso Natural Gas, UTEP and the City of Juarez Ecology Department regarding atmospheric emission from brick kilns. Several different fuel sources such as LP Gas, clean saw dust, contaminated saw dust, tires, and oil were analyzed in this study. Contaminated saw dust refers to saw dust which contains chemicals such as resins and formaldehyde. One

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of the conclusions of this study is that contaminated saw dust, oil and tires generated toxic emissions such as lead, arsenic, chromium, cadmium, selenium and mercury. Contaminated saw dust had similar toxic emissions; added to this were organics such as toluene, benzene, formaldehyde, etc. Each of these emissions are capable of producing cancer, birth defects and other health problems. Considering the study was conducted in 1993, the brick makers continue using these types of fuels in their work. Prior to this study about 15% of brick makers used LP Gas; after this 70% of all brick makers began using LPG. Unfortunately the price of LPG has prevented the further use of LPG in the brick making industry.

Perhaps a law requiring only LPG will help this industry and the health of this community. The agreement signed between the PROFEPA and the brick makers to require only the use of clean saw dust has helped reduce the problem somewhat. We must develop incentive programs for the brick makers who are the poorest of the poor to assist them to use LPG.

Jimmy Clifford asked if Dr. Suarez had any recommendations for the JAC regarding his study and suggested the JAC further study this issue. By its next meeting the JAC should develop and propose a package of rules, laws or recommendations to forward to the AWG.

Dr. Paramo summed by indicating that Dr. Suarez would at the next JAC meeting submit a package of recommendations identifying rules, laws, and regulations directed toward the brick making community to forward to the AWG.

Mr. Carl Snow - TNRCC Emissions Inventories Section - made a presentation on the development of Mobile5Juarez which takes into consideration CO, hydrocarbon and NOx emissions and compares this data to an EPA mobile model developed by Radian Corporation. Data acquisition began in March 1993 during a workshop in Juarez where a multi-gauge mobile model was used to estimate vehicle emissions. At the same workshop the participants learned to estimate Vehicle Miles Traveled (VMT); in Mexico the term was Vehicle Kilometers Traveled (VKT). Several sites were set up around Juarez to determine vehicle data and classification of vehicles traveling on Juarez streets (percentage of cars, pick-up trucks, buses). In the summer of 1993 a vehicle speed data collection study was conducted to determine average vehicle speeds and emissions. Another sideline of this study included bridge traffic data (wait times and traffic counts). In August 1995 we had a vehicle engine test data collection study which is the heart of the project. Over 200 vehicles were tested using the EPA IM240 protocol which measures vehicle emissions under load. A tampering inspection was also conducted to determine if emission control equipment has been removed or altered. In this same study a private firm from Cd Juarez conducted Bar 90 vehicle emissions inspections. Compared to vehicles identified in Mobile5a, Cd Juarez vehicles exhibited slightly higher values and emissions based on Mobile5Juarez data.

Dr. Paramo commented that the previous discussions indicate that the amount of cooperative activity between the US and Mexican Environmental Agencies continues to improve our understanding of air quality in this region. An emissions inventory for a variety of sources including mobile, point, and area sources (vehicular, industrial, brick kiln) is currently being developed. In January of 1997 Secretary Julia Carabias announced that an Air Quality Plan was to be developed for Cd Juarez. An EI for Cd Juarez obligates Mexico to take positive steps to work with data that currently exists to help develop such an Air Quality Plan. Considering the activities that have been taking place, the interest is definitely there. In this respect the AWG will be informed that a thorough discussion took place regarding activities on emissions inventories.

Jim Yarbrough, EPA-Region 6, introduced Dr. Paul Roberts, Field Manager for the Summer 1996 Paso del Norte Ozone Study. He prefaced Dr. Roberts presentation by indicating the goal of the study was to use data (such as industrial or source emissions) collected during this study to enter into a computer model to simulate ozone concentrations throughout the region. A model would then help determine the best control strategies to reduce ozone pollution. The cost may be unnecessarily high to install air pollution control equipment if

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those strategies were implemented without computer models. The goals of such research thus is to have a model ready in the near future to suggest those control strategies.

Dr. Paul Roberts provided an overview of the PDN Ozone Study

- I) Objectives of the field study:
  - a) Collect meteorological and air quality data to support modeling;
  - b) Improve our understanding of the phenomena which influence high ozone concentrations in the airshed; and
  - c) Continue the cooperative process to address common air quality problems.
  
- II) An existing set of continuous air quality monitoring sites is located in both cities. What was lacking was down-wind sites to understand pollution aloft. We added the following equipment: 3 downwind surface air quality and meteorological sites (N, E and SE); 1 elevated air quality and meteorological site (on Franklin Mt.); NO/NO<sub>x</sub> at 2 sites in Juarez; 3 vertical radar profilers for upper-air wind and temperature measurements; a ceilometer to determine mixing heights; TNRCC installed 1 new Doppler acoustic sounder (SODAR) to measure wind speed and direction; we also included routine aircraft measurements of air pollution across the airshed on several days where forecasts indicated we would have modest ozone concentrations. The major function of the aircraft was to make vertical passes (spirals) descending at about 500 ft a minute. The importance of making spirals was to determine the vertical nature of air pollution along a horizontal gradient.

Intensive measurements were taken on 9 separate days using the following equipment: hydrocarbon samples were collected at 4 surface sites; carbonyl samples were also collected.

Additional components of the study include the following: quality assurance audits; LIDAR measurements of aloft winds in the gap between Crazy Cat Mountain, Mt. Cristo Rey and the Juarez Mountains; hot-air balloon flights over downtown El Paso and Juarez on 3 days taking low-altitude tracks from 50-100 feet and making spirals up to several thousand feet; and a tether sonde taking ozone measurements at 150 or so meters above ground; hydrocarbon samples were taken at 10 (mostly source) sites on both sides of the border. Some heavy hydrocarbon samples were collected.

Daily ambient air pollution forecasts were provided by TNRCC and the Project Team.

Part of the design process was to come up w/ several hypotheses on what we thought the mechanisms for ozone formation were. We found that mixing height is a function of time. Daytime heating of the land by the sun produces mixing heights up to about 3,000 feet above ground. Overnight there are nocturnal inversions where there is a temperature inversion close to the ground that can trap the pollutants overnight and into the early morning period. What we noticed was that on the days with the higher ozone concentrations the mixing heights were all generally the same. Usually there is slow growth of the mixing height to allow the morning pollutants and chemistry to occur in volumes which shows higher concentrations of ozone. The key is to model that process properly and improve our understanding of where concentrations are high within the airshed.

General airshed-wide ozone concentrations increase to about 80ppb during an ozone episode and provided background initial conditions. We had fairly clean air during most of the sampling period. General meteorological conditions during periods of high ozone concentrations follow: neutral synoptic gradients; max temperature > 90°F; delta temperature (max-min) > 25°F; calm morning winds and clear morning skies.

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One thing we were looking for was the possibility that high ozone concentrations would be left over from the previous day and mix the next day with new emissions during the mixing process. We didn't find that. We did find that a slow rise in mixing height is associated with high ozone concentrations. The tight cloud of ozone was fairly constrained at a central area which we also saw downwind and still fairly contiguous. It did not disperse horizontally until it was mixed vertically. We saw this when high concentrations were found to the north of El Paso.

Currently data is being processed and quality assured. HC and carbonyl samples also are being analyzed in the lab. The data will then be assembled and be available for further data analysis. Some meteorological modeling will soon begin. We're also developing plans for the emissions inventory, meteorological wind models, photochemical models and air quality modeling.

Dr. Paramo went over the final items on the agenda. On Feb. 27 & 28 the AWG will meet in Mexico City and he will send an agenda along with the invitation to this meeting to members of the JAC.

Octavio Chavez discussed the a letter to PEMEX he sent as chairman of the PDNAQTF regarding the non-sale of oxygenated gasoline in Cd Juarez. The letter was never replied to by PEMEX. The IMP (Mexican Petroleum Institute) was contacted and replied that there is no problem in obtaining oxy-fuels. While PEMEX indicates that cost makes the price too expensive and is an issue for not selling oxy-fuels does not make sense since the price of gasoline is similar to that sold in El Paso. Another reason PEMEX gives for not selling oxy-fuels is that there is no proof that oxy-fuels will work. The IMP has shown and recommended that oxy-fuels should be sold in certain Mexican cities. The PDNAQTF requests that the JAC submit a recommendation that the AWG send out a letter to PEMEX to sell oxygenated gasoline during the winter months in Juarez and throughout Mexico. There are no federal laws prohibiting this. The gasoline in Juarez comes from the same place, the US. There is no excuse PEMEX can use that oxy-fuels should not be used in Juarez, especially cost.

Oscar Ibañez added that PEMEX will reduce its transportation cost to obtain gasoline upon the opening of the gasoline pipeline from the US to its loading terminal in Juarez.

Elaine Barron added a proposal to recommend to the AWG that PEMEX facilitate the use of oxy-fuels at a fair price in Juarez.

Archie Clouse added that the process would be facilitated if the PDNAQTF submit its request regarding the sale of oxy-fuels in Juarez to the JAC. The JAC could then forward the recommendation to the AWG

Dr. Paramo indicated that when PEMEX was asked about their gasoline distribution in Juarez they responded that they distributed the same gasoline in Juarez as is distributed in El Paso, but its not in writing. The AWG will need such a letter to move forward on such an issue. He would also like there to be information or documentation for JAC members to know exactly what is being proposed with proper criteria that can pass scrutiny.

Pilar Lopez-Marco indicated that the committee needs concrete proposals with adequate elements to generate recommendations with a solid base before they are presented as recommendations to the AWG. We can't just throw out ideas without an adequate foundation or support. This is a JAC with various interests, and it should make appropriate recommendations.

A discussion ensued regarding the merits of the proposal regarding its feasibility, background information, etc. to determine what exactly was the most appropriate method of making recommendations, providing supporting information and determining the manner in which these recommendations should be forwarded to the AWG. A motion was made that the JAC recommend to the AWG that PEMEX begin selling oxy-fuels in Juarez during the period 1 Oct-31 March with a 2.7% oxygenate concentration.

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Finally, Dr. Paramo summed up this JAC meeting with the following review of recommendations to send to the AWG:

1. Send a letter to the Congress of the State of Chihuahua supporting the obligatory vehicle inspection prior to obtaining a vehicle registration;
2. A recommendation regarding the reporting of air quality to use the IMECA in Juarez and PSI in El Paso and submit a report of air pollution measurements from all regional air pollution monitoring station;
3. At an operational level providing similar public service announcements regarding human activity on days when air pollution levels are high.
4. Regarding Dr. Ron Ketter's proposal on International Emission Reductions Credits Trading the JAC will request the AWG to begin taking into consideration those recommendations which are as follows:
  - a) Develop a pilot project using some of the following methods: a) Site specific State Implementation Plan Revisions (SSSRs), and b) Supplemental Environmental Projects (SEPs);
  - b) Develop a strategy to select such a pilot project to demonstrate the feasibility of international ERC trading in an international environment; and
  - c) The JAC needs verification by the parties to the enforcement of ERC's that investments in air pollution abatement strategies on one side of the US/Mexico border can be credited to the other side of the border, and if not what specific changes are required to allow the use of international ERC's.
5. Forward to the AWG Danny Vickers' letters regarding a Dedicated Commuter Lane Initiative on the international bridges.
6. Forward to the AWG a letter the JAC recommends be sent to PEMEX regarding the sale and use of oxygenated gasoline in Juarez during the winter months.

As a final note Dr. Paramo will inform the AWG of ongoing activities such as development of the JAC's Bylaws, work on the Cd Juarez Emissions Inventory, studies on the brick kilns, and the presentation on the Paso del Norte Ozone Study.

The next meeting will be held Tuesday, May 13 in El Paso, TX

The meeting was adjourned.