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NAFTA’S Impact on the Environmental Management of the U.S./Mexico Border Lands

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I. Introduction

The debates leading up to the U.S. Congress’ decision in May, 1991, to approve the extension of the “fast-track” procedure in the negotiation of the North American Free Trade Agreement (“NAFTA”) voiced the concerns of environmentalists and businesses with respect to the reputedly limited environmental regulation in Mexico, and the potential comparative economic advantages of Mexican companies, due to lower required investments in pollution control and abatement systems.¹

As a direct result, the maquiladora industry became the focus of public and private sector scrutiny from both sides of the U.S./Mexico border,² Mexican environmental regulations and technical standards began being drafted and enforced at a rapidly increasing pace, and funding avenues were discussed for channeling into the U.S./Mexico border environmental problems.

The 2,100 mile border region connecting the U.S. and Mexico was particularly brought into focus. Trade, industrial and population growth along the U.S./Mexico border had exploded over the last two decades. The resulting impact to this 250,000 square mile border region, its approximately 10 million inhabitants in the sister cities,³ the natural resources and the environment, has been phenomenal.

* The author acknowledges the significant research and editorial assistance of Shirley Hensley of Hughes & Luce, L.L.P.
2. Id.
II. The Maquiladora Impact On The Border Environment

Mexican border communities are booming as a result of the expanded industrial base, due in large part to Mexico's encouragement of foreign-owned industries, or "maquiladoras." These maquiladoras, most of which are owned by U.S. corporations, began their operations affecting the border environment in 1965, when Mexico established a tariff-free zone along its U.S. border. The maquiladora program was established by the Mexican government as a solution to problems associated with economic underdevelopment in northern Mexico at a time when thousands of Mexicans were leaving the interior farmlands. In response to these economic problems, Mexico began to explore ways in which to bring greater foreign investment for industry into Mexico. In 1965, Mexico's president announced the first border industrialization program. By 1971, the program's provisions and procedures had been codified in the Mexican Customs Code. Later, on August 15, 1983, the Presidential Decree for the Promotion and Operation of the Maquiladora Export Industry was issued and published in the Official Gazette of Mexico.

The maquiladora program offered prospective new industries many inducements, including the option of 100% foreign ownership of certain industries. Attractions included: (i) duty-free entry of all machinery, materials (including raw chemical stores), and equipment needed to establish an operation in Mexico; (ii) duty-free entry and subsequent tax free re-export of foreign-source components brought into Mexico for processing; (iii) no restrictions on what items a maquiladora could produce for export (with certain exceptions relating to competing Mexican-owned industries such as textiles); and (iv) a low minimum wage competitive with Far East wages. Proximity to the United States, low wages, tax incentives and the Mexican government's prior disregard of its own environmental laws, lured more than 2,000 maquiladoras employing over 500,000 people to the now-crowded U.S./Mexico border.

The success of the maquiladora concept introduced significant environmental problems to the border area. Although the maquiladora program involved many so-called light industries (electronics, electrical equipment, ceramics, automotive parts and toys), these light industries use large quantities of solvents and other materials (caustics, acids, hydrocarbons, dioxins and petroleum products) resulting in potential extremely hazardous waste streams. Although in and of itself not problematic, these waste streams became an exponential problem when coupled with the lack of legal provisions, and physical facilities and infrastructure, for the proper disposal of hazardous and toxic materials and wastes along the border. Little effort was made to segregate potentially hazardous wastes during normal industrial effluent treatment and waste disposal procedures. Consequently, many hazardous wastes were mixed with municipal wastes and were buried in ordinary landfills or were released with sewage to surface waterways from outfall of treatment plants. Midnight dumping in the desert is illegal.

4. Elizabeth C. Rose, Hazardous Waste Management Problems Along the U.S.-Mexican Border: The Good, the Bad or the Maquiladoras?, 19 St Bar of Tex Envtl L. J. 1 (Summer 1988), Vol. 19, No. 1, Summer 1988. Portions of Sections B and C of this paper are cited from this article.
landfills or in back streets was another not uncommon consequence. Although the La Paz Agreement of 1983' mandated the exportation of hazardous wastes generated from inbound raw materials back to the country of origin (unless otherwise agreed by the host country), no mechanism for tracking imported raw materials and associated generators or exporters of wastes existed to enforce this requirement.

III. United States/Mexico Border Initiatives Pre-NAFTA

A. International Boundary and Water Commission.

A long history of cooperation exists between the United States and Mexico on border sanitation and related water and other environmental quality issues. The 1944 Water Treaty established the International Boundary and Water Commission ("IBWC"), and charged it with undertaking “any sanitary measures or works which may be mutually agreed upon by the two Governments.” (See Figure 1) The Treaty also provided that the Governments agreed to give preferential attention to solution of all border sanitation problems, and required preferential treatment for domestic and municipal water use, agricultural and stock grazing uses, electrical power use and other industrial uses.

B. U.S./Mexico Environmental Agency Initiatives.

While the IBWC continues to remain the principal authority for addressing water quality issues along the border, the U.S. Environmental Protection Agency ("EPA") began playing a greater role in the formulation of agreements regarding border waste issues in the 1970's. In 1978, the environmental agencies of Mexico and the United States signed a Memorandum of Understanding ("MOU") that committed the two nations to "a cooperative effort to resolve environmental problems of mutual concerns in border areas . . . and the establishment of parallel projects which the two parties consider appropriate to adopt." Parallel projects included pollution abatement and control programs, spill detection plans, the mutual review of national environmental policies and strategies, data gathering, and the exchange of information. A second agreement, primarily addressing problems of marine pollution spills, called the 1980 Agreement of Cooperation Regarding Pollution of the Marine Environment was executed in 1980 between the two countries."


9. Id. art. 3. Previously the International Boundary Commission was established by the 1889 International Boundary Convention to deal with boundary disputes.


11. Supra note 4.
C. The La Paz Agreement.

Superseding the 1978 MOU is the Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area (commonly known as the "La Paz Agreement"). The La Paz Agreement provides that the two nations will "to the fullest extent practical, adopt the appropriate measures to prevent, reduce and eliminate sources of pollution in their respective territories which affect the border area of the other." The Agreement objectives are:

to establish the basis for cooperation between the Parties for the protection, improvement and conservation of the environment and the problems which affect it, as well as to agree on necessary measures to prevent and control pollution in the border area, and to provide the framework for development of a system of notification for emergency situations.

Article 4 of the Agreement established the border area as 100 kilometers (65 miles) on either side of the inland and maritime boundaries.

Article 3 of the La Paz Agreement paved the way for future agreements by stating that the nations could annex the Agreement with specific technical arrangements to resolve common problems in the border area, including issues relating to air, land and water pollution. Under this authority, Annexes II and III were entered into on November 29, 1985 and January 29, 1987, respectively addressing spills of hazardous materials in the border area and transboundary shipments of hazardous wastes and substances.

Annex I, signed in 1985, provided for the construction and operation of the Tijuana/San Diego wastewater treatment facilities.

Annex II, also signed in 1985, covers discharges, typically accidental spills, of any hazardous material in the border area. A United States-Mexico Joint Contingency Plan was promulgated, calling for the development of response plans for early detection of polluting incidents and appropriate responses to minimize potential harmful effects of such incidents.

12. Supra note 7. This was signed in La Paz, Baja California Sur, Mexico, and is accordingly commonly known as the La Paz Agreement.
13. Id. art. 2.
14. Id. art. 1.
15. Id. art. 4.
16. Id. arts. 3, 5.
Annex III, signed in 1987, is an agreement concerning the transboundary shipment of hazardous wastes and hazardous substances which includes waste shipped into Mexico for inexpensive disposal and waste to be shipped into the United States for disposal under the provisions of the maquiladora program. Annex III specifically provides that each nation shall ensure "to the extent practicable, that its domestic laws and regulations are enforced with respect to transboundary shipments of hazardous waste and hazardous substances," and includes provisions for cooperation in monitoring and spot checking transboundary shipments "to the extent practicable." Annex III also specifically reaffirms in its preamble, Principle 21 of the 1972 Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

Annex IV, signed in 1987, required copper smelters in the border area to comply with certain emissions limits.

Annex V, signed in 1990, provides for an assessment of the causes of and solutions to, air quality problems in the sister cities.

D. U.S./Mexico Integrated Border Environmental Plan.

Under the guidelines and authority of the La Paz Agreement, on November 27, 1990, President Carlos Salinas de Gortari of Mexico and President George Bush of the United States, met in Monterrey, Mexico, and issued a joint communiqué emphasizing the need for ongoing cooperation between the two countries in the area of environmental protection. In order to support their joint NAFTA efforts and to counter criticism of the proposed NAFTA from Congressmen and public interest groups, they agreed to cooperatively develop a comprehensive plan to address environmental problems and to protect the environment along the border.

After public comment, and much joint effort by environmental agencies of both countries, the U.S./Mexico Integrated Border Environmental Plan (the "Border Plan") was released on February 25, 1992. The stated goal of the Border Plan was "to provide for the long-term protection of human health and natural ecosystems along the border between Mexico and the United States." It contemplated a multi-phase process to achieve this goal, the first stage of which (1992-1994) was intended to address the most serious environmental problems then existing or emerging in the border area. The basic objectives of this first stage and their detailed strategies for implementation included:

18. Id. preamble.
19. Id. art. II.
• **Strengthening of Enforcement of Existing Laws**
  - Increase the number of Mexican border environmental inspectors
    (i) Increase Mexican border operational budget
    (ii) Equip Mexican border workstations with computers and data banks
  - Establish new Cooperative Enforcement Strategy Workgroup
  - Build enforcement capacity
    (i) Expand cooperative training visits to facilities on both sides of the border
    (ii) Conduct bilateral workshops, seminars, field exercises, and personnel exchanges
  - Exchange enforcement information
    (i) Develop computerized database on regulated facilities and the transborder movement of hazardous wastes
  - Cooperate on enforcement actions in agreed-upon priority areas

**Reduction of Pollution Through New Initiatives**

- Increase wastewater treatment
  (i) Complete 9 million gallon per day expansion in Nogales/Nogales, and begin next phase of Nogales expansion
  (ii) Substantially complete 25 million gallon per day international system in Tijuana/San Diego
  (iii) Complete improvements in San Diego's wastewater treatment system
  (iv) Complete 31 million gallon per day system in Nuevo Laredo/Laredo
  (v) Begin construction or expand wastewater collection and treatment systems in Matamoros, Reynosa, Piedras Negras, Ciudad Juarez, San Luis Rio Colorado, and Mexicali
  (vi) Construct wastewater treatment systems and hook-ups in U.S. colonias
- Strengthen industrial wastewater pretreatment program
  (i) Require pretreatment before industrial facility hook-ups to international waste water treatment systems
  (ii) Monitor and characterize effluent entering treatment facilities
- Protect drinking water supplies
  (i) Inventory water sources, quality, and treatment processes at existing drinking water facilities
  (ii) Determine priorities for drinking water protection
  (iii) Construct drinking water systems in U.S. colonias
- Initiate multi-media industrial source controls to reduce air, water, and land pollution
  (i) Collect data on toxic releases from industrial facilities in Ciudad Juarez and Tijuana
  (ii) Target enforcement actions and pollution prevention programs in Ciudad Juarez and Tijuana
- Improve disposal of solid and hazardous wastes
  (i) Purchase equipment and/or construct landfills in Matamoros, Reynosa, Nuevo Laredo, Piedras Negras, Ciudad Juarez, Nogales, and San Luis Rio Colorado
  (ii) Improve detection and reporting of illegal transboundary shipments of hazardous wastes
— Set aside land in Mexico for low-income housing
— Improve air quality
  (i) Improve roads, bridges and traffic circulation in Mexican border cities
  (ii) Establish credit lines for public/private transportation ventures in Mexico
  (iii) Complete air emissions inventory for the Ciudad Juarez/El Paso airshed
  (iv) Implement air quality monitoring programs and prepare emissions inventories for the Mexicali/Calexico and Tijuana/San Diego airsheds
  (v) Prepare bilateral air quality control strategies for the Ciudad Juarez/El Paso, Mexicali/Calexico, and Tijuana/San Diego airsheds
— Promote pollution prevention borderwide
  (i) Establish new Pollution Prevention Workgroup under the 1983 Mexican-U.S. Border Environmental Agreement
  (ii) Implement border area pollution prevention initiatives modeled on EPA’s 33.50 Project
— Provide technical assistance for pollution prevention
  (i) Training programs for the private sector
  (ii) Computer-based hook-ups to international technology information clearinghouse
  (iii) University-based research and education centers
  (iv) Model demonstration projects in local communities

• **Increased Cooperative Planning, Training, and Education**
— For emergency preparedness and response personnel
  (i) Improve and test contingency plans already being developed in Matamoros/Brownsville, Mexicali/Calexico, and Tijuana/San Diego
  (ii) Develop a detailed schedule for contingency planning in 11 other pairs of sister cities
  (iii) Make public more complete information on the kinds, uses, and movements of hazardous chemicals in the border area
  (iv) Foster local action groups to coordinate transborder planning, prevention, and response
  (v) Assure that an effective hazardous release notification system is in place in all sister cities
  (vi) Expedite transborder notification and movement of emergency vehicles and personnel
  (vii) Establish an emergency response loan fund for Mexican border cities
— For government officials
  (i) Expand training of environmental enforcement personnel
  (ii) Improve safety and prompt movement of hazardous materials through border crossings
— For the private sector
  (i) Develop training and education programs on waste-handling for commercial and industrial sources of waste
  (ii) Publicize and update regulatory requirements for the handling and disposal of hazardous wastes
— For the public
  (i) Develop bilingual environmental education materials to be distributed to local schools
(ii) Encourage the international exchange of teachers
(iii) Develop and distribute bilingual public service messages on environmental issues

Improved Understanding of the Border Area Environment
- Develop an inventory of legal and illegal waste disposal sites, and project future capacity needs for legal disposal
- Determine the number, locations, and types of new solid waste disposal facilities needed in the border area
- Compile an inventory of shared water resources, assess future demand on those resources, and establish area-wide monitoring programs to define ground water and surface water quality
- Exchange information on the analysis, proper use, and control of pesticides in the border area
- Prepare a comparative risk assessment that guides future environmental protection efforts
- Prepare periodic reports on environmental quality in the border area

Also established in 1992 to advise the U.S. President and Congress on issues along the Border was the Good Neighbor Environmental Board, a 30-member board which includes representatives from the border states and communities, tribal governments, business and scholars. Mexico's counterpart is the Regional Advisory Council for Sustainable Development. Their efforts were instrumental in the creation of the Border Environment Cooperation Commission, and NADBank, pursuant to the second NAFTA side agreement, discussed in more detail in V below.

22. Maricarmen Eroles, *EPA Submits Formal Plan to Control Development On Both Sides of Border*, Tex & Southwest Envtl News, Nov. 1995. Current members of the Good Neighbor Environmental Board are: James Marson (Chair), Director, Texas Office, Environmental Defense Fund; Honorable Irene Aguirre, Mayor of Sunland Park, New Mexico; Tibaldo Canez, Director, U.S.-Mexico Border Affairs, Arizona Department of Environmental Quality; Rose Diaz, University of New Mexico, Zimmerman Library; John K. Flynn, Supervisor, Ventura County, California; Robert Hathaway, Executive Vice President, Fresh Produce Association of the Americas; Alison Hughes, University of Arizona College of Medicine; M. Lisa LaRocque, Director, Project Del Rio; David Merk, Vice President, Greenfield Environmental; Colleen Morton, Vice President, Institute of the Americas; Diana Natalicio, Ph.D., President, University of Texas at El Paso; Elsa R. Saxod, Director, Border Progress Foundation; Christine M. Sierra, Ph.D., Department of Political Science, University of New Mexico; David R. Smith, M.D., Commissioner, Texas Department of Health; Bill Summers, President, Rio Grande Valley Chamber of Commerce; J. Jorge Verduzco, Executive Vice President, International Bank of Commerce; Kenneth Williams, Legislative Council Member, Tohono O'Odham Nation; Judith Burrell, Special Assistant to the Secretary, U.S. Department of Transportation; Mary Chaves, Director, Office of International Debt Policy, U.S. Department of the Treasury; Stephen R. Gibson, Coordinator for U.S.-Mexico Border Affairs, Office of Mexican Affairs, U.S. Department of State; Honorable Charles Meissner, Assistant Secretary for International Economic Policy, U.S. Department of Commerce; Jane Saginaw, Regional Administrator, U.S. Environmental Protection Agency; Honorable Michael Stegman, Assistant Secretary for Policy Development and Research, U.S. Department of Housing and Urban Development; Rosendo Trevino III, State Conservationist, Natural Resources Conservation Service, U.S. Department of Agriculture; Linda A. Vogel, Director, Office of International Health, U.S. Department of Health and Human Services; Brooks Yeager, Director, Office of Policy Analysis, Office of the Secretary, U.S. Department of the Interior; Mr. John Bernal, U.S. Commissioner, International Boundary and Water Commission.
IV. NAFTA AND THE ENVIRONMENT

A. NAFTA Environmental Commitments.

Both the United States and Mexico have committed to reducing or avoiding any potential adverse environmental impacts of NAFTA (Canada may be less so as discussed in paragraph 2a below). NAFTA's preamble does specifically identify as two fundamental objectives of the agreement: (i) environmental protection and enforcement, and (ii) economic development in an environmentally sound manner. The Chapter on Investment also permits each country to impose stringent environmental requirements to ensure that investment activity in its territory is undertaken in an environmentally sensitive manner, so long as the countries do not discriminate between domestic and foreign investors. Furthermore, the NAFTA explicitly discourages a government from lowering its own environmental standards for the purpose of encouraging investment. Consultations between the governments would follow if such relaxation occurs, with the purpose of ending the practice.

In addition, the chapters in NAFTA that refer to Sanitary and Phytosanitary Standards, and to Standard Related Matters, explicitly recognize the right of governments, including state and local governments, to adopt, maintain or apply measures more stringent than international standards, as long as they do not result in arbitrary or unjustifiable discrimination against goods or services of another country, or constitute a disguised restriction on trade between countries. Those chapters also call on the three countries to work jointly on enhancing the level of environmental protection (which proponents argue will prohibit the downward harmonization of standards).23 It should be noted, however, that NAFTA allows one country to have a higher environmental standard than the others, only if the law or regulation is based on scientific data. At risk, therefore, in the United States, are many statutes, particularly at the state level, that may require higher standards than what science might prove "absolutely". If a NAFTA dispute resolution panel rules that a U.S. (or other party's) environmental statute or regulation is a technical trade barrier, the U.S. (or other party) has the choice of repealing the law or paying compensation to the parties whose interests have been injured by the law.

NAFTA is also the first trade agreement to give precedence to the trade obligations contained in certain international environmental agreements. Listed international agreements in the NAFTA text include the Montreal Protocol on Substances that Deplete the Ozone Layer, the Convention on International Trade in Endangered Species, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the La Paz Agreement. The result is that these and other related bilateral agreements between the three countries could be fully implemented without creating any conflicts with NAFTA.

Supporters of NAFTA argue that it will generate the economic growth and financial resources necessary to insure enhanced environmental protection and enforcement in Mexico. They also point to NAFTA provisions requiring that investment activity be undertaken in a manner sensitive to environmental concerns, and provisions allowing a party to challenge (by arbitration) another party's activities in establishing, acquiring, expanding or retaining a business if such activity violates this provision.

Opponents of NAFTA argue that its two obligations, (i) requiring each nation to eliminate most tariffs on products, and, (ii) to treat products from the other two countries no differently from domestic products, subject state and federal environmental laws to scrutiny and possible impotence when those laws directly or indirectly hamper trade. They argue that because NAFTA does not harmonize the three countries' regulations through the establishment of meaningful and enforceable standards, not only are the laws in jeopardy, but they will be reduced to the lowest standard through the de facto harmonization that will be a by-product of NAFTA.


On May 13, 1993, President Clinton issued an executive order on the implementation of The North American Agreement on Environmental Cooperation (the "Side Agreement"), stating "[E]ffective implementation of the Environmental Cooperation Agreement is essential to the realization of the environmental objectives of NAFTA and the NAFTA implementation Act and promotes cooperation on trade and environmental issues between the United States, Canada, and Mexico".14

The Side Agreement supplements the environmental provisions and objectives of NAFTA, establishing a framework for Canada, U.S. and Mexico cooperation on environmental matters, and committing the countries to effective enforcement of their environmental laws. The agreement also emphasizes the importance of public participation in environmental protection, and expresses a commitment to support and build on international environmental agreements and on existing institutions.25 The Side Agreement has 51 articles and is divided into 7 parts. Highlights of the Side Agreement are discussed below.

1. Preamble and Objectives.

The preamble of the Side Agreement recognizes a tradition of cooperation on the environment and expresses a commitment to support and build on international environmental agreements and on existing institutions. The objectives of the Side Agreement include, (i) the promotion of sustainable development through cooperation and mutually supportive environmental and economic policies, (ii) the effective enforcement of and compliance with domestic environmental laws, and, (iii) the protection and improvement of the environment in each party's country.

Because Canada lacks institutional authority at the federal level, provisions of the Side Agreement are not binding on a Canadian province unless they voluntarily sign the Side Agreement. A number of provinces are vehemently opposed to the Side Agreement and are not expected to sign. A province that does not sign is not bound by the Side Agreement.

24. President Issues Executive Order On Development Bank, Environment Panel, Int'l Env. Daily (BNA), May 17, 1994. © The Bureau of National Affairs, Inc., 1994. Among other matters, this Executive Order provides that the United States, to the greatest extent practicable, shall support public disclosure of all non-confidential and non-proprietary elements of reports prepared by the Environmental Commissions established under the Side Agreement. The order states that the EPA Administrator will develop procedures to inform the public of arbitral proceedings and other activities under the Side Agreement.
25. Supra note 23.
The United States would in such cases be without recourse if the province failed to enforce or chose to under-enforce its laws. Further, because of Canadian arguments, the management and exploitation of natural resources were excluded from the Side Agreements to save the Canadian timber industry, thereby, many argue, disturbing the even playing field NAFTA was designed to create.

2. Obligations.

The Side Agreement requires that each party, (i) insure that its laws provide for high levels of environmental protection, (ii) that it strive to continue to improve those laws, and, (iii) that it effectively enforce its environmental laws through appropriate government actions. More specifically, each party agrees to:

- report on the state of the environment;
- develop environmental emergency preparedness measures;
- promote environmental education, scientific research and technological development;
- assess, as appropriate, environmental impacts;
- promote the use of economic instruments for the efficient achievement of environmental goals;
- notify the other parties of a decision to ban or severely restrict a pesticide or chemical and consider banning the export to another party of toxic substances, the use of which are banned within its own territory;
- insure that procedures for enforcement of environmental laws are open, fair and equitable; and to
- insure public access to procedures for enforcement of environmental laws, including the right to request action for the enforcement of domestic environmental law, and to sue another person under that party's jurisdiction for damages.

The Side Agreement protects the rights of states and provinces to set high levels of protection, consistent with NAFTA. It does not empower one party's authority to undertake environmental law enforcement activities within the territory of another party.


NAFTA establishes a Commission for Environmental Cooperation ("CEC") which is currently the only entity charged with the responsibility of tracking NAFTA's impact on the environment. (See Figure 2) Its task is to monitor each nation's progress in adopting and enforcing laws to protect human health, natural resources and the environment, while promoting and establishing a process for long-term environmental enforcement. This task will include investigation of allegations that a NAFTA country failed to enforce its environmental laws, and the promotion of cooperation in the ecological field. Although the CEC will issue reports advocating ways to guard against NAFTA-related environmental degradation in an effort to insure that no country gets an unfair advantage through weak enforcement, the CEC lacks any true enforcement authority.

Concerns and differences relating to environmental or natural resource issues or obligations may be subject to consultations between the countries who would first exhaust
any possible avenue of resolution, through cooperation and consultations, before resorting to the arbitral provisions of the agreement. This is a particularly important objective of the CEC, which is intended to serve not as a supranational authority, but as a consultative body that would advise the NAFTA Trade Commission on disputes on matters related to the environment. The CEC is also given the responsibility to act on issues subject to dispute settlement panels and possible sanctions when the countries fail to effectively enforce their environmental laws.26

The CEC is comprised of three parts, a Governing Council (the “Council”) made up of the environmental “ministers” of each country, a Secretariat headed by an executive director, and The Joint Advisory Committee, a public advisory committee. Each country may additionally appoint an optional National Advisory Committee to provide advice to that member country on the implementation and further elaborations of NAFTA and the Side Agreement.27 The Council, which is the governing body of the CEC and is located in Montreal, Canada, has several functions, including the following:

26. Id.
27. The United States has appointed a 15-member Board comprised of representatives from industry, non-profit organizations and academia. Mary Kelly, Executive Director of the Texas Center for Policy Studies, was named to chair this commission. Other members are: Lorraine Bodi, co-director of American Rivers, Northwest Region; Quincalee Brown, Executive Director of the Water Environment Federation; Veronica Callaghan, Vice President of Kasco Ventures Inc. of El Paso, Texas; Raul Deju, President of Chemical Waste Management’s western regional services; Helen Ingram, Director of the Udall Center for Studies in Public Policy at the University of Arizona; Stewart Hudson, senior legislative representative for the National Wildlife Federation’s international programs; J. Michael McGloshkey, Chairman of the Sierra Club; Dennis Phelan, Vice President of the Pacific Seafood Processors Association; Ann Pizzorusso, Director of Environmental Affairs at Phillips Electronics North America Corp.; David Schorr, Senior Program Officer for trade and environment at the World Wildlife Federation; David Simon, Southwest Regional Director of the National Parks and Conservation Association; Steven Viederman, President of the Jessie Smith Noyes Foundation; Margaret Wells-Diaz, a physician who specializes in U.S./Mexico border health issues; and Durwood Zaelke, President of the Center for International Environmental Law. A Governmental Advisory Committee composed of 12 public officials representing state, local, tribal governments has also been appointed. Judith Espinosa, Secretary of the New Mexico Department of Environment, will chair the Governmental Committee. Other members are: Edmund Archuleta, General Manager of the El Paso Water Utility Public Service Board; Barbara Bamberger, Environmental Resources Manager for Chula Vista, California; Tim Douglas, Mayor of Bellingham, Washington; Billy Frank, Chairman of the Northwest Indian Fisheries Commission; Ann Glumac, Deputy Commissioner of the Minnesota Pollution Control Agency; John Nordquist, Mayor of Milwaukee, Wisconsin; Dale Phillips, Chairman of the Cocopah Indian Tribe; Daniel Reyna, Director of the Border Health Office in the New Mexico Department of Health; Susan Reiff, Policy Council Director for the Texas governor; and Robert Varney, Commissioner of the New Hampshire Department of Environmental Services. Members’ terms are for one year each, with the possibility of reappointment. Carlos Rojas, former Secretary of SEDESOL (now SEMARNAP), indicated that Mexico is also establishing a National Advisory Committee to advise the five Mexican members of the Joint Advisory Committee.
Overseas implementation of the Environmental Side Agreement;
Cooperating with the Free Trade Commission to achieve the environmental goals and objectives of NAFTA through contributing to the prevention or resolution of environment-related trade disputes and maintaining a list of experts who can provide information or technical advice to NAFTA institutions;
Promoting the exchange of information on criteria and methodologies used in establishing domestic environmental standards;
Developing recommendations on greater compatibility of environmental standards; and
Providing recommendations on a variety of environmental issues including: pollution prevention techniques and strategies, the environmental implications of goods throughout their life-cycles, transboundary and border environmental issues, protection of endangered or threatened species and approaches to compliance and enforcement.

The Joint Public Advisory Committee is composed of 15 members, with each party appointing 5 of the members. The U.S. members appointed by President Clinton on July 25, 1994 are Peter Berle,28 Dan Morales,29 Jean Richardson,30 John Wirth,31 and Jonathan Plaut.32 The Committee is to provide technical, scientific or other information to the Secretariat and make non-binding recommendations to the Council. It operates according to rules and procedures established by the Council.

The Secretariat, composed of an Executive Director, Mr. Victor Lachtinger Wiseman of Mexico, and professional staff, is located in Montreal, Canada. Its function is to discharge Council decisions, policies and procedures. The Secretariat also “must provide technical, administrative, and operational support” to the Council, and provide reports. Importantly, however, the Secretariat may only initiate reports on topics that fall within the scope of an annual Council-approved program. Two-thirds of the parties can block reports on topics falling outside the scope of the approved program, although parties who are the subject of the reports can not block them. The Secretariat has no authority to issue reports on failures to enforce environmental laws. To ensure independence, the agreement expressly prohibits the Executive Director and staff from seeking or receiving instructions from any government or authority other than the Council.

28. Peter Berle is President and CEO of the Audubon Society, New York, New York. He is a lawyer and has served in the New York State Assembly where he was the ranking member of the Committee on Conservation.
29. Dan Morales is Attorney General for the State of Texas and was active in NAFTA implementation and language discussions.
30. Jean Richardson is a Professor of Environmental Studies and National Resources of the University of Vermont and is Director of the Environmental Programs in Communities Project funded by the Kellogg Foundation.
31. John Wirth is a president of the North American Institute, a tri-national public affairs group headquartered in Santa Fe, New Mexico.
32. Jonathan Plaut is Chairman of the United States Council of International Business Environment Committee and Director of Environmental Quality for Allied Signal, Inc.
33. Victor Lachtinger Wiseman helped organize and represented Mexico at the 1992 Rio Summit and is a former director general of the Mexican office of the environmental consulting firm ICF Kaiser.
4. Dispute Resolution.

The Side Agreement establishes a dispute resolution process to address allegations of a "persistent pattern of failure" by one party to effectively enforce its environmental laws. The Secretariat may act on submissions from the citizens of all three countries or from one country party by developing fact-finding reports. The Secretariat may, but is not required to, consider submissions from non-governmental organizations ("NGOs") or persons asserting that a party is failing to effectively enforce its environmental laws. Six criteria must be satisfied before the Secretariat may consider such a submission: (i) it must be in writing; (ii) clearly identify the person or organization making the submission; (iii) provide information sufficient to allow the Secretariat's review; (iv) be aimed at promoting enforcement rather than at harassing industry; (v) indicate that the matter has been communicated, in writing, to relevant authorities of the party and indicate the party's response, if any; and, (vi) be filed by a person or organization residing or established in the territory of a member party.

Even if an NGO or citizen submission satisfies these criteria, it will be excluded from further review if the Secretariat determines that the matter is the subject of a pending judicial or administrative proceeding (this might simply mean that the member party government is seeking voluntary compliance). In developing a factual record, the Secretariat must consider information furnished by a member party and may, but need not consider, among other things, public submissions from NGOs or individuals and information developed by independent experts. These reports will be made public only if two of the three parties concur. The Agreement then provides for a consultative process for the Council to discuss issues. In the event that the consultations fail to resolve the matter, the matter may be referred to a dispute settlement panel. Any country may request an arbitration panel. Panelists will generally be chosen from a previously agreed roster of environmental specialists and other experts.

Monetary sanctions can be assessed against parties failing to effectively and consistently enforce their environmental laws if the non-enforcement is related to trade or cooperation among the parties. Monetary assessments for the first year after the Agreement became effective would be no greater than $20 million. Thereafter, monetary enforcement assessments cannot exceed .007 percent of the total trade in goods between the parties during the most recent year for which the data is available. Canada's failure to pay a monetary assessment is enforceable only by Canadian court order, while trade sanctions can be imposed against the U.S. or Mexico upon their failure to pay assessments, i.e., NAFTA benefits can be suspended or transferred and returned to pre-NAFTA levels. In determining the amount of an assessment, an arbitral panel must consider several factors, including:

- The pervasiveness and duration of the party's persistent pattern of failing to effectively enforce its environmental law;
- The level of enforcement that could be reasonably expected of a party, given its resource constraints;

The reasons, if any, provided by the party for not fully implementing any plan of action intended to remedy a party's failure to enforce effectively its environmental law;

- Efforts made by the party to begin remedying the pattern of non-enforcement; and other relevant factors.

The Council can direct that funds be expended to improve or enhance the environment or the environmental law enforcement of the party found in violation of the Side Agreement.

V. NAFTA and the Border.


The United States and Mexico have agreed as "part" of the NAFTA to share the cost of cleaning up the shared border. A second side agreement, the "Agreement Between the Government of the United Mexican States and the Government of the United States of America for the Establishment of a Border Environment Cooperation Commission and the North American Development Bank," signed November, 1993, just weeks before the NAFTA vote in Congress, went into effect January 1, 1994. (See Figures 3, 4 and 5). Although the United States had said that cleaning up the area along the 2,000-mile border could cost between $7 billion to $10 billion over the next ten years, environmental groups projected border needs at a somewhat higher figure of between $20 billion to $30 billion. Yet, in Washington's haste to pass NAFTA, no concrete answers were provided to two critical questions: how much money will actually be needed for the various projects and where will the money come from?

The Border Environment Cooperation Commission ("BECC") and the North American Development Bank ("NADBank") were created exclusively to answer these questions and to address environmental infrastructure concerns impacting the region within 100 kilometers (65 miles) on either side of the U.S./Mexico border. The BECC and NADBank are complementary institutions. The BECC was created to assist border states and local communities in coordinating, designing and facilitating border infrastructure projects, while the NADBank is to act as a catalyst for private and public capital investment for projects certified for funding by the BECC.

B. The BECC.

The stated purpose of BECC is to help preserve, protect and enhance the environment of the border region in order to advance the well-being of the people of the United States and Mexico and achieve sustainable development. In carrying out its purpose, BECC will:

35. Notice of this Agreement was published in Mexico's Federal Official Gazette on December 27, 1993.

• Assist states and localities and other public entities and private investors in:
  (i) coordinating, preparing, developing, implementing, and overseeing environmental
      infrastructure projects;
  (ii) assisting with the planning, design, construction management, operation and
       maintenance of infrastructure projects;
  (iii) providing technical assistance to applicants in the development of proposals,
        project feasibility planning, engineering design and environmental assessments;
  (iv) assessing the technical and financial feasibility of projects;
  (v) evaluating social, environmental and economic benefits of projects;
  (vi) organizing, developing and arranging public and private financing for projects;
  (vii) assisting with the development of a comprehensive public outreach and partici-
       pation plan; and

• Certify projects for financing by the NADBank (discussed in more detail below) or
  other sources.37

The ten-member BECC, located in Ciudad Juarez, Chihuahua, Mexico, across the bor-
der from El Paso, Texas is composed of five members from each country. The U.S. members
are: Carol Browner, the Administrator of the EPA; John Bernal, U.S. Commissioner, IBWC;
Ygnacio Garza, Chair of the Texas State Parks and Wildlife Commission; Peter Silva, Deputy
Director of the City of San Diego, California, Division of Water Utilities; and Lynda Taylor,
the Chair of the Albuquerque, New Mexico, Air Quality Control Board, and the Director of
the Radiation, Toxics and Health Project at the Southwest Research and Information
Center.38 The Mexican members are: Arturo Herrera Solis, Commissioner, Commission
Interracional de Limites y Aguas; Julia Carabias, Secretaria de Medio Ambiente, Recursos
Naturales y Pesca or Secretariat of the Environment, Natural Resources and Fisheries
(“SEMARNAP”); Dr. Jorge Bustamante (BECC Chairman), President, Colegio de la
Frontera Norte Tijuana, Baja California; Horacio Garza Garza, Mayor, Nuevo Laredo,
Tamaulipas; and Dr. Rogelio Montemayor Seguy, Governor, State of Coahuila.39

The BECC also has an 18-seat Advisory Council whose members are evenly divided
between the two countries. The U.S. members include six state and municipal representa-
tives, plus three members from the public at large. They are: Thomas Soto, president and
founder of PS Enterprises, an environmental affairs and public relations firm in southern
California; Kathleen Marr, former Secretary of the New Mexico Department of Finance
and Administration; Daniel Eckstrom, Pima County, Arizona, Supervisor, and a manage-
ment consultant; Sandra Ferniza, Executive Director of the Arizona Hispanic Chamber of

37. Id.
38. California, New Mexico, Texas Officials Named by Clinton to Border Commission, 11 Int’l Trade
(S. 2231) to authorize funding for the BECC. Introduced by Sen. Jeff Bingaman (D-NM) June
23, 1994, the measure would authorize $100 million to the Environmental Protection Agency.
EPA in turn could use the money to provide financial or other assistance to the BECC, the
IBWC, any other appropriate federal agency, state or local government, or Mexico. The U.S. EPA
has located offices in El Paso, Texas and San Diego, California to monitor the Border activities.
39. FACT SHEET, Border Environment Corporation Commission.
Commerce; Travis Johnson, a partner in the law firm of Johnson & Bowen in El Paso, Texas; Rick Reyes, County Commissioner, Laredo, Texas; and Cynthia Miscikowski, Executive Director of the Skirball Cultural Center in Los Angeles and a former aide to a member of the Los Angeles City Council. The Mexican representatives are: Ing. Refugio A. del Campo, Universidad Autonoma Agracia Antonio Narro, Saltillo, Coahuila; Antropologa Laura Durazo Silvan, Tijuana, Baja California; Dr. Rene Franco Barreno, Gerente General, Consultorio Ambiental Ciudad Juarez, Chihuahua; Ing. Vernon Perez Rubio, Secretary of Public Works, Hermosillo, Sonora; Dra. Elida Rizzo Garza, Monterrey, Nuevo Leon; Oscar Romo, Colegio de la Frontera Norte, Tijuana, Baja California; Arq. Arturo Sepulveda Lerma, Subsecretario de Desarrollo Urbano y Ecologico, Gobierno del Estado de Tamaulipas, Ciudad Victoria, Tamaulipas.

C. The NADBank.

The NADBank, located in San Antonio, Texas, was created in October 1993, to help finance environmental infrastructure projects, and community adjustment and investment programs certified by the BECC and related to the NAFTA Side Agreements. The U.S. Department of Treasury and Mexico’s Ministry of Finance act as the lead government agencies for NADBank from their respective governments. The NADBank is governed by a six person Board of Directors, comprised of 3 representatives from each country. The current Directors are: Robert Rubin, U.S. Secretary of Treasury; Warren Christopher, U.S. Secretary of State; Carol Browner, U.S. EPA Administrator; Guillermo Ortiz, Mexican Secretario de Hacienda; Herminio Blanco, Mexican Secretario de Comercio; and Julia Carabias, Secretaria of SEMARNAP.

NADBank acts as the lead bank, akin to an investment bank, organizing the financial team of players. Its lending policies are designed to assist in financing border environmental infrastructure projects as a compliment to private sector financial sources. Although it has the authority to provide financing to any public or private entity through long-term loans and guaranties to encourage private financing and risk sharing, it does not provide grants or equity funding for environmental infrastructure projects.

When NADBank is fully capitalized, it will have $450 million in paid-in capital and $2.55 billion in callable capital. The U.S. and Mexico have agreed to contribute equal amounts consisting of $225 million in paid-in capital and $1.275 billion in callable capital, totaling $3.0 billion. The paid-in capital and callable capital will be subscribed over the

40. Id.
41. Id.
42. In an executive order issued May 13, 1994 and released May 16, 1994, President Clinton established a Community Adjustment and Investment Program Finance Committee to assist in carrying out the community adjustment and investment program pursuant to NAFTA Implementation Act Section 543(a)(3). This committee will include representatives from the Departments of Agriculture, Treasury, Housing and Urban Development and the Small Business Administration. The Treasury representative will chair the committee “President Issues Executive Order on Development Bank, Environment Panel,” Int’l Env. Daily, (BNA), May 17, 1994. ©The Bureau of National Affairs, Inc., 1994.
44. Id.
banks first four years. The bank currently has $112.50 million in paid-in capital and $750 million in callable capital. FY '96 appropriations from countries were to increase this amount to a total of $225 million and $1.275 million respectively. The bank is expected to be able to leverage this capital two to three times via the use of partial guarantees, private sector participation and financing by other public entities. Facilitation of approximately $6.9 billion in total investments over the next ten years is expected.  

Ninety percent of NADBank's total funds will be dedicated to supporting infrastructure projects that have been certified by the BECC. The remaining ten percent of NADBank's paid-in capital will be used to finance separate domestic community adjustment and investment programs in support of the purposes of NAFTA. This ten percent is not limited to border area projects. Mexico will channel these resources through SEMARNAP's Solidarity Program, and by providing credit loans to small businesses through NAFINSA, Mexico's largest state development bank. The U.S. domestic window will operate through existing federal credit programs such as the Small Business Administration loan guaranty programs and the Rural Business and Cooperative Development Services Business and Industry Program. Each of these agencies will administer the loans on behalf of the NADBank, and borrowers will be required to meet both the particular agency's lending criteria and additional criteria reflecting the purposes and goals of NADBank's NAFTA responsibilities to assist individuals and businesses in making adjustments to the post-NAFTA economy. The U.S. Community Adjustment Division office, the NADBank headquarters for U.S. Economic Development, has been located in Los Angeles, California.

VI. The United States/Mexico Border Environment Post-NAFTA
A. The Impact of the Side Agreement and CEC.
  a. The first CEC meeting.

  The CEC Council held its first meeting on July 26, 1994, at the U.S. Department of State in Washington, D.C. The meeting, which began with a 90-minute public session, was intended to lay out the initial priorities of the CEC, set funding levels for the organization and announce the Joint Advisory Committee members. The Council members approved a 1994 budget and heard from concerned public citizens regarding issues the CEC should be addressing.

45. Id. In 1994, the World Bank also announced $1.8 billion in new loans for environmental projects which the Mexican government said it would match with $2.2 billion of its own money. The World Bank has said that it would make the funds available over a three-year period in the form of new loans to be approved by the Bank's executive directors. Part of these combined funds were to go to the border region.

46. Id.

At the meeting, groups asked that the CEC address problems with electricity generation on the Mexico/Texas border, especially those stemming from a coal-fired plant, Carbon II, near Big Bend National Park along the southern border of Texas. Recent models show that visibility will decrease by 60 percent in the national park, as a result of the 200,000 pounds of sulfur dioxide emitted annually from the plant and its counterpart, Carbon I.4 (More fully discussed in VI.C below.)

A trade analyst from Friends of the Earth, Andrea Durbin, urged the commission to open offices in all three countries to facilitate accessibility to the CEC for citizens and non-governmental organizations. The group also suggested that the CEC orchestrate an exchange of environmental scientists and officials to share information and provide human resources when needed, especially in emergency situations. The Natural Resources Defense Council recommended that the CEC focus on protecting primary forests and biological diversity, energy policy, and hazardous waste management. For instance, they said, the CEC should support technology transfer efforts aimed at improving pollution prevention capabilities and examine laws in all three countries and make recommendations for improving protection through tougher enforcement.

Actions the CEC could take include an agreement on “community-right-to-know” procedures in all three countries, an evaluation of the environmental impacts of trade and fiscal policies (including economic instruments) on agriculture, natural resources (including forests), and energy sectors, support for lead poison abatement and a phaseout of the use of the grain fumigant methyl bromide in North America.

The Center of International Law and the Natural Resources Defense Council also urged the CEC to achieve a $15 million total budget for operations in 1995. The CEC reported that it approved the 1994 budget of $2.1 million, and it began discussions of a minimum budget of $9 million for 1995.

Sheila Copps, Deputy Prime Minister of Canada and Minister of the Environment, pledged Canada’s commitment to environmental cooperation, and U.S. Environmental Protection Agency Administrator Carol Browner committed U.S. support. Meanwhile, Victor Lachtinger Wiseman, Executive Director of the Secretariat, stated in a meeting on August 15, 1994, that The General Law of Mexico “is good and complete” and argued that Mexico “has done in five years what it took ten to fifteen years for Canada and the United States to achieve.” Comments such as this from the head of the implementing arm of the CEC do not bode well for an unbiased implementation of the Side Agreement.

2. The New River -- A NAFTA First Test.

On December 16, 1993, just eight days after President Clinton signed NAFTA into law, Imperial County, California filed with the EPA a petition for rule-making pursuant to Section 21 of the Toxic Substances Control Act, 15 U.S.C. § 2620.49 The Petition, among other things, asked the EPA to use NAFTA’s new authority to begin discussions with Mexican officials to find a permanent solution to the New River problems.

48. Reported by Jan Gilbreath, coordinator of the Mexican Studies Program, at the Lyndon B. Johnson School of Public Affairs at the University of Texas.
The New River, which has been called "the most contaminated river in the world" begins ten miles south of the U.S. border. This 75-mile river which begins south of Mexicali, Mexico carries, among other things, carcinogenic wastes, pesticides, solvents and raw wastes to the United States through Calexico, California and into the Salton Sea, a popular swimming and fishing resort near Palm Springs in Imperial County, California.

Imperial County had hoped that their request to the EPA would lead to NAFTA's formal dispute resolution process if the talks between Mexico and the United States broke down. The formal dispute resolution process could only be invoked, however, if Mexico had laws governing the types of pollution flowing into the New River in Mexico, and the United States could prove there had been a persistent pattern by the Mexican government in failing to enforce these laws since January 1, 1994 (the effective date of the NAFTA). In such a circumstance, Mexico could face monetary assessments or trade sanctions if no solution was found. Mexico could, however, defend the action on the basis that its failure to enforce these laws came from a commitment of its limited resources to more pressing problems, i.e., birth defects at the Matamoros border.

Responding to Imperial County's NAFTA request, EPA stated that the provisions of the Side Agreement, under which the U.S. government could potentially take action to improve the New River water quality, were of limited utility because the NAFTA institutions were not yet fully established. In addition, the EPA stated that it would "be difficult if not impossible" to establish and meet the Side Agreement requirements of a "persistent pattern of nonenforcement" of environment law by Mexico because the allegations would be limited to events since January 1, 1994. EPA suggested, however, that Imperial County might have a remedy under Article 6 of the Side Agreement under which they could request that Mexico investigate possible violations of Mexican environmental law that may be resulting in contamination of the New River. In such case, Mexico, as the requested party, would be required to give Imperial County's request "due consideration in accordance with law."

Imperial County also requested in its petition that EPA, by rule, request the manufacturers and processors of the wastes on the Mexican side of the border to pay for and conduct testing and an investigation to determine whether the substances being dumped into the New River presented an unreasonable risk of injury to health and human environment. For EPA to take this action the County had to prove that the maquiladoras dumping into the New River were importing "dangerous chemicals" into the United States as the river crossed the border. The EPA denied the petition on March 16, 1994, but acknowledged the seriousness of the New River situation. The EPA instead agreed to fund testing of the river on the U.S. side of the border through the California Regional Water Quality Control Board. As for the Mexican side of the border, EPA stressed that it had already begun information gathering measures through correspondence with SEMARNAP and the Mexican section of the IBWC (through the U.S. section) requesting information on pollution entering the New River. EPA also proposed contacting U.S. parent companies of maquiladoras operating in Mexicali, upon the approval of the Mexican government, and noted additional actions it was taking pursuant to the 1983 La Paz bi-national work group structure and the BECC and NADBank. Subpoenas were issued to the U.S. parent companies requesting information on discharges from their Mexican operations. Challenges to the validity of these subpoenas and EPA's extraterritorial authority to issue them were filed by most U.S. Companies.

3. First Complaint Filings.

Silva Reservoir Complaint. The CEC received its first official complaint under the NAFTA Side Agreement on June 7, 1995.\(^{51}\) The complaint, filed by the New York City-based National Audubon Society and two Mexican ecology groups — the Mexican Environmental Law Center and the Group of One Hundred — filed a petition requesting an investigation into the deaths in December 1994, of over 40,000 migratory and native birds at the Silva Reservoir, an artificial irrigation basin in northeast Mexico, 195 miles northwest of Mexico City. The petition to investigate the deaths of ducks and other birds was filed under Article 13 of the Side Agreement, which allows the CEC to prepare a report on any environmental issue which meets the criteria established by the CEC. Article 13 precludes sanctions to the government involved.

A 15-member scientific panel including Canadian, American and Mexican scientists and environmental experts visited the site and conducted a scientific investigation into the matter.\(^{52}\) On September 28, 1995, they issued their report identifying human sewage as the cause of the deaths of the 40,000 migratory birds. The scientists found that from November 1994 through January 1995, the waters of the Silva reservoir contained 100 percent raw sewage. They recommended that Mexico spend $50 million to build water treatment plants for the city of Leon, which lies upstream of the Silva Reservoir. Following publication of the report, it was sent to the NAFTA member governments for comment and other action.\(^{53}\)

U.S. Environmental Law Implementation Complaint. The second petition was filed on July 5, 1995, by four United States environmental groups — the Biodiversity Legal Foundation, Forest Guardians, Greater Gila Biodiversity Project, and the Southwest Center for Biological Diversity — and one Mexican environmental group, Consejo Asesor Sierra Madre. The petition requested an investigation of the United States’ failure, as a result of a 1995 appropriations law, to enforce its Endangered Species Act (“ESA”). Their allegations involved a fiscal 1995 supplemental appropriation for the U.S. military (PL 104-6) signed into law by President Clinton on April 10, 1995, which included a provision added by Senator Kay Bailey Hutchinson (R-Texas) that suspended listings of threatened and endangered species and designations of critical habitat under the Endangered Species Act. The petition was filed under Articles 14 and 15 of the Side Agreement which address a member country’s failure to enforce domestic environmental laws.\(^{54}\)

The CEC rejected the petition on the basis that Articles 14 and 15 of the Side Agreement do not address operation of new laws enacted by elected officials in NAFTA countries. The opinion letter written by the CEC Secretariat Executive Director, Victor Lachtinger Wiseman, stated that:

"[T]he Department of Interior had not ‘failed’ to discharge duty to enforce certain provisions of the ESA since the department is legally precluded from taking such action and the alleged failure to enforce environmental laws results from competing legislative mandates and not from other action or inaction taken by agencies or officials. Articles 14 and 15 primarily envisage administrative breakdowns (failures) resulting from acts or omissions of an agency or official charged with implementing environmental laws. Enactment of legislation which specifically alters the operation of pre-existing environmental law in essence becomes part of the greater body of environmental laws and statutes on the books. This is true even if pre-existing law is not amended or rescinded and the new legislation is limited in time."

Article 3 of the Side Agreement does acknowledge that each treaty partner has the right to modify its environmental laws and regulations.

**Second U.S. Environmental Law Implementation Complaint.** A second petition involving U.S. environmental law is currently pending before the CEC. On August 30, 1995, the Sierra Club Legal Defense Fund filed a petition on behalf of twenty environmental groups pursuant to Article 14 of the Side Agreement. The Petition alleges that a rider in the fiscal 1995 rescissions package (PL 104-49) that increases the amount of logging in national forests, violates U.S. environmental laws. The rider allowed for salvage “logging of sick or diseased trees and timber cutting old growth forests.”

The CEC's previous opinion letter involving the Endangered Species Act petition filing may have implications for the Sierra Legal Defense Fund petition pending before the CEC. An attorney for the Sierra Club Legal Defense Fund argues, however, that unlike the Hutchinson amendment in the prior case, the logging rider leaves existing environmental laws intact but specifically precludes their enforcement.

4. **Cross-Boundary Pollution Impact Assessment.**

The Side Agreement requires that by the end of 1996, the CEC establish procedures for assessment of trans-boundary environmental impacts. Such a cross-border environmental impact mechanism is under development by the three member countries. In October 1995, the top environmental officials of the three countries drew up “over-arching principles” for guiding the development of trans-boundary impact assessments. One such principle is “good neighborliness” defined as the “willingness to cooperate with neighboring states to seek to inform an affected state of relevant data and a willingness to take appropriate steps to address the legitimate concerns of those potentially impacted by the activities in another state.” Other principles call for cost-effectiveness and efficiency in the

55. *Id.*
56. *Id.*
57. *Id.*
process, public participation, and building on or complementing successful procedures or mechanisms already in place at federal or at state, provincial or local levels. According to the CEC office, states and provinces within the NAFTA member countries are already sharing information about potential environmental impacts. British Colombia and Washington State in particular have been cited as an example.\textsuperscript{58}

5. \textit{The Future Impact of the Side Agreement.}

Although the Side Agreement is an unprecedented attempt to marry international trade and the environment, it is still too early to determine whether the Side Agreement will achieve its stated goals. This will in large part depend on how the CEC organizes itself, the leadership assumed by the individual representatives to the CEC, what rules and regulations are developed to guide its proceedings and the degree of flexibility with which the Side Agreement is implemented. Interested parties should seize opportunities to insure the implementation of the NAFTA and the Side Agreement in the spirit with which they were created. It is incumbent on all of us to see that trade becomes the driver for sustainable development and does not endanger the high environmental standards in the United States. How we treat our natural world reveals much about our cultural values and the effectiveness of our social institutions.

B. The Impact of the BECC and NADBank.

1. \textit{Management.}

While the BECC and NADBank were slow to get staffed and started, by April 1995, Boards of Directors and management of the two institutions were appointed and hired. Roger Frauenfelder, a Registered Professional Civil Engineer and a Retired Captain with the Navy Civil Engineer Corps, was appointed as the General Manager for the BECC. Frauenfelder previously served as General Manager of the San Diego Area Wastewater Management District, Deputy City Manager for the City of San Diego and Commanding Officer of the Navy Public Works Center in San Diego, among other positions. His Mexican counterpart, Louis Dominguez, the BECC Deputy General Manager (the person in charge of preparations of the budget for BECC), was also appointed. Dominguez was previously Head of the Urban Finance Department of the Special Development Ministry in Mexico and General Deputy Director of the National Water Commission in Charge of Planning and Finance. He has also held positions on the Board of Directors of Pemex and the Federal Electricity Commission.\textsuperscript{59}

NADBank also appointed its Managing Director and Deputy Managing Director. Managing Director Alfredo Phillips Olmedo was born in the border city of Matamoros, Tamaulipas. He has previously held several positions with the Mexican government, including, Director of the Institute of the National Housing Fund for Workers. He also


\textsuperscript{59.} Maricarmen Eroles, NADBank, BECC Face Environmental, Economic Strife, Texas & Southwest Environmental News, Apr. 1995.
previously held the positions of a Loan Officer with the Inter-American Development Bank in Washington, D.C., Director of the Bank of Mexico and Ambassador from Mexico to both Canada and Japan. NADBank appointed U.S. citizen Victor Miramontes, previously an investment banker, as Deputy Managing Director.

2. **BECC Guidelines for Submission and Criteria for Project Certification.**

BECC held several public hearings prior to June 1985, to debate criteria for certifying border clean-up projects, prior to preparation and issuance of the draft guidelines for project submission and criteria for project certification on June 1, 1995. After several subsequent public hearings on the draft guidelines, final Guidelines were issued on September 13, 1995. The Guidelines state that the BECC will be giving preference, in certifying projects or in providing technical assistance, to projects relating to:

- **Water pollution**
  - potable water treatment
  - water supply systems
  - water pollution prevention
  - projects to improve or restore the quality of water resources

- **Wastewater treatment**
  - wastewater collection systems
  - wastewater treatment plants
  - water reuse systems
  - systems for treatment and beneficial use of sludge

- **Municipal Solid Waste Management**
  - landfills
  - solid waste collection and disposal
  - reuse, recycling, or waste-to-energy projects

- **Related matters or projects**
  - projects which in some way directly or indirectly correspond to the three priority areas described above

The Guidelines provide submission procedures for technical assistance proposals and for project proposals. (See Figure 6) The guidelines also provide eight categories of fundamental criteria that must be satisfactorily met in order for projects to obtain BECC certification. The eight criteria relate to: (i) general project description; (ii) environment and human health; (iii) technical feasibility; (iv) economic and financial feasibility; (v) social issues; (vi) community participation; (vii) operation and maintenance; and (viii) sustainable development. Certification by BECC is not a guarantee that NADBank will approve

60. *Id.*
62. Supra note 36.
the project for financing; however, the BECC guidelines state that: once a project is certified, BECC will work with the project applicants to obtain financing for the project.63

BECC has indicated that the sustainable development criteria was drafted based on the internationally accepted guidelines approved at the June 1992 Earth Summit in Rio de Janeiro, Brazil. This sustainable development criteria requirement goes above and beyond that which is required in the environmental laws of either the United States or Mexico and includes such concepts as natural resources management, energy efficiency and wildlife preservation.

3. BECC Interim Procedures for Public Input on Project Applications.

True to its word, BECC has provided for a full and open hearing and discussion on procedural and technical and all other issues that have been pending before the BECC. In keeping with this policy, the BECC Board of Directors, on September 28, 1995, passed a resolution allowing the General Manager of BECC to implement interim procedures for public input on project applications. The interim procedures provide for public notice of (i) submission of projects to BECC for consideration, (ii) of projects pending for certification by the BECC, and (iii) of public meetings on proposed projects, and for public access to project information.

4. BECC Certified Projects.

The BECC has certified its first three projects, two in September involving a $17 million drinking water plant in Brawley, (Imperial County) California and a $14 million water treatment plant and technical and all other issues that have been pending before the BECC. In keeping with this policy, the BECC Board of Directors, on September 28, 1995, passed a resolution allowing the General Manager of BECC to implement interim procedures for public input on project applications. The interim procedures provide for public notice of (i) submission of projects to BECC for consideration, (ii) of projects pending for certification by the BECC, and (iii) of public meetings on proposed projects, and for public access to project information.

The BECC has certified its first three projects, two in September involving a $17 million drinking water plant in Brawley, (Imperial County) California and a $14 million water treatment plant in Ensenada, Baja California,64 and one in November, a $11.7 million wastewater treatment and reuse project for El Paso, Texas.65 The Brawley wastewater treatment plant will replace an existing plant which does not currently meet environmental standards or needed capacity. The Ensenada wastewater treatment plant project may never have been built without the help of the BECC and NADBank. Plans for the $8 million Ensenada plant were at an advance stage when the devaluation of the peso hit Mexico and doubled the estimated cost of the project. As a result, the state government was forced to postpone construction until other financial sources could be found. The solution came in the form of an application to BECC earlier this year. In this project, the government of Ensenada has committed to contributing at least 25% of the cost of the plant with the remainder to be loaned by NADBank pursuant to a ten year loan at a much lower rate than a regular bank would charge.66 The El Paso project consists of construction, in five phases, of infrastructure to provide reclaimed water for non-potable use in the northwest area of El Paso, thereby freeing existing groundwater resources to supply colonias in the upper valley region of El Paso County and reduce demand on a non-renewable aquifer resource.

63. Supra note 36.
5. **BECC Submitted Projects.**

Projects which may be considered for certification at the next BECC scheduled meeting on January 18, 1996, in Nogales/Nogales include:

- $40 million wastewater treatment plant in Ciudad Juarez, Chihuahua
- $1 million wastewater treatment plant for the FINSA Industrial Park, Matamoros, Tamaulipas
- $7.8 million tire recycling project plant in Mexicali, Baja California
- $42 million water distribution and treatment project in Nogales, Sonora
- $770,000 water supply and wastewater treatment plant in Naco, Sonora
- $118 million urban development and environmental improvement project (Phase III of the Tijuana River) in Rio Tijuana, Baja California
- $2.5 million upgrade of a wastewater treatment plant in Somerton, Arizona
- $2 million upgrade of water distribution and sewage collection systems in Douglas, Arizona.

The BECC has identified approximately 25 additional projects in near-completion stages that could be forwarded to the NADBank. Some of the projects received by the BECC include:

- A $600,000 project for preparing environmental infrastructure development, California-Baja California Border; Project Sponsor: Colegio de la Frontera Norte, San Diego State Univ.
- A $66 million project relating to Plaza Alamar, Tijuana, Baja California; Project Sponsor: Ayuntamiento de Tijuana
- An $800,000 project relating to ECOPARQUE, Tijuana, Baja California; Project Sponsor: Colegio de la Frontera Norte
- A $480 million recycled paper facility in Baja California; Project Sponsor: North-South Trade Investment Ltd.
- A $15 million project relating to Eje Histórica de Ensenada, Ensenada, Baja California; Project Sponsor: Ayuntamiento de Ensenada
- A $1.3 million municipal solid waste landfill project in Agua Prieta, Sonora; Project Sponsor: Ayuntamiento de Agua Prieta
- A $4.3 million drinking water, collection, and treatment project in Miguel Alemán, Tamaulipas; Project Sponsor: Ayuntamiento Miguel Alemán
- A $42 million drinking water supply and wastewater treatment project, Matamoros, Tamaulipas; Project Sponsor: Junta de Aguas y Drenaje de Matamoros
- A wastewater treatment plant project in Columbus, N.M./Palomas, Chihuahua; Project Sponsor: City of Columbus and Municipality of Ascension

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67. **BECC News**, October 1995, Border Environmental Cooperation Commission. The meeting will take place from 9:00 am - 2:00 pm at Club de Leones, Calle Navajoa y Hermosillo, Colonia Granjas, Nogales, Sonora.

68. *Id.*
More than 130 potential projects have been identified totaling greater than $5 billion. More than two thirds of these involve water supply or wastewater treatment or collection. The greatest number of identified potential projects on the U.S. side of the border are located in California (greater than one-half), with Texas following second in number. Chihuahua leads the Mexican states, followed closely by Tamaulipas and Baja, California.


When questioned regarding the impact of Mexico's financial crisis on border projects and NADBank financing, Victor Miramontes, NADBank Deputy Director, continues to state that Mexico's financial crisis poses little danger to the NADBank's future. "We are a long-term institution, and our strategy has to be long-term in nature. Our long-term plans are in terms of 25-30 years, and Mexico is facing a short-term liquidity crisis which has already begun to improve."69 "Our vision and our strategy for the bank does not change because of a short-term problem," Miramontes said in a July 1995 interview with Texas Business magazine.70 Miramontes does not believe that Mexico will have trouble making the next scheduled contribution to NADBank, which will total roughly $55 million and is required to be paid in early 1996. NADBank's Executive Director has repeatedly said that despite Mexico's economic crisis, the country recognizes the environmental needs of the Border area and will keep its commitment to NADBank.71 However, the significance of the peso devaluation has a great impact on Mexican border communities' willingness to take on debt associated with environmental infrastructure in this time of economic hardship. Since NADBank loans for infrastructure must be repaid, the projects must either be revenue-generating or eligible to receive no-cost grants from other sources.

An example of this is evident in Ciudad Juarez where the cash-strapped municipal government may not be able to afford the loan necessary to continue construction and operation of a much needed wastewater treatment facility. The economic crisis there has had a double-barreled impact. In December, shortly before construction was scheduled to begin on the facility, the peso suddenly collapsed, eventually cutting the dollar value of the city revenues by half, and the city was forced to stop work. Although the BECC stated that the Ciudad Juarez wastewater treatment project was a top priority, the BECC sent the project back to the city at its September 1995, meeting, stating that the city ought to promote public acceptance for its plan to raise water bills, thereby allowing it to pay off a NADBank loan. City officials have indicated, however, that city water rates might have to double from $8 per month for an average household if they are to take on the $40 million NADBank loan. This may be a political impossibility in a city where the average assembly-plant worker makes $150 per month. Questioned Francisco Nunez, Chief of the city's water and environmental programs, "but if (NADBank) cannot help the largest city on the border get sewage treatment, then why does it exist?"

The Ciudad Juarez wastewater treatment plant project is again listed as a project that may be considered for certification at the BECC meeting on January 18, 1996. Perhaps Mr. Nunez' question will be answered during that meeting. If not, Ciudad Juarez may be forced to seek other funding possibilities. Nunez has sought contributions from the owners of the 400 assembly plants in Ciudad Juarez. Despite profits made by Maquiladoras in the City, the Southwestern Maquiladora Association, an El Paso-based group representing 170 of the Ciudad Juarez area’s biggest firms (a blue-chipped roster including such giants as Ford, General Motors and General Electric) has thus far refused to respond positively to Nunez' request for contributions to construction of the wastewater treatment plant.

In the meantime, projects being submitted to the BECC and certified by the BECC to NADBank may not be as grandiose or have as great an impact on the border environment as once envisioned. This is partially due to the current intent of BECC and NADBank officials to ensure the initial success of both agencies through a go-slow approach to lay a sound foundation for the long term. Said the BECC's General Manager Faurenfelder, "I think it's going to be tougher, probably tougher than I can imagine. The expectations are higher than they really should be." "Our horizon for the projects is 50 years," said Victor Miramontes. "The problems have taken tens of years to develop, since the turn of the century. Solutions are not going to take as long but are not going to happen overnight either.”


The second phase of the Integrated Environmental Plan for the U.S./Mexico border area, called Border XXI, is currently under development, through the coordinating efforts of the U.S. EPA and Interior Department on the U.S. side, and Mexico's SEMARNAP. While the first phase of the border plan generated several important projects (discussed in more detail below), which will continue into Border XXI, many felt that outreach was inadequate to involve the affected parties in the region. Accordingly, local empowerment of communities and interagency participation at all levels, state and federal, are important goals of Border XXI, along with the goal of sustainable border development. The Plan is being designed to identify long-term objectives for each region of the border, which will be geographically specific, in order to accommodate the vast diversity of the area. The Plan's eight areas of concern and the basis for the public hearings that have been held in El Paso, Texas and Tijuana, Baja California are: water, air, toxic waste, law enforcement, prevention of environmental

75. Id.
76. Supra note 22. EPA has also issued fourteen grants of up to $35,000 each to communities in the U.S./Mexico border region under its new Border XXI Community Grants Program. EPA's Office of International Activities initiated the grant program to strengthen local capacity at the community level, and as a means of identifying their specific needs and priorities. For further information contact the U.S. EPA Office of International Activities (202) 260-6623 or (202) 260-4896.
77. Id.
contamination, emergency response capacity, natural resources, and environmental information. The final Border XXI Program Framework is expected in early 1996. EPA has set up a toll-free number (1-800-334-0741) for the public to either obtain information/documents about Border XXI or offer recommendations on what environmental issues need to be addressed. Comments can also be sent to the San Diego Border Liaison Office located at 610 W. Ash Street, Suite 703, San Diego, California 92101.78

Discussions began on Border XXI following the joint meeting and report on the first phase of the border plan on June 21, 1995, in Mexico City, by the U.S. and Mexico.79 The Border XXI Environmental Plan will be a comprehensive plan for infrastructure, information and legal reform projects along the U.S.-Mexico border. It is expected to have an even greater impact on the border environment than the first phase border plan, which impacted significantly the border environment through the initiation of community participation, bi-national cooperation at the state and federal level and the initiation of several projects. BECC and CEC representatives are being invited to monitor the Border XXI Plan development.80 A review of some of the programs and activities initiated under the first phase and some which will be continued and initiated under the Border XXI Plan, follows.81

1. Enforcement of Existing Laws

   Inspection Program. Both the United States and Mexico through their environmental agencies have increased border environmental inspections. Under the new Border XXI, PROFEPA, the enforcement arm of SEMARNAP, Mexico's environmental agency, will implement a 1996-2000 inspection program consisting of 35,000 visits per year to companies operating in the border area.

   Cooperative Enforcement Strategy Workgroup. This group, which was formed in 1991, continues to address environmental violations affecting both sides of the border involving import and exports of hazardous waste.

   Cooperative Enforcement Action/Targeting. In the first bilateral joint investigation of a cross-border pollution crime, the Los Angeles County District Attorney's Office and the Mexican government obtained a $2.3 million fine from Quemetico, Inc., owned by RSR Corporation, a Dallas-based lead recycler, for improperly importing lead waste from its Los Angeles smelter to a recycling facility east of Tijuana, Mexico. The fine was to be used to clean up the Alco Pacifico de Mexico recycling facility. In a related case, Morris Kirk, the president of Alco Pacific, a now defunct lead smelter operation, was ordered to pay $2.5 million fine and was sentenced to sixteen months in prison after pleading no contest to three felony counts of violating California hazardous waste laws. In addition, U.S./Mexico case-specific cooperation has facilitated Mexico's cleanup actions at abandoned waste sites in Mexico and the initiation of criminal prosecutions in additional border cases.

78. Supra note 74.
79. Copies of the report can be obtained by calling the EPA toll-free number (1-800-334-0741).
Pilot Maquiladora Compliance Program. A cooperative pilot effort was undertaken by U.S. firms with subsidiaries in Mexico to comply with Mexican laws. Several U.S. companies pledged to insure that their Mexican subsidiaries would comply with Mexican laws and some submitted data evidencing compliance reviews. Some companies have also taken voluntary measures to join the environmental antipollution and cleanup campaigns, such as GM de Mexico's voluntary audit program with SEMARNAP.

Information Exchange. U.S. and Mexico environmental agencies have begun an exchange of enforcement information.

Transboundary Shipment Enforcement. The new computerized hazardous waste tracking system allowed the EPA to initiate four enforcement actions against U.S. companies with import violations identified through the database. Three of those companies were Allied Signal Aerospace, Brownsville, Texas, Jeep Collins Jewellerymaker, Fredericksburg, Texas, and REM-TEX Manufacturing, Del Rio, Texas.42

Transboundary Shipment Surveillance. EPA funded a year-long program called the Border Enforcement Program intended to monitor the international transportation of hazardous waste between the U.S. and Mexico. The program, headed by the Texas Natural Resource Conservation Commission ("TNRCC"), includes U.S. Customs Agents, local fire marshals and other law enforcement agencies. In addition, a task force of U.S. federal and state agencies increased detection of illegal transboundary shipments through renewed efforts.43

2. Reduction of Pollution Through New Incentives

Wastewater Treatment Facilities. The United States and Mexico began design, construction or operation on at least thirteen wastewater treatment facilities in the border area including Tijuana, Nogales, Nuevo Laredo and Laredo. The EPA has allocated $47.5 million for wastewater treatment along the border. Of that, $10 million is related to Texas with the remaining $37.5 million to be used for Nogales and Mexicali. Two wastewater treatment grants were issued in October 1995 by the EPA to the City of Nogales for the study and repair of the binational wastewater treatment plant operated by the IBWC and the City of Nogales. The plant, which was built in 1972 and expanded in 1992, has a capacity of 17.2 million gallons a day but has been running at a capacity of 18 million gallons per day. Currently, the treatment plan serves 20,000 people on the Arizona side of the border and 440,000 people on the Sonora side of the border. (Estimates of the future border population of 1.4 million people indicate a production of eighty-six million gallons per day.) Some of the increase is attributed to the Nogales wash, which is drainage originating in Mexico and includes both ground and surface water. The surface water is contaminated with raw sewage from the City of Nogales, Mexico. Failure to increase capacity and maintain the facility could lead to health problems resulting from the contaminated water. A proposed IBWC plan for a ten year, $42 million program for a massive sewage-collection system in Nogales, Arizona is anticipated to correct many of the sewage and wastewater problems of the sister cities.44

82. TIEA, June 30, 1993.
83. Texas Environmental Compliance Update, Texas Natural Resource Conservation Commission.
Programs for Colonias. Colonias, unincorporated towns along the border, are often characterized by conditions similar to third-world countries, with no water and sewer services. The United States is implementing programs addressing sanitation needs of the colonias in Texas and New Mexico. The EPA's Wastewater Assistance Program has been funnelling some of its funds to the colonias. Some of the 130 projects that EPA is addressing along the border include the installation of sewer lines costing $150 million in Texas and $20 million in New Mexico, enforcement mechanisms to prevent the creation of more colonias, and sewer projects by the Texas Water Development Board costing $150 million. Recently the Lower Valley District Authority, the agency in charge of handling federal government funds in the El Paso area, received $1.6 million in grants from the U.S. Department of Agriculture to build a wastewater system that would serve hundreds of residents living in the Sparks Addition in the desert east of El Paso.

The state of Texas, through the Texas Water Development Board ("TWDB"), has committed $400 million in federal and state assistance to colonias through its Economically Distressed Areas Program. According to a TWDB report dated October 19, 1995, four of the sixty-six projects being funded by the agency have been completed, nineteen are under construction, or in plans and specifications stage and forty-five have been approved for planning. Also in 1995, Texas passed a colonia bill, House Bill (H.B.) 1001, requiring developers selling land in the border area to provide water and sewer services to customers under risk of criminal and civil penalties. County attorneys in El Paso have been filing charges against colonia developers as well.

Other Infrastructure. Implementation and planning of projects continues, including dredging sewer systems, intensive clean up of hazardous waste sites, construction of sanitary land fills, road paving and improving public transportation and traffic management.

Monitoring of Transboundary Surface and Ground Waters. In September 1994, phase one of a study of the Rio Grande and its tributaries was completed. The report identified areas down stream from the sister cities of El Paso, Texas/Ciudad Juarez, Mexico and Laredo, Texas/Nuevo Laredo, Mexico as trouble spots on the main river. In El Paso/Juarez, elevated levels of methylene chloride and other toxic chemicals were detected and aquatic life showed signs of impairment. Silver and other chemicals were found at Laredo/Nuevo Laredo where impact to aquatic life was greater than in any other area. In addition to the trouble spots on the main river, six problem areas were located along the tributaries to the river -- the El Paso Public Service Board Haskell St. Wastewater Treatment Plant, Ciudad Juarez Discharge Canal, Manadas Creek, Zacate Creek, Arroyo el Coyote, and Anhelo Drain. Among the thirty chemicals identified as exceeding screening levels were residual chlorine, toluene, arsenic, chlordane and polychlorinated biphenyls. The study also found low-level human health criteria exceeded in water and/or edible fish tissue at 22 of the 45 sites. Limited human health risks could result from regular, long-term consumption of untreated water and/or fish at 17 of the sites, while significant risks were found at 5 other sites, all of which are impacted significantly by sewage effluent.

The 1992-93 study, which was conducted with a $300,000 grant from the EPA, was followed by a second phase of the study pursuant to a $400,000 grant from the EPA. The IBWC announced the second phase of the Rio Grande study in May 1995 through the Texas Natural Resource Conservation Commission. The study included testing of areas identified in phase one as moderate to high areas of concern. Sampling was conducted at the areas from Langtry, Texas to below Eagle Pass/Piedras Negras, around Laredo, Texas and Nuevo Laredo, Brownsville/Matamoras, Presidio/Ojinaga and El Paso/Ciudad Juarez. The study also includes sampling at Amistad and Falcon, two international reservoirs.

Although an IBWC representative indicated that the river is generally healthy, Laredo, Texas has banned swimming in one stretch of the Rio Grande since August 1994, as a result of the Nuevo Laredo practice of allowing raw residential and industrial sewage to flow directly into the river. In April 1995, the American Rivers Conservator Group declared the Rio Grande one of the most polluted rivers in the United States in its annual report.

Cooperative efforts have also been initiated by private groups/volunteers on both sides of the border. The El Paso chapter of the River Watch Network and Texas Watch joined to become the Rio Bravo River Watchers. The thirty-member organization takes samples of river water every two weeks along the banks on both sides of the border that stretch for twenty miles from Zarapoza to Vinton. Samples are processed in the organization's laboratory. Although the group has no enforcement capability, pollution found is reported to the TNRCC representatives who are also actively sampling the river.


91. Id.

92. Information is available from the Texas Natural Resource Conservation Commission at (512) 239-5000 or the International Boundary and Water Commission at (915) 534-6700.


Computerized Hazardous Waste Tracking System. EPA has developed a hazardous waste tracking system (HWTS) to merge and compare Mexican hazardous waste shipment authorizations with U.S. manifests to confirm movement of hazardous waste from maquiladoras to facilities in the United States. A Spanish version of the software was provided to SEMARNAP by the EPA, along with training on how to use the system.

In March 1995, the two agencies began a pilot project to track movement of hazardous waste electronically. The electronic exchange of transboundary reports will avoid the massive and cumbersome paper system of tracking hazardous waste shipments and allow for a better exchange of information and more thorough and accurate enforcement.  

Location of Abandoned/Illegal Hazardous Waste Sites. EPA has developed strategies for the border area using available geographic information systems technology/aerial surveillance and information from local agencies. Training was provided on aerial photography interpretation to SEMARNAP.

Identification of Municipal Waste Disposal Needs. EPA and SEMARNAP compiled inventories on existing municipal solid waste disposal facilities in the border area.

Air Quality Monitoring Programs.

Ciudad Juarez/El Paso. In 1990, the EPA declared El Paso a non-attainment city for failing to meet U.S. clean air standards for ozone, carbon monoxide or particulate matter. Most of El Paso's air problems are the results of hundreds of miles of unpaved roads across the border in Ciudad Juarez, and Ciudad Juarez residents cooking on open fires or using wood burning stoves to heat their homes. While El Paso County has a population of about 7,000, Ciudad Juarez has twice that amount in less than half the area. The collapse of the peso on top of the already poor economy of the locale made it impossible for city officials to install or maintain any infrastructure to reduce the air pollution. In the meantime, El Paso was unable to take measures to comply with the Clean Air Act because the cause of much of its problem was across the border. To address this issue, two advisory groups began working on bilateral efforts, to include the possible formation of an international air quality management district along the Texas-Mexico border and to combine monitoring systems to obtain more accurate readings on air quality. The Paso Del Norte Air Quality Management District Task Force was formed to accomplish this task and requested that an annex be issued to the La Paz Agreement, formally creating the Air Management District.  

In June 1995, the United States was finally authorized to enter into talks with Mexico to establish the International Air Management District which would encompass Ciudad Juarez, Mexico; El Paso, Texas; and Sunland, New Mexico.  

Mexicali/Imperial Valley. An air quality study was initiated in 1992 to address concentrations of particulates and to develop control strategies.

Tijuana/San Diego. Joint air quality monitoring programs have been instituted between San Diego and Tijuana. A pilot vehicle inspection and maintenance program for


fleet vehicles has also been initiated by municipal authorities.

Tamaulipas/Texas. Texas and Tamaulipas signed an agreement in February 1995 to conduct joint air monitoring activities along the common border from Laredo/Nuevo Laredo to Brownsville/Matamoros. 86

Piedras Negras, Mexico/Big Bend, Texas (Carbon II plant). Less cooperation was evident between the two countries in relation to a major new power plant being constructed by Mexico in Piedras Negras. U.S. and Mexican officials disagree over the impact on the Big Bend National Park from the emissions of the new power plant. 87 Officials from the U.S. EPA and the National Park Service contend that emissions from the Carbon II plant will seriously impact visibility at Big Bend National Park 100 miles to the northwest of the Carbon II facility. While the facility has the technology to control particulate emissions to approximately 99%, no controls are in place to curb emissions of sulfur dioxide. Mexican officials criticize the accuracy of U.S. air quality models which assume a facility's potential to emit rather than actual emissions. Additionally, Mexican calculations indicate that the Carbon II plant emissions will comply with Mexico's air quality standards which are not as strict as those in the United States. Visitors to the park in the summer of 1995, however, met limited visibility due to a white haze made up of sulfur dioxide, organic carbon-based matter, and dust which obscured the visibility up to 28 miles. 88 U.S. officials continue to contend that the coal-fired 3,400 megawatt plant is the cause of this haze. Should the startup of the Carbon II plant increase the visibility problem at Big Bend, this matter may turn into a petition filing before the CEC in Montreal.

Nogales/Nogales. In coordination with SEMARNAP and state and local officials, implementation has begun on cross-border transport of PM-10 air toxins.

3. Increased Cooperative Planning, Training and Education

Joint Response Team. A group of state and national experts have sponsored meetings with officials of both countries to cooperate and enhance emergency response capabilities.

Cross-Border Mobility of Emergency Response Equipment and Personnel. Both countries are drafting protocols to facilitate cross-border mobility of emergency response equipment and personnel.

Multi-Media Training. EPA has provided multi-media training inspection techniques for air monitoring, air dispersion modeling, emissions inventories, hazardous waste management and environmental inspection techniques to SEMARNAP personnel. Sister-city contingency plans are in the drafting stages or have been completed for sister cities located in Mexicali/Calexico, Tijuana/San Diego, Matamoros/Brownsville, Ciudad Juarez/El Paso and Nuevo Laredo/Laredo.

100. Maricarmen Eroles, Skies In Big Bend Park Clouded by Border Pollution Controversy, Tex & Southwest Env'tl News, Oct. 1995.
4. **Improved Understanding of the Border Area Environment**

**Hazardous Waste Tracking System.** A compatible tracking system was developed to verify compliance with U.S. and Mexican laws for transport or movement of hazardous waste.

**Air Quality Monitoring.** Emissions inventories and monitoring networks are being developed for priority border areas to determine ambient air quality concentrations and how to best apportion resources.

**Water Quality Monitoring.** Water quality monitoring of the Rio Grande/Rio Bravo River, the Colorado River and the New River are being implemented.

**Transboundary Resource Inventory.** The Transboundary Resource Inventory Project ("TRIP") was established as a regionally-based binational effort to map shared natural resources of the U.S./Mexico border region. It is intended to create a mechanism to inventory, collect and make accessible, information about transboundary natural resources such as air sheds, aquifers, rivers, oil and gas reserves, mineral reserves and flora and fauna. The U.S. Steering Committee included one representative for each U.S. border state and one from U.S. federal agencies. To meet its objectives, TRIP is working to create a standardized digital base map and geographic information system for translating, integrating, storing and displaying transboundary data. Updating of aerial photography by base mapping will require several years, depending on the resources, however, TRIP soon should have available base maps and selected data files for several areas on the U.S./Mexico border.101

**EPA Offices.** Border issues are coordinated by the EPA through its Region 9 office. The Mexico Steering Committee (John Wise, Deputy Regional Administrator and John Hamill, Border Coordinator) and Mexico Team are located at 75 Hawthorne St., San Francisco, California 94105 (Phone (415) 744-1281; facsimile (415) 744-1072). EPA opened several new additional offices to assist in information exchange and coordination of U.S./Mexico border issues. In October 1994, EPA formally opened the U.S./Mexico Border Liaison Facility in San Diego, California at 610 West Ash St., Ste. 703, San Diego, California 92101. The Director, Colleen Smith, and Assistant Director, Dave Fege, can be contacted respectively at (619) 235-4768 and (619) 235-4769 (facsimile (619) 235-4771). Brent Maier, the Border Outreach Specialist, can be contacted at (619) 235-4767. This followed the initial office opening on the border in El Paso, Texas, at 4050 Rio Bravo, Suite 100, El Paso, Texas 79902, phone (915) 533-7273. Recently, a Border Outreach Office was opened in McAllen, Texas to increase EPA's outreach efforts. This new office is located at 3600 North 23rd Street, Suite 104, McAllen, Texas; Phone (210) 664-2809. The office is staffed every other Thursday by EPA employees from the El Paso office, but the answering machine is checked for messages on a daily basis.

101. **FACT SHEET, The Transboundary Resource Inventory Project, Texas General Land Office.** This document indicates further information can be obtained by contacting TRIP's Executive Secretary Tyrus Fain at the Texas General Land Office, 1700 North Congress Avenue, Room 630, Austin, Texas 78701-1495; Phone (512) 305-8996. These efforts are also being coordinated through the U.S. Dept. of Interior, U.S./Mexico Border Environmental Issues Field Coordinating Committee, created in 1994. In addition to the joint mapping initiative, the Committee is focusing on environmental education, shared water resources and the border protected areas. For more information contact: (202) 208-4948.
Joint Texas/Chihuahua Discussions. Discussions have begun between environmental officials from the states of Chihuahua and Texas on possible joint environmental projects. Chihuahua is Mexico's largest state and includes El Paso's neighboring city, Ciudad Juarez. As one of Mexico's northern border states, Chihuahua is involved in a project to shift the environmental authority from the federal to the state level. Now two years old, the Chihuahua Department of Ecology has designed an ambitious program of environmental activities, with air issues as the number one priority. A total of nearly $1.2 million is scheduled to be invested in air quality systems, including approximately $1 million for analyzing air contaminants. World Bank funds will finance this project.

International Park Lands. U.S. and Mexico have joined forces to protect park lands, preserves and natural refuges in an area including Big Bend and northern Coahuila and Chihuahua. This cooperation, beginning in April 1995, was made possible by the Mexican government's creation of two new wildlife preserves adjacent to Big Bend, totaling 1.2 million acres. These areas are located in the Maderas del Carmen region of the Sierra del Carmen and the Santa Elena Canyon along the Rio Grande, both of which are within the Chihuahua Desert Eco system, which is protected in the Big Bend National Park.

El Paso/Juarez Clean Cities Program. In November 1995, federal, state and local authorities from the El Paso/Ciudad Juarez area signed a memorandum of understanding establishing the Paso Del Norte Clean Cities Coalition whose goal will be to reduce motor vehicle air pollution through the use of alternative fuels. The parties plan to use the MOU to promote the use of propane and natural gas in the transportation sector and to increase the number of alternative fuel vehicles in the area by 50% by the year 2000.

Other Joint Efforts. Cooperative efforts among different groups and levels in the United States, Canada and Mexico are also frequently occurring. In May, governors of four U.S. and six Mexican border states met at the first post-NAFTA border governors' conference and issued recommendations on the health and social impact of increased trade along the border, tourism, environment, transportation, business opportunities, education and migration. Attending the conference were the governors of Arizona, California, New...


103. Maricarmen Eroles, U.S., Mexico Join Forces to Protect International Park Lands Tex & Southwest Env'tl News, Apr. 1995. The U.S. National Park Service manages five units directly on the border: Amistad National Recreation Area, Texas; Organ Pipe Cactus National Monument, Arizona; Coronado National Memorial, Arizona; Big Bend National Park; Rio Grande Wild and Scenic River, Texas; and Chamizal National Memorial in El Paso, Texas. For more information contact the National Park Service, Mexico Affairs Office, Box 30001, MEAF, Las Cruces, New Mexico, phone: (505) 646-7880 or facsimile: (505) 646-8083. The U.S. Fish and Wildlife Service also manages seven national wildlife refuges, covering one million acres, along the border. For further information contact: Region 2, P.O. Box 1306, Albuquerque, New Mexico; phone: (505) 248-6281 or facsimile: (505) 248-6845.

Mexico, Baja California, Coahuila, Chihuahua, Nuevo Leon, Sonora, and Tamaulipas. The governor of Texas sent a representative. With regard to the health and social impact of increased trade, the governors recommended establishment of a U.S./Mexico health commission, establishment of public health priorities for the border, and endorsement of the proposal of the Pan American Health Organization for the establishment of a pre-investment program in health and the environment. With regard to the environment, the governors agreed to prepare proposals to obtain financing for the implementation of border environmental training and monitoring with the participation of federal, state, local and private sectors. Participants also agreed to develop emergency response plans for environmental emergencies, promote the standardization of a format of basic data gathering for hazardous materials and waste, promote the creation of a data base with trans-border environmental information, support the conservation and protection of shared natural areas, and allow more participation of the border governments in the government task forces related to environmental protection within the framework of NAFTA.

VII. Environmental Laws and Enforcement in Mexico

A. Legal Provisions

1. The General Law and other Environmental Legislation.

Mexico's primary environmental statute, The General Law of Ecological Equilibrium and Environmental Protection, also known as Ley General or General Law, is the legal foundation for Mexico's environmental protection program. It became effective March 1, 1988, replacing the previous law on environmental matters. The spirit of the General Law was taken notably from the legislation of the United States. What may surprise most Americans is that where Mexico's program differs, it is sometimes more stringent than the United States counterpart.

The General Law contains specific provisions regarding ecological policy, environmental impact, ecological planning and regulation, ecological criteria on development, protected natural areas, air, water, soil, noise, vibrations, nuclear energy, thermal and luminous energy, odors and visual pollution, toxic substances, hazardous activities and hazardous waste. It is administered by the Secretariat of the Environmental, Natural Resources and Fisheries, or SEMARNAP (formerly SEDESOL and SEDUE), Mexico's equivalent of the EPA. The General Law is currently undergoing a major review, "overhaul" and modification, which is expected to be submitted to the Mexican Congress in 1996. The proposed changes are intended to update and expand Mexico's environmental regulatory regime, and to harmonize it with international standards. Modifications are expected to include, (i) the concept of sustainability, (ii) wider public access to government documents, (iii) greater public involvement in the policy making process, (iv) reduced discretion of public officials, (v) more state and municipality participation, and (vi) added penalties and obligations for companies causing environmental damage.

105. U.S., Mexican Governors Address Broad Range of NAFTA-Related Issues, Int'l Env. Daily (BNA), June 1, 1994. (The Bureau of National Affairs, Inc., 1994. The portion on this paragraph on the Conference of Governors was taken significantly from this BNA article.


Additional relevant Federal Environmental Legislation includes the Natural Waters Law, the Decree Relating to Import of Hazardous Materials or Residues that by Their Nature May Cause Damage to the Environment or to Property or Constitute a Risk to Public Health or Welfare, and the National Program for Protection of the Environment, 1990-1994 (the "Program"), which the entities and agencies of the Federal Public Administration must observe in facilities. The Program, which has five chapters, follows the premise that was established under the National Plan for Development, 1989-1994, of harmonizing the general process of development and modernization with the re-establishment of quality of the environment for the conservation and respect of natural resources.

The first chapter contains the diagnosis that describes the geographical characteristics of the territory, the general elements of the environmental problems, and the present situation of the natural resources, including Ecological Regulation - the process of planning directed at evaluating the scheduling of land use and management of natural resources in Mexico and the zones over which the nation exercises sovereignty and jurisdiction in order to preserve and restore ecological equilibrium and to protect the environment. The second chapter deals with objectives such as environmental management as one of the basic instruments for the modernization of national development. The third chapter includes the general, territorial, and environmental management strategy. The fourth chapter establishes the goals, and chapter five establishes the mechanisms and instruments to solve specific problems. The environment is still a top priority in the New National Development Plan--1995-2000, now in effect under President Ernesto Zedillo.

There are also related federal laws and regulations, such as the Mexican Political Constitution, the General Health Law, the Social Security Law, the Federal Law of Measures and Standards, the Federal Labor Law, Regulations for Occupational Health and Safety, the Forest Law, the Fishing Law, the Federal Hunting Law, and the General Law of Human Settlements. Mexico is also a signatory to various international treaties including the Montreal Protocol and the Basel Convention.

2. Regulations and Standards.

Regulations and standards explaining and implementing the Law are developed and updated chiefly by an agency of SEMARNAP, Instituto Nacional de Ecologia (the National Institute of Ecology or "INE"). INE is divided into four operating divisions: environmental planning, technical standards, development of natural resources and research and development. In addition to developing and evaluating environmental policy and standards, INE issues permits, licenses and regulations. Some of the most relevant regulations include:

109. The Comision Nacional del Agua, (the National Works Commission or "CNA"), is responsible for assessing and collecting fees related to waste water discharge. Their responsibilities may soon be expanded to include permitting and enforcement.

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- Regulations of the General Law of Ecological Equilibrium and Environmental Protection Regarding Environmental Impact
- Regulations of the General Law of Ecological Equilibrium and Environmental Protection in Relation to Hazardous Residues
- Regulations of the General Law of Ecological Equilibrium and Environmental Protection Related to the Prevention and Control of Air Pollution
- Regulations for the Prevention and Control of Water Pollution
- Regulations for the Protection of the Environment Against Pollution Caused by the Emission of Noise
- Regulations of the General Law of Ecological Equilibrium and Environmental Protection for the Prevention and Control of the Pollution Generated by Automotive Vehicles that Circulate in the Federal District and Municipalities of the Metropolitan Area (zonas conurbadas)
- Regulations to Prevent and Control the Sea Pollution from Shedding Residues and Other Materials
- Regulations for Land Transportation of Hazardous Materials and Waste

Also promulgated by SEMARNAP, after consultation with the Ministry of Healthcare, are the Normas Oficial Mexicana (Official Mexican Standards or "NOMs") (previously known as technical environmental standards, or "NTE’s"). NOMs establish quantitative parameters and limits for those substances controlled by the Law and its regulations such as water, air, hazardous residues, and others related to health and safety in the work place.

Unlike full notice and comment offered the public in regulatory promulgation in the United States, in Mexico no “proposed” regulations are published, no advance notice of impending or completed regulations or standards or explanatory preambles are provided, and only limited public comment is allowed (limited to development of NOMs). Also of note is that regulations are effective upon publication in the Diario Oficio (the equivalent of the U.S. Federal Register and Congressional Record) unless otherwise stated, and there is no deferral of compliance dates. 111

3. Permitting and Licensing Requirements.

The General Law and regulations require companies to apply for and obtain several types of environmental permits and licenses in order to do business in Mexico. The requirements are based substantially but not completely on EPA criteria. For instance, companies must obtain an operating license (Licencia de Funcionamiento) which will set maximum levels of each type of emission allowed the company and obtain a registration for waste water discharge.

New companies must also file an environmental impact statement or obtain a waiver from SEMARNAP before receiving the required operating permit from the Secretariat De Comercio y Formento Industrial (Department of Commerce and Industry, or "SECOFI"). Environmental impact statements are not required of those companies operating prior to 1988; however, SEMARNAP may require them to submit such a statement within thirty days of a SEMARNAP request. Generally, however, most industrial and manufacturing installations have been required to submit some type of environmental impact statement. Mexico also requires, among other things, registration of hazardous waste generators, manifesting of off-site shipments, siting, design, construction, and operation standards for hazardous waste management facilities, and registration for discharge into drainage and sewer systems.

4. The Environmental Impact Regulation.

Perhaps the most important regulation under the General Law is Reglamento de la Ley de Impacto Ambiental (The Regulation of the Law for Environmental Impact) or the "Environmental Impact Regulation" effective June 8, 1988. Until October 1995, this regulation required prior approval from SEMARNAP (or respective state or city officers) of any activity that is performed in Mexico, whether public or private, that must have caused ecological imbalances or exceeded the limits and conditions stated in the regulations and NOMs. The Environmental Impact Regulation basically required any new potentially contaminating operations to file an Environmental Impact Statement ("EIS") with SEMARNAP prior to commencing operations (and it appeared, prior to construction of any new facility). As a result of new SEMARNAP rules published October 23, 1995, an EIS filing is now required only in limited circumstances, including (i) construction projects which are "high risk" due to use of hazardous substances, (ii) industries in protected nature zones, and (iii) industries increasing production capacity above limits established in existing operating licenses.112

The EIS is generally accompanied by a study of the risk attendant with the proposed development or construction, and any technical, preventative and corrective measures required to mitigate the adverse effects on the ecological equilibrium created during the development of the operation, its normal operation and/or in the event of an accident. These studies may be performed only by consultants duly registered and approved by SEMARNAP. The EIS may be approved, denied or conditioned on the amendment of the work project or activity so that the adverse environmental impact that might be produced by its development or construction, its normal operation, or even in the event of an accident, will be avoided or reduced.

As a result of the new rules issued in October 1995, small- and medium-sized companies working in a variety of industries and large companies constructing in authorized industrial parks will no longer be required to file an EIS. These companies will now be required to file a more simplified "preventative report" in advance of construction, providing information regarding the proposed project, including: (i) the equipment required for the construction activity, (ii) the waste to be generated from the construction, and (iii) a before-and-after description of the anticipated changes to the real property and landscape of the particular construction site. Rulings from the INE will thereafter be provided within 30 working days from receipt by the INE of the preventative reports. As with EIS, the INE has the authority to deny the project, authorize the project, or authorize the project subject to conditions required to mitigate impact to the environment.

Although planned business activities may not be included in the above list, as a practical matter most industrial operations or installations are required to submit some type of EIS. It is, therefore, strongly recommended that any activity that may cause an ecological disequilibrium be submitted for prior approval.

B. Enforcement Procedures


To expand and improve on existing enforcement activities, Mexico established within SEMARNAP (then SEDESOL) in 1992 the Procuraduria, Federal de Proteccion al Ambiente, (Office of Attorney General for the Protection of the Environment, or "PROPERA"), (the "Office of Attorney General"). This Office, which has full responsibility for enforcement of Federal Environmental Laws, reviews and monitors compliance, conducts inspections and audits, resolves administrative appeals or recourse and files criminal complaints. It is divided into seven operating units with responsibility over: social participation, operations, verification, administration, environmental audit and planning, programming and technical support and legal services.

2. Inspection Activity.

Also central to Mexico's program for strengthened enforcement has been the aggressive training of inspectors in the latest and most effective environmental inspection methods and a significant increase in the number of inspectors. Federal and state governments may carry out inspections for the verification of complaints with the General Law. During the first four years of enforcement, over 7,668 inspections of industries have been made. One thousand nine hundred twenty-four of these industries have been shut down (primarily on a temporary basis) as a result of non-compliances detected during these inspections. Figures from 1993 indicated a more stringent enforcement with 13,000 inspections resulting in 742 company closures. Thirty percent of these closures resulted from companies failing to meet the existing 33 NOMS on waste water standards.

113. Id. NGO's in Mexico have criticized the new more limited pre-construction environmental impact requirement. A filing of a complaint with the CEC is being considered by the NGO's who argue that the "deregulation" is designed to attract new investment in Mexico, which is a violation of Article 1114 of NAFTA.


3. Citizen Complaints.

Environmental violations are also increasingly discovered and reported through citizen complaints. To facilitate this process, in 1992, the Office of Attorney General established a division for public liaison and complaints. In its first year of operation, it received and reviewed 795 complaints, of which 113 precipitated investigations by the Office of Attorney General.116

4. Sanctions for Failure to Comply.

To speed up and ensure regulation compliance among plants and industrial facilities, the Government, in 1988, developed and began applying new punitive measures for failure to comply with Mexican Environmental Laws. The General Law and regulations now provide for harsh administrative and federal sanctions in the event of non-compliance. Upon detection of a non-compliance, SEMARNAP may grant the violator a period of time to correct measures and/or it may impose sanctions that may consist of one or more of the following:

- A fine in an amount ranging from twenty to twenty thousand times the applicable minimum daily wage (currently the minimum daily wage in the Federal District is approximately U.S. $4.50)
- A partial or total, temporary or permanent, shutdown of the facility (This is the most common sanction.)

The General Law -- Article One Hundred Seventy.- "When there exists imminent risk of ecological imbalance or cases of pollution with repercussions dangerous for ecosystems, their components, or public health, SEMARNAP, as a safety measure, may order the confiscation of polluting materials or substances, temporary closure, total or partial, of the corresponding polluting sources, and promote execution before the competent authority pursuant to the relevant laws, of one or more safety measures established in said laws."

SEMARNAP’s inspector, after finding that the company is violating the General Law, may seal doors, machinery, equipment, boilers, etc. of the violator and request corresponding governmental entities to suspend, revoke, or cancel all authorizations granted for the offending corporate enterprise.

If the violator subsequently agrees that it has violated the General Law, or if upon appeal, it is determined that the company did indeed violate the General Law, the violator must sign a covenant with SEMARNAP, acknowledging the violation and agreeing to submit for approval an environmental action plan for correction of the violation and/or investment in the appropriate anti-pollution equipment. Prior to execution of this covenant, the violator is required to post a bond, with SEMARNAP as the beneficiary, in an amount equivalent to the cost of the required improvements. The bond acts as a guarantee of fulfillment of the covenant on a timely basis. Failure to fulfill the agreement will result in forfeiture of the bond and the permanent shutdown of the offending facility.

• Suspension, revocation or cancellation of any license or permit
• The administrative arrest of company officials for up to 36 hours
• Criminal fines or imprisonment

SEMARNAP authorities are required to notify the public prosecutor of the performance and omission of acts that may compromise a Federal crime. Federal crimes are defined as engaging in, ordering, or authorizing acts without the respective authorizations, or a violation of applicable safety and operational standards that are considered hazardous and cause serious injury to the public health, flora, fauna, or ecosystems.

Fines of up to twenty thousand times the daily minimum wage in effect in the Federal District and imprisonment for up to six years may be imposed for such violations. The gravity of the violation, the financial condition of the company and recidivism, if any, will be considered in the imposition of sanctions.

C. Mexican Environmental Law vs. U.S. Environmental Law

Several significant differences exist between the environmental laws of Mexico and the United States. At this time, Mexico has no equivalent to the United States' "Superfund" liabilities of the Comprehensive Environmental Response Compensation and Liability Act, 42 USC § 9601, which focuses primarily on cleaning up thousands of hazardous waste sites created from past disposal activities. Significantly, this means that there is no lender liability issue or issue with regard to the historical disposal activities of companies to whom financial institutions lend funds and with regard to properties taken as security for such loans. Furthermore, it does not appear at this time under Mexican environmental law that a party can be held liable for violation of environmental laws and pollution of the environment unless they are the party responsible for such pollution activity. Superfund type liability in Mexico may not, however, be far away as abandoned hazardous waste sites are being investigated under the Border Plan described above, and as the NAFTA creates pressure on Mexico to improve its environmental standards.

Mexico additionally has no equivalent of the "Community Right to Know" laws in the United States which require public disclosure of hazardous substance inventories and toxic emissions, one of EPA's most powerful tools in pursuing companies in the U.S. Mexico also lacks any detailed tank standards, including underground storage tanks, pre-treatment limitations for wastewater discharge requirements, and remediation requirements related to soil protection. Interestingly, where the two countries' laws differ, Mexico's laws are many times more stringent than those of the United States. For instance, landfilling is prohibited in Mexico, in general more wastes are characterized or listed as hazardous under Mexican Law, used oil and empty drums are considered hazardous wastes, and enforcement penalties of temporary or permanent shutdown are available and utilized by Mexican authorities.¹⁷

¹⁷ Supra note 110 at 5.
D. The Future Mexican Environment.

Mexico has identified most of the major environmental problems, but it is still a long
way from correcting them. Mexico lacks the money, resources, training and full political
support to clean up, regulate and enforce its stated vision of sustainable development. It
can still handle only 15 percent of its hazardous waste; the rest go into waterways, sewers
or the desert. illegal dumps with thousands of barrels of toxic waste continue to dot the
country's northern deserts. Critical air problems continue to haunt the major urban cen-
ters where 41,000 industries and more than 3.5 million cars are concentrated. In addition,
water treatment facilities operate at only a 20 percent efficiency rate in a country that gen-
erates more than 422,000 tons of solid waste.

Improvements have occurred, however. Under Louis Donaldo Colosio Murrieta
(“Colosio”), the intended successor to President Salinas, SEMARNAP created two new
offices for improved communication and enforcement, hired and trained hundreds of new
inspectors and put long delayed regulations in place. In his efforts to improve enforcement,
he also expanded the powers of the Office of Attorney General, shut down ten large manu-
factoring plants and levied large penalties on polluters along the Tamaulipas/Texas border.
Colosio also fought for and won limited financial support for environmental infrastructure
projects, including sewage systems, clean drinking water, reforestation in Southeast Mexico
and conversion of all 85,000 gasoline-operated public vehicles in Mexico City to natural gas.

The Mexican environment lost a powerful ally in Colosio, obviously a proponent of
bringing increased attention to environmental issues in Mexico. In contrast, Mexico's new
president, Ernesto Zedillo Ponce de Leon (“Zedillo”), is an unknown in the environmen-
tal arena with no track record on environmental issues other than having been part of the
circle of top Mexican advisors to Salinas who apparently viewed environmental quality as
a national priority. Zedillo, a masters and doctoral economics graduate of Yale, served as
budget and planning secretary during the first three years of the Salinas presidency and
later as Secretary of Education. In addition, until Colosio's assassination, Zedillo served as
his campaign manager.

Given his positions in the Salinas administration and Colosio campaign, Zedillo, even
without an impressive environmental background, is most likely to continue the forward
moving environmental agenda begun by Salinas and Colosio. Not only is he likely to share
their vision, but as a reputed intelligent and thoughtful individual, Zedillo is not likely to
ignore the very real trade and media risks Mexico faces if it fails to continue to improve its
environmental record. Some even believe that Zedillo may be more dedicated to reform
than his late predecessor whose heart may not have been in the overall reform movement.
As a prime architect of Salinas' economic policies, many argue that Zedillo will be even
more committed to the reform in general and environmental reform in particular. Time
and Zedillo's “political will” will tell.

of the 5 million tons of hazardous waste generated annually in Mexico are adequately treated
or stored.
E. NAFTA’s Effect on the Future Mexican Environment.

The question in the long run is whether free trade will push Mexico toward true environmental reform or in the opposite direction. In answering this question one must keep in mind always that NAFTA is a trade agreement first, and only second an environmental policy agreement. Many still argue that NAFTA exacerbates the danger that countries will compete in the international marketplace by lowering environmental and other standards without providing strong tools to cope with the large political and economic pressures of trade. The risk may be especially high under NAFTA because the agreement provides new safeguards to increase direct foreign investment in Mexico and seeks to integrate the economies of countries with very different political systems, cultures and levels of development. Mexico’s need to attract investment could force it to neglect environmental protection. Its less than fully democratic political structure may allow it to do so. Recent relaxation of pre-construction Environmental Impact Study requirements may indicate a trend in Mexico to lessen standards to attract new investment. Although government officials credit this as an administrative action, many NGO’s see it as an emasculation of Mexico’s environmental law and a major step in the wrong direction.

Although President Salinas established a record of environmental activism during the NAFTA debate, environmental groups point to the past, when Mexican authorities tightly controlled the pace of environmental improvement to protect trade objectives. For example, in March 1992, the Mexican government abruptly fired Carmen Hernandez de Vasquez, chief of the civil-protection office in Tijuana, for vigorously investigating heavy-metal contamination at a battery-recycling plant abandoned by Alco Pacifico, a U.S. company. Two years later, a large dairy feedlot downwind from the plant’s contaminated slag heaps is still in operation. Also, in the summer of 1993, the government closed Mexico City’s Center for Ecodevelopment and dismissed, among others, Ivan Restrepo, an agricultural economist critical of chemical-intensive agro-industry. The American Association for the Advancement of Science has suggested that these dismissals were meant to stifle criticism of Mexico’s environmental record during the NAFTA debate.119

Many agree that Mexico is on the road to successfully facing the challenge of economic growth while preserving a healthy environment. It is still too early in the infancy of NAFTA and its Side Agreement, and the Zedillo Administration, to predict with any certainty how these agreements and increased trade will impact Mexico’s continuing attempts to meet its environmental challenges. Certainly Mexico, as a result of NAFTA, is aware of the world’s perception - that how we treat our natural world reveals much about our cultural values and the effectiveness of our social institutions. We await the passage of time to see how well the lesson has been learned.

VIII. Conclusion

If Mexico's current economic problems and competition for foreign investment force it to hold down environmental standards and cut back on environmental spending, the border and the United States' environment could also suffer. Transboundary pollution will continue at its current pace and probably increase, and U.S. companies could more easily justify moving abroad to escape tough environmental standards. Further destruction of Mexico's natural resource base will also impair its ability to support its own population and aggravate migration to and wage competition in the United States.10

The long-term key to improving environmental conditions in Mexico and along the border is to increase the economic well-being of its residents, thereby allowing higher payment of user fees for water, sewer and solid waste services. NAFTA, the Side Agreement, BECC and NADBank, acting as a catalyst for growth of the Mexican and border economies, are implements for enhancement of this process. The process has only begun, yet the attention paid to the Mexican and border environment since 1990 is greater than that received over the total 90 years prior. The neglect of the border region by both countries can be erased only through the new spirit of cooperation between Mexico and the United States resulting from NAFTA.

120. 59 Fed. Reg. 13721 (1994). As some evidence of this, the environment was one of the reasons given by the rebels for the armed rebellion in Chiapas on New Year's Day, when NAFTA took effect. One of the rebels stated at that time that a chief concern was that NAFTA would accelerate destruction of the forests and agricultural systems that have sustained their culture for hundreds of years. Id.
Figure 1

INTERNATIONAL BOUNDARY AND WATER COMMISSION
IBWC (U.S.A.)   CILA (Mexico)

<table>
<thead>
<tr>
<th>U.S. Commissioner</th>
<th>Mexican Commissioner</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Bernal</td>
<td>Ing. Arturo Herrera Solis</td>
</tr>
</tbody>
</table>

* Addresses sanitation problems of a binational nature
* Allocates joint use of international waters
* Manages international reservoirs and related facilities
* Other responsibilities

Source: Office of the Texas Attorney General
Figure 2

COMMISSION FOR ENVIRONMENTAL COOPERATION

Governing Council
- SEMARNAP Administrator
- Canadian Administrator
- EPA Administrator

- Governs the Commission
- Promotes information exchange and develops environmental recommendations
- Assists the Free Trade Commission on environmental matters
- Provides dispute settlement process
- Meets at least once yearly

Joint Advisory Committee
15 members
- 5 appointed by each Country
- Provides advice to the Council
- Provides technical, scientific, and other information to Secretariat
- Performs other tasks as Council may direct
- Meets at least once yearly

Secretariat
- Executive Director, appointed by Council, appoints a staff which:
  - Has a permanent office in Montreal
  - Receives allegations of non-enforcement of environmental laws
  - Submits allegations to Council
  - Independently investigates and prepares reports on allegations
  - Submits annual program and budget to Council

Source: Office of the Texas Attorney General
Figure 3

BORDER ENVIRONMENT COOPERATION COMMISSION ORGANIZATION CHART

Source: Border Environment Cooperation Commission.
### Figure 4

**BORDER ENVIRONMENTAL COOPERATION COMMISSION**

<table>
<thead>
<tr>
<th>Board of Directors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mexico (5 members)</strong></td>
<td><strong>U.S.A. (5 members)</strong></td>
</tr>
<tr>
<td>1. Commissioner IBWC (ex officio)</td>
<td>1. Commissioner IBWC (ex officio)</td>
</tr>
<tr>
<td>2. SEMARNAP Administrator (ex officio)</td>
<td>2. EPA Administrator (ex officio)</td>
</tr>
<tr>
<td>3. Representative of a border state</td>
<td>3. Representative of a border state</td>
</tr>
<tr>
<td>4. Representative of a border locality</td>
<td>4. Representative of a border locality</td>
</tr>
<tr>
<td>5. Resident of a border region</td>
<td>5. Resident of a border region</td>
</tr>
</tbody>
</table>

**General Manager and Deputy (appointed by Board)**

For environmental infrastructure projects:

- coordinating, preparing, developing, implementing, including design, siting, and other aspects
- analyzing financial feasibility of projects
- evaluating social and economic benefits
- organizing, developing, and arranging public and private funding
- certifying applications for financing to be submitted to the North American Development Bank

**Advisory Council**

18 members, 9 each from Mexico and U.S.A.

(U.S.A. members appointed by U.S. President represent state and local governments and/or local community groups and members of the public.)

- meets quarterly
- advises Board and General Manager

Source: Office of the Texas Attorney General
Figure 5

For Additional Information

North American Development Bank
Alfredo Phillips Olmedo, Managing Director and CEO
Victor Miramontes, Deputy Managing Director and COO
425 Soledad, Suite 610
San Antonio, TX 78205
Telephone: (210) 231-8000
Facsimile: (210) 231-6232

Border Environment Cooperation Commission
Roger Frauenfelder, General Manager
Luis R. Dominguez, Deputy General Manager
Bvd. Tomas Fernandez No. 7940
Torres Compostre Piso 6o
Apartado Postal 3114-j
Ciudad Juarez, Chihuahua, Mexico, C.P. 32470
Telephone: 011-52-16-29-23-95
Facsimile: 011-52-16-29-23-97
E-mail: BECC(a)eagle.com
Figure 6

BORDER ENVIRONMENT COOPERATION COMMISSION

Certification process flow chart

BEGIN → STEP 1 → TECHNICAL ASSISTANCE → STEP II → ANALYSIS AND CERTIFICATION → FINANCING → PROJECT EXECUTION

The applicant communicates with BECC
The general information format is filled in
Technical assistance requirements and conditions are requested by applicant
Detailed information is submitted and reviewed according to BECC criteria
BECC personnel recommend certification to the Board of Directors and it is conditionally established
Financing through NADBasis and/or other credit institutions, partial or total is sought
Project construction is started, as well as applicable operation and maintenance

Source: Border Environment Cooperation Commission