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Maquiladoras: Corporate America Moves South of the U.S.-Mexican Border; Encouraged by Lax Environmental Enforcement and the Prospect of a NAFTA That Fails to Integrate Internationally Binding Health, Safety and Environmental Safeguards With GATT Principles of Free Trade

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I. INTRODUCTION

Mexico has been blessed with rich and bountiful ecosystems: mountains; tropical forests; deserts; and a variety of flora and fauna. In stark contrast to that inviting vacationers' vision, it is also a country that is struggling with an unstable national economy, grappling with widespread grass roots poverty, and dancing with environmental disaster.¹ In relation to the environment, Mexico is plagued by a plethora of multimedia problems, a significant portion of which are concentrated along the U.S.-Mexican border: air pollution; ground and surface water contamination; toxic and hazardous waste disposition.²

As with many other developing countries, the level of Mexico's social and economic growth has made it easy prey for industrialization and unlawful disposition of wastes from the more

¹Note, *The New Mexican Revolution: Economic Reform and the 1989 Regulations of the Law for the Promotion of Mexican Investment and the Regulation of Foreign Investment*, 24 GEO. WASH. J. INT'L L. & ECON. 647 (1991); Cody, *Expanding Waste Line Along Mexico's Border*, Washington Post, Feb. 17, 1992, at A1, col. 6; Rich, *Bordering on Trouble*, ENV'T'L F., May-June 1991.

²SECRETARIAT OF URBAN DEVELOPMENT AND ECOLOGY (SEDUE)-ENVIRONMENTAL PROTECTION AGENCY (EPA), INTEGRATED ENVIRONMENTAL PLAN FOR THE MEXICAN-U.S. BORDER AREA (FIRST STAGE, 1992-1994) (released Feb. 25, 1992), V-1 - V-36 [hereinafter cited as BORDER PLAN]; U.S. TRADE REPRESENTATIVE (USTR), REVIEW OF U.S.-MEXICO ENVIRONMENTAL ISSUES, Executive Summary, 4-7 [hereinafter cited as USTR REVIEW].

developed segments of the world.³ Moreover, foreign violations have been compounded by domestic noncompliance and poor government enforcement of existing Mexican environmental standards.⁴ In the international arena, the United States has emerged as the acknowledged home for some of the more substantial corporate contributors to the growing environmental crisis on the U.S.-Mexican border.⁵ That is not to suggest that corporate America is unwelcome in Mexico, however, it is clear that its destructive influence has left an indelible mark on the Mexican environment.⁶

Porfirio Diaz, President of Mexico from 1876 to 1910, once commented, "[P]oor Mexico, so far from God and so close to the United States." The last twenty-five years have demonstrated that Mexico's proximity to the United States has offered economic benefits and environmental disaster for both countries.

In 1964, the United States discontinued the Bracero Program⁷ and Mexican unemployment increased, significantly enhancing the

³BILL MOYERS, GLOBAL DUMPING GROUND: THE INTERNATIONAL TRAFFIC IN HAZARDOUS WASTE (1990); Note, *America's Lethal Export: The Growing Trade in Hazardous Waste*, 1991 U. ILL. L. REV. 889 (1991).

⁴Rich, *supra* note 1, at 28.

⁵*Id.*, at 27

⁶Cody, *supra* note 1, at A1, A34.

⁷A program which allowed Mexican farm laborers to work seasonally on American farms. See *Comment, Mexico's Border Industrial Program: Legal Guidelines for the Foreign Investor*, 4 J. INT'L L. POL'Y 89 (1974). See also, Act of Dec. 13, 1963, Pub. L. No. 88-203, 77 Stat. 363 (effective Dec. 13, 1964).

existing economic underdevelopment of the country. In response to the dire economic needs of his country Lopez Mateos, then President of Mexico, announced the first border industrialization program in 1965.⁸ That announcement marked the inception of the maquiladoras.

Historically the term "maquiladora," or mill, referred to grain grinding mills, and "maquila" was the mill owner's share of the flour received for grinding the grain.⁹ Currently, maquiladora refers to the primarily foreign-owned plants, located along the Mexican border, that use imported materials for the processing, assembly, and export of consumer items. Most of the plants are the result of production-sharing arrangements with firms in the United States who are drawn by the low cost of operation and proximity to the American consumer market. Moreover, the Mexican maquiladora program permits 100 percent foreign investment, duty-free temporary importation of materials, and a minimal value added tax applied to exports.¹⁰

In 1971, the provisions and the procedures applicable to the maquiladora program were codified in the Mexican Customs Code.¹¹ As the program developed the economic benefits to the previously under-employed Mexican population became evident. The Mexican

⁸INTERNATIONAL REPORTS, MOVING TOWARD FREE TRADE: THE MEXICAN-U.S. RELATIONSHIP, 47-57 (1990).

⁹BORDER PLAN, *supra* note 2, at 11-8.

¹⁰*Id.*, at 11-8 - 11-9; Stephenson, *Mexico's Maquiladora Program: Challenges and Prospects*, 22 ST. MARY'S L. J. 589 (1990).

¹¹Customs Code [Mexico], Art. 321, para. 3, D.O. Mar. 17, 1971.

President, Miguel de la Madrid, responded with the August 15, 1983 Presidential Decree for the Promotion and Operation of the Maquiladora Export Industry.¹² The corresponding average annual growth rate for maquiladora employment and facilities has been 16 percent over the last eight years.¹³ Currently, the estimated 2,000 maquiladoras operating in Mexico employ approximately 420,000 Mexican workers. About 90 percent of the factories were established by approximately 850 companies from the United States.¹⁴ It is estimated that approximately 90 percent of the maquiladoras are located in the border region.¹⁵

The flip side of the economic success story of the maquiladoras is the severe environmental damage that is the result of concentrated and rapid industrial growth along the 2,000 mile U.S.-Mexican border.¹⁶ Increases in population, air pollution, water

¹²Decree for the Development and Operation of the In-Bond Export Industry, D.O. Aug. 15, 1983, reprinted in MEXICAN FOREIGN TRADE INSTITUTE, MEXICO: ITS IN-BOND INDUSTRY, YOUR INVESTMENT OPPORTUNITY (1984).

¹³BORDER PLAN, *supra* note 2, at 11-9.

¹⁴U.S. GENERAL ACCOUNTING OFFICE, HAZARDOUS WASTE: MANAGEMENT OF MAQUILADORAS' WASTE HAMPERED BY LACK OF INFORMATION, 1-2 (Feb. 27, 1992) [hereinafter cited as MAQUILADORAS' WASTE]; Rich, *supra* note 1, at 27.

¹⁵*House Comm. on Ways and Means Hearings, infra* note 18, at (statement of Joseph A. Kinney, Executive Director, National Safe Workplace Institute).

¹⁶NATIONAL TOXIC CAMPAIGN FUND, BORDER TROUBLE: RIVERS IN PERIL (A REPORT ON WATER POLLUTION DUE TO INDUSTRIAL DEVELOPMENT IN NORTHERN MEXICO) (May 1991) ["Sampling was performed between January 1990 and April 1991. The project made

pollution, hazardous waste generation, occupational safety problems, and the potential for environmental accidents are issues which pose significant environmental challenges.¹⁷ Regarding these areas of concern, the absence of adequate enforcement and monitoring by the Mexican authorities has provided an allure for United States corporate participation in the maquiladora program.¹⁸ Specifically, the extreme cost differential between the disposition of hazardous waste under strict EPA regulatory standards and those imposed by a developing nation such as Mexico has made the maquiladora program enticing for the corporate sector of America.¹⁹ Recently, these issues have become the focus of international attention as a result of the pending trilateral negotiations for the

use of state-of-the-art testing methods including high resolution capillary gas chromatography/mass spectrometry (GC/MS) and atomic absorption spectrometry (AAS). Analyses were performed for: conventional pollutants; toxic metals; and toxic organics.”] [hereinafter cited as WATER POLLUTION REPORT]; Cody, *supra* note 1; Rich, *supra* note 1.

¹⁷BORDER PLAN, *supra* note 2, at V-1 - V-36.

¹⁸Cleeland, *A Border Boom Has Its Ugly Side, Too*, Dallas Morning News, Feb. 16, 1992, at A-8, col. 2; *Hearings on the Proposed Negotiation of a Free Trade Agreement With Mexico Before the Subcomm. on Trade of the House Comm. on Ways and Means*, 102d Cong., 1st Sess. (Feb. 20-21 & 28, 1991) [hereinafter cited as *House Comm. on Ways and Means Hearings*] (statements of Congressman Terry L. Bruce; David L. Ortman, Northwest Representative, Friends of the Earth; Joseph A. Kinney, Executive Director, National Safe Workplace Institute; Dale L. Matschullat, Vice President and General Counsel, Newell Company); Bradsher, *GAO Job Study Expected to Fuel Trade-Pact Debate*, N.Y. Times, May 8, 1991, at D2, col. 5.

¹⁹Note, *supra* note 3, at 891.

North American Free Trade Agreement (NAFTA).²⁰ The mishandling of hazardous waste has become a preeminent concern.²¹

The focus of this paper will be the American corporate exodus to the maquiladora program, a movement designed to evade the stringent implementation of EPA environmental standards, particularly in the area of hazardous waste disposition. This discussion will touch upon several influencing factors: the high cost

²⁰In June 1990, President George Bush of the United States, and President Carlos Salinas de Gortari of Mexico, announced that a comprehensive free-trade agreement would benefit both countries. Later, in December 1991, the presidents met again and announced the formal beginning of the negotiation process. The prospect of a trilateral trade agreement, that would allow for Canadian participation, was not initially considered. TEXAS COMPTROLLER OF PUBLIC ACCOUNTS, THE U.S.-MEXICO FREE-TRADE: PAYOFFS AND TRADEOFFS, 17 (Nov. 1991). It was not until February 1991 that all three countries concurred in the decision to expand negotiations from U.S.-Mexican free trade to the NAFTA. U.S. CHAMBER OF COMMERCE, NORTH AMERICAN FREE TRADE AGREEMENT, i (Sep. 1991) [hereinafter cited as U.S. CHAMBER OF COMMERCE REPORT]. As a result of pending NAFTA negotiations labor, occupational safety and environmental issues in the U.S.-Mexican border region have received extensive attention in the Senate and the House. *Hearings on the United States-Mexico Free Trade Agreement Before the Senate Comm. on Finance*, 102d Cong., 1st Sess. (Feb. 6 & 20, 1991) [hereinafter cited as *Senate Comm. on Finance Hearings*]; *House Comm. on Ways and Means Hearings*, *supra* note 18; *Hearings on the North American Free Trade Agreement Before the Subcomm. on Commerce, Consumer Protection, and Competitiveness of the House Committee on Energy and Commerce*, 102d Cong. 1st Sess. (Mar. 20, May 8 & 15, 1991) [hereinafter cited as *House Comm. on Energy and Commerce Hearings*].

²¹BORDER PLAN, *supra* note 2, at III-18 - III-27, V-1 - V-5.

of compliance with environmental standards in the United States; the lax environmental enforcement by Mexican authorities; the high and increasing costs associated with hazardous waste disposition; the use of the maquiladoras as a means of unlawfully disposing of hazardous waste outside of EPA jurisdiction. The proposed NAFTA will also be addressed in regard to its potential impact on that corporate shift.

II. COST BENEFIT ANALYSIS

A continuing theme in industrial history has been the drive by manufacturers to maximize profits. Integral to this consideration is the need to minimize costs. Businesses in the United States spend approximately 95 billion dollars per year complying with EPA environmental regulatory standards.²² Some United States businesses have determined that the costs of environmental compliance have exceeded the benefits of production. For example, in 1985 the second largest rum producer in Puerto Rico chose to discontinue operations rather than make the considerable investment in the requisite waste treatment facilities.²³ In other instances, however, relocation south of the U.S.-Mexican border has become the corporate backlash response to the financial burden imposed by environmental standards.

The Mexican government's hands-off attitude toward

²²*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Congressman Terry L. Bruce).

²³*Id.*, at (statement of Alfredo Salazar, Jr., Administrator, Economic Development Administration, Commonwealth of Puerto Rico).

environmental protection and occupational health and safety laws has made it a haven for American industrial relocation.²⁴ The Texas Economic Commission has gone so far as to use the absence of environmental and health enforcement to promote the flight of American businesses to the maquiladoras. The Commission has maintained that in Mexico: "Governmental control is minimal; for example, there are no stiff prohibitions such as in the United States with respect to air quality, etc."²⁵ While it is difficult to numerically quantify which American firms have moved to Mexico to avoid having to implement EPA environmental regulations, there is support for the existence of that industrial trend.

A study conducted by the General Accounting Office found that employment in the Los Angeles furniture industry dropped by approximately one-tenth in the last three years as companies moved to Mexico in pursuit of lower wages and less rigid environmental enforcement.²⁶ A survey of the 28 furniture manufacturers, who participated in the relocation, indicated that 78 percent "cited stringent air pollution emission control standards for paint coatings and solvents" as the reason for the move.²⁷

²⁴*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Congresswoman Marcy Kaptur, Appendix 10).

²⁵*Id.* Texas has about an \$8 billion trade surplus with Mexico. Much of this comes from component parts for maquiladoras. TEXAS COMPTROLLER OF PUBLIC ACCOUNTS, THE U.S.-MEXICO FREE-TRADE PACT: PAYOFFS AND TRADEOFFS (November, 1991), 3 [hereinafter cited as TEXAS COMPTROLLER].

²⁶Bradsher, *supra* note 18, at D2, col. 5.

²⁷*Id.*

Based on a report prepared by the National Safe Workplace Institute, sentiments in the industrial heartland of the Midwest suggest that maquiladora relocation has become an acknowledged alternative to strict environmental compliance. Faced with the choice of reduced production or relocation to Mexico, some plant managers are cutting corners in relation to health, safety, and environmental strictures.²⁸ One EPA official reported that when confronted with strict environmental requirements a plant manager responded: "Hey, keep the heat up and we will just pack up and move to Mexico."²⁹ To ease the regulatory pressures on businesses, some state governments such as Ohio, Indiana, Illinois, and Michigan have established industrial retention policies, that provide concessions in the form of tax or land-use zoning relief. According to the National Safe Workplace Institute, demands for such concessions are accelerating. The estimated dollar value of state concessions has reached the range of hundreds of millions of dollars.³⁰

The history underlying the Occupational Safety and Health Act (OSHA)³¹ demonstrates what occurs when there is an absence of a level regulatory playing field, such as between the United States and Mexico. In the 1960s many companies in the United States began

²⁸*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Joseph A. Kinney, Executive Director, National Safe Workplace Institute, Chicago, Illinois).

²⁹*Id.*

³⁰*Id.*

³¹Occupational, Safety, and Health Act (OSHA) 29 U.S.C. § 651 *et seq.* (1990).

seeking occupational environments with minimal controls and inexpensive labor. During that period there was no federal legal framework to protect against an unsafe or unhealthy workplace. In 1970 OSHA was passed to remove the disparate occupational safety standards that existed at the state level, that had the concomitant effect of discouraging manufacturing relocations.³²

A specific instance involving Kast Metal Workers bears further witness to the attraction of an unregulated occupational environment. Kast Metals, Inc., of Keokuk, Iowa, fought against OSHA inspections for many years. In 1982 the Iowa State Bureau of Labor won a lawsuit that got the state OSHA agency into the plant. In 1987 Kast Metals was fined \$2,000 for "serious violations" centering on improper containment of certain toxic gases. Kast Metal, Inc. responded by closing its Keokuk plant and moving to Carmago, Mexico.³³

The term *maquiladoras* has come to mean many things to many people: low cost production for American businesses; inadequate infrastructure and environmental ruin for residents on both sides of the border; meager wages (average \$2.90 per day) and sweatshop conditions for Mexican workers.³⁴ In short, the *maquiladoras* represent a profitable endeavor for some, and overwhelming health

³²*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Joseph A. Kinney, Executive Director, National Safe Workplace Institute, Chicago).

³³*Id.*, at (statement of Congresswoman Marcy Kaptur, Appendix 10).

³⁴*Id.*

and environmental problems for others. An examination of the dynamics of environmental enforcement in the United States and Mexico may provide some insights regarding the future impact of the maquiladora program. An important aspect of this evaluation will involve a discussion of the binational and international actions that pertain to the shared border environment.

A. U.S Environmental Laws

Corporations based in the United States that failed to spend the money to achieve environmental compliance have discovered that noncompliance can be painful. Most environmental laws in the United States provide a variety of enforcement tools to ensure compliance.

The Clean Air Act,³⁵ for example, allows EPA to issue administrative compliance or penalty orders, bring civil actions or initiate criminal actions against violators, and impose sanctions such as injunctions, fines and imprisonment. Under the EPA Administrator's authority administrative penalties may range from field citations for minor violations, with fines up to \$5,000 per day of violation, to orders with fines up to \$25,000 per day of violation, with a maximum of \$200,000. Court imposed civil fines may be assessed up to \$25,000 per day for each violation without any

³⁵42 U.S.C. §§ 7401-7642 (1988), *amended by* Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (codified at 42 U.S.C. §§ 7401-7671q (West Supp. 1991)).

maximum limit.³⁶

Similarly, the many other media specific environmental statutes in the United States establish administrative enforcement mechanisms such as compliance orders, civil actions (which may include citizen suits) and criminal prosecutions. The statutes tend to differ in respect to the amounts of fines authorized, the timing and threshold for taking an action. While EPA administers some aspect of most environmental law statutes, the Department of Justice is responsible for litigating civil and criminal judicial actions.³⁷

Since 1988 EPA has referred 1,111 environmental violations to the Department of Justice. In 1990 EPA referred 375 civil judicial enforcement cases and 65 criminal cases to the Department of Justice. Based on delegated authority, state and local governments also play a significant role in enforcement.³⁸ "On the

³⁶42 U.S.C. §§ 7413, 7607 (1991). The EPA Administrator's authority is limited to matters where the total administrative penalty sought does not exceed \$200,000. A larger penalty may be sought where the Administrator and the Attorney General jointly determine that such action is appropriate. 42 U.S.C. § 7413(d) (1991).

³⁷USTR REVIEW, *supra* note 2, at 36; *See generally* Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j-26 (1986); Federal Water Pollution Control Act, 33 U.S.C. §§ 1251- 1387 (1987); Marine Protection, Research, and Sanctuaries Act, 33 U.S.C. §§ 1401-1445 (1988); Endangered Species Act, 16 U.S.C. §§ 1531-1544 (1988); Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901-6992(k) (1988); Comprehensive Environmental Response, Conservation and Liability Act, 42 U.S.C. §§ 9601-9675 (1986).

³⁸USTR REVIEW, *supra* note 2, at 37-38.

civil enforcement side, U.S. enforcement policy aims not only at making polluters pay, but also at taking the profit out of environmental violations, by imposing additional penalties as a deterrent, and seeking injunctions against harmful practices."³⁹

EPA involvement with the maquiladoras begins at the border, with the importation of maquila hazardous waste.⁴⁰ In the area of hazardous waste management and control a complex body of environmental regulations has been developed pursuant to the Resource Conservation and Recovery Act.⁴¹ The RCRA defines hazardous waste as:

... a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may: (A) cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.⁴²

³⁹*Id.*, at 38.

⁴⁰La Paz Agreement Annexes, *infra* note 82, at Annex III, art. 11.

⁴¹Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6987, *amended by* Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. §§ 6921-6939 (1984), *amended by* Resource Conservation and Recovery Act [RCRA] 42 U.S.C. §§ 6901-6992(k) (1988); 40 C.F.R. pts. 260-281 (1992).

⁴²42 U.S.C. § 6903(5) (1988).

In order to meet statutory definition the waste must fall into three categories: (1) solid; (2) discarded; and (3) hazardous.⁴³ RCRA does not regulate the transportation, storage, or disposal of waste that is

⁴³The statutory definition for the term disposal is set forth at 42 U.S.C. § 6903(3):

... the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

A solid waste is defined at 42 U.S.C. § 6903(27):

...any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923) [42 U.S.C. § 2011 et seq.].

EPA does not classify "waste derived products" as solid wastes subject to RCRA regulation unless the waste is "used in a manner constituting disposal, or used to produce products that are applied to the land." 40 C.F.R. § 261.2(e)(2)(i) (1992); See Note, *supra* note 3, at 898. The terms solid, discarded, and hazardous waste are defined with greater exactitude through federal regulations promulgated pursuant to RCRA. 40 C.F.R. §§ 261.3-261.33 (1992).

by definition nonhazardous.⁴⁴ In addition, certain materials are specifically excluded from regulation under RCRA: household garbage, fly ash, bottom ash, slag ash, flue gas emission control wastes, solid wastes associated with mining operations, and cement kiln dust waste.⁴⁵

When RCRA hazardous waste, produced by maquiladora processing of American raw materials, crosses the border for return to the United States it must be accompanied by a Uniform Hazardous Waste Manifest.⁴⁶ It is required that the manifest identify the foreign generator and importer. The importer is considered the legal

⁴⁴2 U.S.C. §§ 6901-6992(k) (1988). Some critics have asserted that the failure to regulate nonhazardous wastes has left a significant loophole. It is claimed that the complexity of the RCRA hazardous waste definition results in fine line distinctions between hazardous and nonhazardous wastes that ultimately are toxicologically identical. As a result of the potential dangers associated with certain nonhazardous wastes environmental advocates contend that such wastes pose severe health and environmental problems. Note, *supra* note 3, at 899.

⁴⁵2 U.S.C. § 6921(b)(3)(A) (1988); 40 C.F.R. § 261.4 (1992).

⁴⁶The U.S. "Uniform Hazardous Waste Manifest" is a required form which identifies the quantity, composition, and the origin, routing, and destination of the hazardous waste during its transportation from the point of generation to the point of off-site disposal, treatment, or storage. 40 C.F.R. §§ 262.20-262.23 (1992). Maquiladora hazardous waste that is the product of American raw materials must be returned to the U.S. pursuant to a bilateral agreement between the United States and Mexico. That agreement will be discussed later in this paper. See La Paz Agreement, *infra* note 80.

generator for RCRA tracking and management purposes.⁴⁷ The owner or operator of the destination facility in the United States must give EPA notice of hazardous waste imports four weeks in advance of actual receipt.⁴⁸

Transboundary shipments of hazardous waste from Mexico may be received at 19 U.S. Customs Service points of entry located in Arizona, California, New Mexico, and Texas. Customs inspectors at the points of entry process the initial entry documents. Although Customs has not established specific regulations applicable to the entry of hazardous waste, the Southwest and Regional Customs Offices have recommended that importer/receivers provide 72-hour notice of such shipments. In an effort to preserve the safety of the border area, and ensure proper tracking of imported hazardous waste, it has also been recommended that the Customs staff in the Southwest and Pacific Regions obtain information regarding the chemical identification of the imported waste, and retain copies of U.S. manifests.⁴⁹ Pursuant to an informal arrangement with U.S.

⁴⁷40 C.F.R. §§ 262.20, 262.60 (1992); Telephone interview with Jim Vincent, Coordinator, Hazardous Waste Export Enforcement, Denver, Colorado, EPA (Mar. 17, 1992) [hereinafter cited as Vincent Interview].

⁴⁸40 C.F.R. §§ 264.12, 255.12 (1992).

⁴⁹MAQUILADORAS' WASTE, *supra* note 14, at 3. The U.S. Customs Service is responsible for the promulgation and implementation of policies and regulations pertaining to cargo, pedestrians, and passenger vehicles entering the United States. That responsibility entails the processing of entry documents, the collection of duties, inspections for illegal substances or contraband, and enforcement of other federal agency standards. In

Customs officials, copies of Uniform Hazardous Waste Manifests are then forwarded to the office of Hazardous Waste Export Enforcement, Denver, Colorado, EPA.⁵⁰ Maquiladora hazardous waste

consideration of its range of responsibilities the Customs inspection staffing along the U.S.-Mexican border has not kept up with transboundary traffic. In fiscal year 1990 the Customs Service was authorized 1,586 positions for the four districts along the border (Laredo, El Paso, Nogales, and San Diego). Of the allotted 1,263 inspector positions only 1,164 were filled. While the actual number of inspectors increased by 12 percent between fiscal years 1987 and 1990, northbound commercial traffic increased by 42 percent for trucks and 29 percent for rail cars. Although Congress authorized and funded an additional 351 inspector positions for the same four border districts in fiscal year 1991 recruiting and training requirements delayed position manning. In short, Customs staffing levels have not been adequate to handle the ever-increasing commercial border traffic. U.S. GENERAL ACCOUNTING OFFICE, U.S.-MEXICAN TRADE: CONCERNS ABOUT THE ADEQUACY OF BORDER INFRASTRUCTURE, 13-14 (May 1991) [hereinafter cited as BORDER INFRASTRUCTURE].

⁵⁰MAQUILADORAS' WASTE, *supra* at 8-9; Vincent Interview, *supra* note 47. Jim Vincent's office of Hazardous Waste Export Enforcement is part of EPA's National Enforcement Investigations Center (NEIC). The NEIC is responsible for overall coordination of the enforcement program for hazardous waste exports, including information management activities such as the development and maintenance of a hazardous waste export data base, the tracking of manifests and related data processing. Unfortunately, NEIC is not receiving all manifests. "For example, the center [NEIC] received no manifests from one Customs district in Texas, even though ...hazardous waste was being shipped across the border at the district's eight ports of entry. In addition, the manifests received by the center do not always contain all the required information. According to Customs' national hazardous waste coordinator, Customs is not required to review the manifest for completeness before admitting a shipment. As a result, some manifests do not identify the foreign generator or the amount of the waste imported."

is regulated under RCRA as a domestic hazardous waste upon entry to the United States, and is subject to storage, treatment or disposal consistent with the applicable federal or state regulatory scheme.⁵¹

B. Mexican Environmental Laws

Despite 100 percent foreign ownership, maquiladora facility operations and business practices conducted south of the border are subject solely to the Mexican Secretariat of Urban Development and

MAQUILADORAS' WASTE, *supra* note 14, at 8.

5140 C.F.R. pts. 270, 271 (1992). Some states are RCRA authorized states which have been allowed to maintain a separate regulatory program under state law. Other states have been given delegated authority to implement RCRA at the state level. RCRA requirements represent the baseline for both methods of state hazardous waste management. In addition, a RCRA authorized state regulatory program should not impede interstate management of hazardous waste. Although this issue is currently the subject of litigation, previous rulings have suggested that when hazardous waste is transported over state lines it becomes an object of commerce and subject to the Commerce Clause, U.S. Const., art. I, Section 8, cl. 3. See *National Solid Wastes Management Assoc. v. Alabama Department of Environmental Management*, 910 F.2d 713, 719 (11th Cir. 1990), *cert. denied*, ___ U.S. ___, 111 S.Ct. 2800, 115 L.Ed.2d 973 (1991); See also *City of Philadelphia v. New Jersey*, 437 U.S. 617, 622 98 S.Ct. 2531, 2534, 57 L.Ed.2d 475 (1978). In a recent case involving the disposition of maquiladora hazardous waste, the court concluded that it was a Commerce Clause violation for a RCRA authorized state to establish a blanket prohibition against the introduction or receipt for treatment, storage, or disposal of a hazardous waste generated by a foreign country. *Chemical Waste Management, Inc. v. Templet*, 770 F.Supp. 1142 (M.D. La. 1991).

Ecology (SEDUE) jurisdiction.⁵² Regarding the underlying legal authority for SEDUE action, Mexico has had environmental legislation in place since 1971.⁵³ When the General Law of the Ecological Equilibrium and Environmental Protection (General Law)⁵⁴ was enacted in 1988, it represented the first comprehensive body of Mexican environmental legislation designed to protect air, water, and soil. The General Law replaced earlier legislation that failed to adequately address the problems associated with maquiladora industrialization.⁵⁵

The General Law provides the basic criteria and policy guidance for developing specific regulatory regimes, and leaves wide

⁵²MAQUILADORAS' WASTE, *supra* note 14, at 1-2. It should be noted that environmental liability of a maquiladora plant may render the U.S. parent corporation susceptible to Mexican and U.S. tort laws. Gonzalez, *Environmental Aspects of Maquiladora Operations: A Note of Caution for U.S. Parent corporations*, 22 ST. MARY'S L. J. 659 (1991); See *In Re Union Carbide Corp. Gas Plant Disaster at Bhopal, India* in Dec. 1984, 809 F.2d 195 (2d Cir. 1987); *But See Piper Aircraft Co. v. Reyna*, 454 U.S. 235, 238 (1981).

⁵³Federal Law to Prevent and Control Environmental Pollution, D.O., Mar. 12, 1971; Federal Environmental Protection Law, D.O. Jan. 11, 1982, and the 1984 Amendments.

⁵⁴General Law of Ecological Equilibrium and Environmental Protection, D.O. Jan. 28, 1988 [hereinafter cited as General Law]. The General Law governs both environmental protection and natural resource conservation, as compared to the numerous media specific U.S. environmental and natural resource protection laws. Mexico's environmental protection provisions address air, water, and hazardous waste pollution, pesticides and toxic substances. There is also an established framework for environmental impact appraisals. REGULATIONS AND ENFORCEMENT, *infra* note 56, at 5.

⁵⁵MAQUILADORAS' WASTE, *supra* note 14, at 3.

discretion to SEDUE to develop the details of environmental programs through regulations and technical standards. Because of the relatively recent enactment of the General Law, Mexico is still developing regulations and enforcement standards. Mexican environmental laws, when completely supplemented by the new regulations and technical norms, are expected to be similar to the regulatory regime of the United States.⁵⁶ The current environmental

⁵⁶The Mexican regulations and technical norms are based on U.S. and other international standards. Mexican regulations are designed to provide specific nonnumeric criteria and policy guidance under the law, while the technical norms are designed to provide numeric criteria. As such, the norms are similar to U.S. regulations that specify numeric criteria for emissions. Although the Mexican law is not as detailed as the U.S. laws, the related regulations and technical norms have or are expected to provide the needed degree of specificity that will make them comparable. While most of the major concerns of U.S. pollution control are addressed, at least three areas are not yet covered: (1) cleanup of abandoned hazardous waste sites; (2) restrictions on land disposal of hazardous waste; and (3) regulation of leaking underground storage tanks. U.S. GENERAL ACCOUNTING OFFICE, U.S.-MEXICO TRADE: INFORMATION ON ENVIRONMENTAL REGULATIONS AND ENFORCEMENT (May 1990), 5-6 [hereinafter cited as REGULATIONS AND ENFORCEMENT]. Regulations relating to national air pollution, air pollution within the Mexico City Metropolitan Zone, environmental impact assessment and hazardous wastes have been issued under the General Law. As of November 1990, 57 technical ecological standards (NTEs) and ecological criteria have been issued to implement the regulations. Since then, SEDUE has approved additional NTEs involving source categories for water. Other NTEs for air and hazardous waste pollution are expected by the end of 1992. See *Id.*, at 5-6; See also MAQUILADORAS' WASTE, *supra* note 14, at 4-5; BORDER PLAN, *supra* note 2, at A-1; See also EPA, MEXICAN ENVIRONMENTAL LAWS, REGULATIONS AND STANDARDS, PRELIMINARY REPORT OF EPA

regulatory policy in Mexico reflects both traditional centralism, and a movement toward decentralization of authority.⁵⁷

Regulatory and enforcement responsibility imposed by the General Law is nationally centralized under SEDUE. In addition, the General Law delegates implementation authority to the states of Mexico, which may not impose a standard lower than the federal law. As of 1991 eighteen of the thirty-one Mexican states had enacted legislation comparable to the General Law. Four of those states are located along the U.S.-Mexican border: Sonora, Nuevo Leon, Coahuila, and Tamaulipas.⁵⁸

The actual enforcement practices of Mexican authorities reveal that there is a general preference for the application of civil administrative measures, as opposed to the less frequently endorsed criminal prosecutions.⁵⁹ Environmental enforcement in Mexico under

FINDINGS (June 27, 1991) [hereinafter cited as MEXICAN ENVIRONMENTAL LAWS].

⁵⁷General Law, *supra* note 54, at tit. 1, ch. II and tit. 6, ch. IV; MAQUILADORAS' WASTE, *supra* note 14, at 3-4.

⁵⁸USTR REVIEW, *supra* note 2, at 39. The enforcement budget capacity of the Mexican states is questionable. *Hearing on the North American Free Trade Agreement Before the Subcomm. on Regulation, Business Opportunities, and Energy of the House Comm. on Small Business*, 102d Cong., 2d Sess. (Feb. 21, 1992) (statement of Dick Kamp, Director, Border Ecology Project) [hereinafter cited as *House Comm. on Small Business Hearings*].

⁵⁹USTR REVIEW, *supra* note 2, at 39; MEXICAN ENVIRONMENTAL LAWS, *supra* note 56, at 6. A term of three months to six years imprisonment may be imposed together with a fine of 100 to 1,000 times the daily non-skilled minimum wage for unauthorized hazardous activities "which cause or may cause serious injury to public health, ecosystems or their elements." General Law, *supra*

the General Law typically involves the use of one, or several, of five major mechanisms: (1) inspections; (2) temporary or permanent plant closures; (3) fines; (4) administrative detention; (5) voluntary compliance agreements.⁶⁰

SEDUE's preferred enforcement measures appear to be inspections and plant closures.⁶¹ Subsequent to the passing of the General Law, SEDUE maintains that it has increasingly applied both enforcement options. In the period March 1988 through the end of 1990, SEDUE claims that it conducted 5,405 inspections nationwide resulting in 980 partial, 1,139 temporary, and 3 permanent facility closures. January 1, 1991 through May 15, 1991 involved 275 inspections of plants located in Mexico City, resulting in the temporary or partial closing of 102 facilities, 3 permanent closures, and 34 facilities identified as in compliance.⁶² In addition, funds

note 54, at tit. 6, art. 184. If the same violation occurs in a population center three more years imprisonment may be imposed, and 20,000 days wages assessed. *Id.* The range of penalties is authorized for acts relating to hazardous materials or wastes, air pollution, and water pollution. *Id.*, at tit. 6, arts. 184-186.

⁶⁰ Currently, the maximum fine that can be assessed is the equivalent of about U.S. \$80,000 for a first time violation. Administrative detention involves the criminal arrest of a corporate officer or responsible party, and holding that individual for up to 36 hours. USTR REVIEW, *supra* note, at 40.

⁶¹ Although SEDUE has reserved the right to inspect, the potential for "arreglos," (making arrangements), will be high. *House Comm. on Small Business Hearings, supra* note 58, at (statement of Dick Kamp, Director, Border Ecology Project).

⁶² BORDER PLAN, *supra* note 2, at A-2; MEXICAN ENVIRONMENTAL LAWS, *supra* note 56, at 2. The Mexican procedures for implementing and enforcing its environmental protection

have been designated to permit a substantial increase of SEDUE inspectors in the border area, from 50 to 200. In order to support the new inspection staff SEDUE has increased its 1992 operational budget by about 450 percent, to U.S. \$6.3 million.⁶³

program vary for new and existing facilities. The primary components of the process are permits that specify the operating requirements and inspections to ensure compliance. These components are similar to those used in the U.S. Prior to obtaining an operating permit, Mexican law requires owners and/or operators of new facilities (post 1988 General Law enactment) to submit an environmental impact appraisal (EIA), and potentially an environmental risk assessment if hazardous risk activities or dangerous substances are involved. Owners and/or operators of existing facilities planning new modifications that may adversely affect the environment are also required to submit an EIA and possibly a risk assessment. A permit to construct the facility is issued after approval of the EIA and risk assessment. Before beginning operation, owners and/or operators of new facilities must then obtain separate permits or authorizations for applicable air emissions, water discharges, or handling of hazardous waste. Subsequent to the receipt of emissions/discharge permits operating licenses are issued, and the facility is then subject to future compliance inspections. Owners/operators of existing facilities are not subject to the EIA or risk assessment process. Existing facility owners and/or operators are merely required to register with SEDUE and to apply for the appropriate air, water, and hazardous waste permits. REGULATIONS AND ENFORCEMENT, *supra* note 56, at 7. While the major Mexican industrial facilities tend to have permits, over 90 percent of all industrial plants are operating without permits. Monitoring facilities are still sparse outside Mexico City, although Mexico has suggested that there are plans to establish monitoring networks which will cover 60 percent of the population. MEXICAN ENVIRONMENTAL LAWS, *supra* note 56, at 2.

⁶³Mexico's total financial commitment to environmental protection in the border area suggests that it has serious intentions of adhering to a tougher enforcement policy. The Mexican

Enforcement measures directed at maquiladora plants seem to have been a recent focus of SEDUE action. In 1989 only 6 percent of the maquiladoras had obtained operating licenses; in 1991, the percentage had increased to 54.6 percent. In 1990, 30 percent of the maquiladoras generating hazardous waste declared such activity; by 1991, this figure had apparently risen to 55 percent. Both the EPA and SEDUE officials have optimistically projected that in 1992 stricter controls will be placed on maquiladora waste disposition, and environmental inspections will be stepped up through increasing regulation of the maquiladoras.⁶⁴

Mexico's legal regime for managing hazardous waste is quite similar to that of the United States. The most significant differences are that SEDUE has not yet promulgated treatment-oriented land disposal restrictions equivalent to those under RCRA, nor has the issue of leaking underground storage tanks been appropriately addressed.⁶⁵

SEDUE monitors in-country hazardous waste generation by requiring that generators submit semiannual reports, and by conducting on site inspections of maquiladoras and other hazardous

government has allocated U.S. \$460 million over a three year period (1992-1994). A portion of Mexico's funds will come from a U.S. \$50 million loan from the World Bank, contingent upon matching Mexican government support. The total financial commitment by the United States for fiscal year 1992 and 1993 is \$384 million. *BORDER PLAN*, *supra* note 2, at V-1 and V-50; *House Comm. on Small Business Hearings*, *supra* note 58, at (statement of Dick Kamp, Director, Border Ecology Project).

⁶⁴*BORDER PLAN*, *supra* note 2, at V-1 and V-4.

⁶⁵*MEXICAN ENVIRONMENTAL LAWS*, *supra* note 56, at 16.

waste facilities. The semiannual reports must describe the volume, identity, and management of the hazardous waste generated by a facility.⁶⁶ Existing hazardous waste regulations implementing the General Law provide for (1) the classification of hazardous waste; (2) a requirement that hazardous waste be reported and accompanied by a manifest when transported; (3) federal standards for generators, transporters, and storage/disposal facilities; (4) registration of facilities through a permitting program; (5) authorization of state programs; (6) inspection and enforcement to ensure compliance with environmental regulations; and (7) civil and criminal penalties for violators, including fines and imprisonment.⁶⁷

The Mexican General Law manifest system requires that domestic companies, and maquiladoras, obtain SEDUE authorization through a "guia ecologica," for transboundary movement of hazardous waste. The "guia" is essentially a permit to import or export hazardous waste, which is issued for a ninety day period, and applies to a single shipment.⁶⁸ Mexico also requires a "Manifest of

⁶⁶MAQUILADORAS' WASTE, *supra* note 14, at 3-4. EPA uses a reporting system as well. 40 C.F.R. §§ 264.73-264.77.

⁶⁷MAQUILADORAS' WASTE, *supra* note 14, at 4. As is true with other media controls, only a small number of Mexican facilities operate with the required hazardous waste authorizations. MEXICAN ENVIRONMENTAL LAW, *supra* note 56, at 17.

⁶⁸BORDER PLAN, *supra* note 2, at III-20; USTR REVIEW, *supra* note 2, at 122-123; Rich, *supra* note 1, at 30.

Delivery, Transport and Acceptance of Hazardous Residues,"⁶⁹ that accompanies the shipment to the border crossing. When the waste shipment crosses the border, the maquiladora must send a letter to SEDUE to close out the "guia."⁷⁰

The maquiladora program allows plants affiliated with the United States to import into Mexico all raw/hazardous materials necessary for production, which may include chemicals used in manufacturing operations.⁷¹ Mexican law requires that hazardous

⁶⁹The Mexican manifest is similar to the U.S. "Uniform Hazardous Waste Manifest." Neither the U.S. or the Mexican manifest is designed to accompany the transport of hazardous waste across the border. BORDER PLAN, *supra* note 2, at III-20; Solid Waste Disposal Act of 1976, 42 U.S.C. §§ 6901-6987, *amended by* Hazardous and Solid Waste Amendments of 1984 [HSWA], 98 Stat. 3221 (1984), *amended by* Resource Conservation and Recovery Act of 1988 [RCRA], 42 U.S.C. §§ 6901-6992(k), 40 C.F.R. pts. 260-281, at pt. 262, subpt. B (1992).

⁷⁰Vincent Interview, *supra* note 47; USTR REVIEW, *supra* note 2, at 122-123; MAQUILADORAS' WASTE, *supra* note 14, at 4-5.

⁷¹The transportation of hazardous materials (products and raw materials) has become an accepted element of a modern industrial society. The health and environmental risks associated with unsafe handling and shipment of such materials are no less significant than those related to hazardous wastes. In the U.S. hazardous materials are potentially subject to the Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601-2671 (1988). Pursuant to TSCA, §12(b) EPA promulgated its Export Notification Rule, 45 Fed. Reg. 82,844 (1980) (codified as amended at 40 C.F.R. pt. 707, subpt. D). However, TSCA, § 12(a) generally exempts from most provisions of the Act any chemical substance, mixture, or article manufactured, processed or distributed solely for export from the United States as long as there is no "unreasonable risk of injury to health within the United States or to the environment of the United States." In effect, the control of

waste byproducts from maquiladora processing of U.S. raw materials must be amenable to "nationalization," or be returned to the United States for management.⁷² "Nationalization" is a process through which SEDUE, SECOFI (the Mexican Commerce Department), and Aduanas (Mexican Customs) decide that hazardous wastes can remain

exported hazardous materials has proven to be an impossible task given the current threshold of "unreasonable risk" that must be met under the TSCA. Vincent Interview, *supra* note 47. See Corrosion Proof Fittings v. EPA, No. 89-45-96, slip op. 558, ___ F.2d ___ (5th Cir. Oct. 1991). Absent a U.S. legislative amendment to RCRA or TSCA, and stepped up Mexican enforcement the apparent solution to this aspect of transboundary environmental problems is to "...reduce the volume of hazardous material used or to identify alternative, non-toxic substitute materials." BORDER PLAN, *supra* note 2, at III-19.

⁷²La Paz Agreement Annexes, *infra* note 84, at Annex III, art. 11; USTR REVIEW, *supra* note 2, at 122. The tracking of returnable hazardous wastes generated by maquiladora use of U.S. raw materials is complicated by the fact that the export of hazardous materials to Mexico is subject only to random border checks by U.S. Customs agents. There is no formal inspection or tracking process for such materials. Although any information gathered by U.S. Customs agents is shared with SEDUE, the sporadic nature of the border checks fails to provide consistent inputs. Vincent Interview, *supra* note 47. Mexico apparently attempts to track the transport of hazardous material through the use of the "Manifest of Delivery, Transport, and Acceptance of Hazardous Residues." BORDER PLAN, *supra* note 2, at III-20. Yet, the implementation of this tracking system is questionable given the apparent failure to link the receipt of hazardous material with the disposition of resulting hazardous wastes. *Id.*, at III-20 and III-21. Given the number of maquiladoras, the extent of hazardous waste pollution in areas of maquiladora concentration, and the duty-free accessibility of U.S. raw materials it is reasonable to conclude that a substantial portion of the hazardous waste produced should be returned to the U.S. WATER POLLUTION REPORT, *supra* note 16; BORDER PLAN, *supra* note 2.

in Mexico for recycling purposes, provided all duties have first been paid.⁷³ Mexican treatment, storage, and disposal facilities are not supposed to accept maquiladora hazardous waste generated from U.S. raw materials unless it is for recycling that will yield valuable materials.⁷⁴ As of 1990, seven hazardous waste recycling facilities had been authorized by SEDUE.⁷⁵

C. *Bilateral Efforts To Resolve Environmental Issues*

The United States and Mexico are currently parties to a substantial number of bilateral environmental agreements, one of which predates the maquiladora program. The 1944 Water Treaty established the International Boundary Water Commission (IBWC), responsible for "sanitary measures or works which may be mutually agreed upon by the two governments."⁷⁶ However, the IBWC maintains that the United States and Mexico are responsible for the enforcement of their own water quality standards and cleanup. According to the U.S. State Department representative to the IBWC: "[T]he IBWC is based on delegated powers. We don't have a general mandate to do everything that needs to be done on U.S.-Mexican environmental issues."⁷⁷ It would seem that while the IBWC has retained its authority to oversee water quality issues on the border,

⁷³USTR REVIEW, *supra* note 2, at 122.

⁷⁴BORDER PLAN, *supra* note 2, at III-19.

⁷⁵USTR REVIEW, *supra* note 2, at 122.

⁷⁶Water Treaty of 1944, United States-Mexico, 59 Stat. 1219, T.S. No. 944, art. 3.

⁷⁷Rich, *supra* note 1, at 32.

EPA and SEDUE have assumed increasing responsibility in fostering a bilateral cooperative approach to waste management and control.

In 1978, EPA and the Mexican Subsecretariat for Environmental Improvement signed a Memorandum of Understanding (MOU) that committed the United States and Mexico to "a cooperative effort to resolve environmental problems of mutual concern in border areas... and the establishment of parallel projects which the two parties consider appropriate to adopt."⁷⁸ Later, in response to marine petroleum spills, the countries entered the 1980 Agreement of Cooperation Regarding Pollution of the Marine Environment.⁷⁹

By the 1980s environmental degradation in the border area had become an overwhelming problem that began to hinder development. The governments of the United States and Mexico responded by signing their first environmental accord in 1983, frequently referred to as the La Paz Agreement.⁸⁰ The La Paz Agreement

⁷⁸Memorandum of Understanding Between the Subsecretariat for Environmental Improvement of Mexico and the Environmental Protection Agency of the United States, June 19, 1978, United States-Mexico, 30 U.S.T. 1574, T.I.A.S. No. 9264.

⁷⁹Mexico-United States: Agreement of Cooperation Regarding Pollution of the Marine Environment, July 24, 1980, 32 U.S.T. 5899, T.I.A.S. No. 10021, 20 I.L.M. 696 (1981).

⁸⁰See Rich, *supra* note 1, at 28; Mexico-United States Agreement to Cooperate in the Solution of Environmental Problems in the Border Area, Aug. 14, 1983, 22 I.L.M. 1025 (1983) [hereinafter cited as La Paz Agreement]. The Agreement is an "executive agreement" consummated by the President of the United States without the confirmation of the United States Senate. See U.S. v. Belmont, 301 U.S. 324, 57 S.Ct. 758, 81 L.Ed. 1134 (1937). The Agreement was signed by President Ronald Reagan, for the United

entered into force on February 16, 1984, and superseded the 1978 MOU.⁸¹ Similar to the 1978 MOU, the La Paz Agreement outlined broad objectives for handling environmental problems on the border,⁸² and named EPA and its Mexican counterpart, then SEDUE, as the lead agencies on joint regulation and enforcement issues.⁸³

It is the problem specific approach of the annexes to the La Paz Agreement that distinguish it from the 1978 MOU. The Agreement, and its five annexes,⁸⁴ provide a framework for

States, and President Miguel de la Madrid, for Mexico.

⁸¹La Paz Agreement, *supra* note 80, at art. 23.

⁸² "...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." La Paz Agreement, *supra* note 80, at art. 1.

⁸³*Id.*, at art. 8.

⁸⁴Mexico-United States: Annexes to Agreement on Cooperation for the Protection and Improvement of the Environment in the Border Area [hereinafter cited as La Paz Agreement Annexes]. Annex I (1985) concerns the border sanitation problems of Tijuana/San Diego. Mexico and the U.S. agreed to work together in the construction, operation, and maintenance of waste-water treatment facilities to resolve the problem. Annex II (1985) applies to any discharge, or threat of discharge, of a hazardous substance in the border area. It further provides for the preparation of a Joint Contingency Plan and the designation of a Joint Response Team. Annex III (1986) pertains to the transboundary shipments of hazardous wastes and hazardous substances. By the terms of the Annex III the U.S. agreed to readmit maquiladora hazardous waste generated from American raw materials. Annex IV (1987) addresses the problem of transboundary air pollution caused by copper smelters along the common border. The Annex established maximum

cooperation between the United States and Mexico on the control of air, land, and water pollution sources in the 100-kilometer area on each side of the international boundary. Consistent with the role of lead agencies, EPA and SEDUE have designated five working groups of technical experts to address issues involving air pollution, water pollution, hazardous wastes, environmental accidents, and enforcement.⁸⁵ The limiting aspect of the La Paz Agreement was that it did not delineate a cohesive binational approach to the relevant multimedia issues.⁸⁶

sulfur dioxide emission limits for new and existing facilities. Annex V (1989) created specified "study areas" within which Mexico and the U.S. have agreed to collect data on air pollutant concentrations, air pollutant transport, and the physical mechanisms facilitating the transport.

⁸⁵The enforcement working group was established in June of 1991. USTR REVIEW, *supra* note 2, at 11.

⁸⁶Although the La Paz Agreement, Annex IV, represented a major milestone in coping with transboundary air pollution (SO₂ emissions) only the Border Ecology Project and Enlace Ecologico (an Aqua Prieta based non-profit organization) have conducted on-site monitoring south of the border. Another example provides insight as to the successful application of the La Paz Agreement. The La Tomatera well in Nogales, Sonora continues to pump water, contaminated by sewage and industrial solvent, into tanker trucks that deliver the cargo to some of the poorer sections in that part of Mexico. Such activities were observed as continuing 15 months after the Nogales Water Project generated data that indicated the attendant health risks. *House Comm. on Small Business, supra* note 58, at (statement of Dick Kamp, Director, Border Ecology Project). The Nogales Water Project involved the testing of three water supply wells in Sonora. Samples were taken in June and October 1990, and test results were reported in November 1990. UNIVERSITY OF ARIZONA, TUCSON, ARIZONA, INTERIM AMBOS NOGALES WATER RESOURCES STUDY (NOV. 1990) [hereinafter cited as NOGALES WATER

The most recent evidence of a bilateral effort to resolve mutual environmental concerns is the Integrated Environmental Plan for the Mexican-U.S. Border Area (Border Plan).⁸⁷ In large part, the Border Plan was a product of vehement criticism from environmentalists who had claimed that negotiations for the pending NAFTA failed to adequately address existing, and future environmental issues in the border area.⁸⁸ However, environmental interests were not appeased by a plan that has been characterized as short on funding, devoid of deadlines, vague on enforcement issues, and unclear on state and federal agency coordination.⁸⁹

D. Hazardous Waste Trade

The trade in hazardous waste poses a threat to human health

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⁸⁷BORDER PLAN, *supra* note 2.

⁸⁸*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of David E. Ortman, Northwest Representative, Friends of the Earth); *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statements of Craig Merrilees, Western Director, Fair Trade Campaign, on behalf of National Toxics Campaign; Richard Kamp, Director, Border Ecology Project; Alex Hittle, International Coordinator, Friends of the Earth; Peter Emerson, Senior Economist, Environmental Defense Fund; Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

⁸⁹Craig, *Border Plan Fails to Entice Environmentalists*, North American Report on Free Trade, Mar. 23, 1992; *International Trade, Texas Governor's Environmental Advisor Calls Mexican Border Plan 'Disappointing,'* (BNA), Feb. 27, 1992. It should be noted that the economic imbalance between the United States and Mexico may prove to be a difficult hurdle in maintaining cooperative efforts under the Border Plan. For example, the average per capita income for Mexico in 1989 was U.S. \$1,670; the U.S. average was \$19,620. BORDER PLAN, *supra* note 2, at 11-8.

and the global environment, and serves to strain international relations between the developing and developed nations. In the United States, transboundary shipments of hazardous waste provides a solution to an otherwise expensive and difficult problem. In the last decade, as public consciousness of environmental problems has increased hundreds of landfills have closed. From 1984 to 1988, the number of operating landfills dropped from 1,500 to 325, and the cost of disposal skyrocketed.⁹⁰

In the late 1970s manufacturers in the United States were lawfully permitted to bury their hazardous wastes in landfills at relatively insignificant costs. Auto manufacturers, for example, could bury a ton of paint sludge for \$2.50; incineration costs averaged \$50 per ton.⁹¹ However, the enactment of the RCRA⁹² shifted the entire spectrum of hazardous waste disposal. Eleven years after the passage of RCRA landfill prices jumped to \$200 per ton - provided there was space available - and incineration had soared to \$2,000 per ton.⁹³

RCRA marked the beginning of federal involvement in the regulation of hazardous waste, and is probably one of the more

⁹⁰EPA, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, THE WASTE SYSTEM (Nov. 1988), 1-20.

⁹¹The Economist, Apr. 8, 1989, 24.

⁹²Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6987, *amended by* Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. §§ 6921-6939 (1984), *amended by* Resource Conservation and Recovery Act [RCRA] 42 U.S.C. §§ 6901-6992(k) (1988); 40 C.F.R. pts. 260-281 (1992).

⁹³The Economist, *supra* note 91, at 24.

comprehensive bodies of environmental legislation in the United States. In a nutshell, RCRA requires the proper management of hazardous waste "from cradle to grave."⁹⁴ The "cradle to grave" concept is the hallmark of the comprehensive RCRA tracking system which requires: hazardous waste identification; standards applicable to hazardous waste generators; manifests to accompany off-site treatment, storage, or disposal of hazardous waste; pre-transport preparations; generator record keeping and reporting; standards applicable to transporters; standards applicable to owners and operators of hazardous waste treatment, storage, and disposal facilities; accountability of transporters, owners, and operators; and potential generator liability throughout the processes.⁹⁵

The financial impact of RCRA has provided sufficient incentive for American manufacturers to utilize the channels of international trade for hazardous waste disposition. Given the cost differential between the disposal of such wastes in a developed, as opposed to a developing nation⁹⁶ the increased flow of the international waste

⁹⁴Legislative History of House Comm. on Resource Conservation and Recovery Act of 1976, H.R. REP. NO. 94-1491, Pt. I, 94th Cong., 2d Sess., reprinted in 1976 U.S. Code Cong. & Admin. News, 6238, 6244; National Solid Waste Management Association v. Alabama Dept. of Env'tl. Management, 910 F.2d 713, 722 (11th Cir. 1990), *cert. denied*, ___ U.S. ___, 111 S.Ct. 2800, 115 L.Ed.2d 973 (1991). See The Economist, *supra* note 91, at 24.

⁹⁵Hazardous Waste Management System, 51 Fed. Reg. 28,664 (Aug. 8, 1986), (*codified at* 40 C.F.R. pts. 260-264) (final rule).

⁹⁶Tighter regulations in industrialized economies forced the price of hazardous waste disposal to about \$2,500 per ton. In contrast, disposal of that same waste in a developing country can

stream to a lesser developed country such as Mexico is dictated by basic economics.⁹⁷ The EPA estimates that the United States annually produces about 250 million tons of hazardous waste. Pursuant to EPA's hazardous waste export rules exportation is limited to approximately 150,000 to 160,000 tons.⁹⁸

In order to facilitate the proper handling of hazardous waste exports the Hazardous Waste Amendments of 1984 were enacted, which added a new Section 3017 to RCRA.⁹⁹ RCRA, Section 3017 applies to U.S. exports of hazardous waste to Mexico. Although such exports would not typically involve maquiladoras the total volume of transboundary shipments handled by authorities on both sides of the border influences the degree of binational cooperation necessary for effective multi-agency tracking of hazardous wastes.

Section 3017 prohibits the export of hazardous waste, unless the exporter has notified the EPA of its intent to export, the government of the receiving country has consented to accept the waste, a copy of the receiving country's consent is attached to the manifest accompanying the waste shipment, and the shipment conforms to the terms of the consent. Section 3017 does not authorize EPA to stop a shipment for which consent has been given,

amount to as little as \$3.00 per ton. Note, *supra* note 3, at 891.

⁹⁷MOYERS, *supra* note 3, at 1-14.

⁹⁸Mounteer, *Codifying Basel Convention Obligations Into U.S. Law: The Waste Export Control Act*, 21 E.L.R. 10085, 10086 (Feb. 1991).

⁹⁹Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6987, *amended by Hazardous and Solid Waste Amendments of 1984* (HSWA), 98 Stat. 3221 (1984).

even if there is reason to believe that the hazardous waste will not receive proper environmental management. Additionally, Section 3017 allows for the export of hazardous waste pursuant to a bilateral agreement between the United States and the receiving country, establishing notice, export, and enforcement procedures for the transport, treatment, storage, and disposal of hazardous waste. All shipments must conform with the terms of the agreement.¹⁰⁰

EPA promulgated final rules under RCRA, Section 3017, regarding hazardous waste exports, effective November 8, 1986.¹⁰¹ The legislative history underlying RCRA, Section 3017 provides that EPA "...should work with the U.S. Customs Service to establish an effective program to monitor and spot-check international shipments of hazardous waste to assure compliance..." with export requirements.¹⁰² The U.S. Customs Service has been granted broad authority under the Export Administration Act Amendments of 1985 to stop, search, and examine shipments of hazardous waste based on

¹⁰⁰42 U.S.C. § 6938 (1988). Only RCRA criminalizes international environmental misconduct. *Id.* There is no existing environmental statute, international treaty, or transnational agreement that specifically provides for U.S. criminal prosecution for U.S.-based acts or consequences resulting in environmental harm or injury to human health in a foreign jurisdiction. Strock, *Symposium On Environmental Crime: Environmental Criminal Enforcement Priorities for the 1990s*, 59 GEO. WASH. L. REV. 916 (1991). Criminal statutes, such as those relating to conspiracy, provide more latitude in facilitating such prosecutions. *Id.*; See 18 U.S.C. §§ 371-373 (1988)).

¹⁰¹40 C.F.R. pts. 260-263, 271 (1992).

¹⁰²S. REP. NO. 98-284, 98th Cong., 1st Sess. 48 (1983).

reasonable cause suspicion of an illegal export.¹⁰³

In February, 1987, EPA and the U.S. Customs Service entered a Memorandum of Understanding (MOU) that provided for a cooperative effort between the agencies in dealing with exports of hazardous waste. In summary, the MOU called for the border collection of manifests that accompany hazardous wastes destined for exportation, border spot checks, training of Customs officials in detecting noncomplying shipments, and interagency assistance to facilitate the enforcement of the export regulations.¹⁰⁴ Consistent with the terms of the MOU, EPA and the U.S. Customs Service developed a joint enforcement strategy for hazardous waste exports. Beginning in 1987, EPA implemented a training program for Customs officials involved in the border collection of manifests with attached acknowledgements of consent from the receiving country.¹⁰⁵

In 1988, the NEIC developed a comprehensive strategy for enforcing the RCRA export regulations. A data-base of information on hazardous waste exports is maintained by NEIC as an intricate

¹⁰³Export Administration Act [EAA], 50 U.S.C. app. at § 2411 (1969), *amended by* Export Administration Act Amendments of 1985, Pub. L. No. 99-64, 99 Stat. 120 (1985).

¹⁰⁴*Hearing on Waste Trade With Mexico and Canada Before the Subcomm. on Environment, Energy, and Natural Resources of the House Comm. on Government Operations, 102d Cong., 2d Sess., (Nov. 21, 1991)[hereinafter cited as House Comm. on Government Operations Hearing] (statement of C. Bowdoin Train, Deputy Assistant Administrator, Office of Solid Waste and Emergency Response, EPA).*

¹⁰⁵*Id.*; Vincent Interview, *supra* note .

part of that strategy. According to EPA that data-base has successfully facilitated the investigation and detection of export violations, resulting in increased penalties.¹⁰⁶

At the present time hazardous waste that is lawfully exported from the United States to Mexico is subject to recycling only, not disposal. Pursuant to a bilateral agreement (La Paz Agreement, Annex III) between the two countries, Mexico precludes imports of any hazardous waste for disposal.¹⁰⁷ The hazardous waste that is the subject of United States export to Mexico is approximately 50,000 tons of electric arc furnace (EAF) dust (RCRA hazardous waste code K061), produced annually by six member companies of the Steel Manufacturers Association (SMA), and shipped to the Zinc National facility in Monterrey, Mexico.¹⁰⁸ EAF dust has significant levels of cadmium and lead. In recycling the EAF dust Zinc National uses a high-temperature metal recovery process, which does not meet the full range of RCRA requirements.¹⁰⁹

Consistent with RCRA, Section 3017, the La Paz Agreement,

¹⁰⁶*House Comm. on Government Operations Hearing, supra* note 101, at (statement of C. Bowdoin Train, Deputy Assistant Administrator, Office of Solid Waste and Emergency Response, EPA).

¹⁰⁷La Paz Agreement Annexes, *supra* note 84, at Annex III; *Waste Export Control: Hearings on H.R. 2525 Before the Subcomm. on Transportation and Hazardous Materials of the House Comm. on Energy and Commerce*, 101st Cong., 1st Sess. (July 27, 1989). That agreement remains in force unless terminated by one of the parties. La Paz Agreement Annexes, *supra* note 84, at Annex III, art. XX.

¹⁰⁸Mounteer, *supra* note 98, at 10088; Vincent Interview, *supra* note 47.

¹⁰⁹*Id.*; Vincent Interview, *supra* note 47.

Annex III controls the export of hazardous waste from the United States to Mexico.¹¹⁰ Under Annex III, hazardous waste is defined as any waste so designated by either party to the agreement.¹¹¹ Forty-five days prior to shipment EPA is required to give the Mexican government notification of any export of hazardous waste for which consent is required.¹¹² Notification may cover one or several shipments for a period of up to a year.¹¹³ Notification information must include: exporter identity; estimated frequency of the shipment; description of the hazardous waste; estimated total quantity; means of transportation; port of entry; identity of consignee; and description of the treatment or storage.¹¹⁴

The Mexican government has forty-five days from receipt of

¹¹⁰42 U.S.C. § 6938 (1988).

¹¹¹La Paz Agreement Annexes, *supra* note 84, at Annex III, art. 1(2). In connection with Annex III, a Department of State letter, dated November 12, 1986, signed by Michael G. Kozak, Deputy Legal Adviser, Co-Head of U.S. Delegation, addressed to Ambassador Alberto Szekely, Legal Adviser, Mexican Secretariat of Foreign Relations, noted that the term "hazardous waste" was defined in accordance with the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. § 6903), and implementing regulations (40 C.F.R. pt. 260). The letter further stated that the term "hazardous substances" was defined in accordance with the Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601 *et seq.* (1988), and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. §§ 136 *et seq.* (1988).

¹¹²La Paz Agreement Annexes, *supra* note 84, at Annex III, arts. 1(1), 3(1), 3(2).

¹¹³*Id.*, at art. 3(2).

¹¹⁴*Id.*, at art. 3(2).

notification to respond, indicating its consent, conditioned consent, or objection.¹¹⁵ Moreover, the importing country may require that the hazardous waste export have adequate insurance coverage, and may modify or withdraw consent at any time.¹¹⁶

Annex III provides that the parties will enforce respective domestic laws regarding the export of hazardous waste, and will cooperate in monitoring shipments to ensure conformance with the law.¹¹⁷ In addition, the Annex sets forth the requisite responses for illegal exports of hazardous wastes: (1) return hazardous waste to the exporting country; (2) return the ecosystem to the status quo; (3) repair damages to persons, property, and the environment; and (4) take all other legal actions.¹¹⁸

Annex III is also relevant to the international status of the United States hazardous waste trade with Mexico. International concern regarding the environmental problems associated with the transboundary shipments of hazardous wastes provided the foundation for the adoption of the Basel Convention.¹¹⁹

¹¹⁵*Id.*, at art. 3(4).

¹¹⁶*Id.*, at art. 14(1), art. 3(6).

¹¹⁷*Id.*, at art. 2(2), art. 2(3).

¹¹⁸*Id.*, at art. 14(2).

¹¹⁹Basel Convention on the Transboundary Movements of Hazardous Waste and Their Disposal, Mar. 22, 1989, 28 I.L.M. 649, (U.N. Doc. No. UNEP/IG. 80/3) [hereinafter cited as Basel Convention], opened for signature from Mar. 22, 1989 to Mar. 22, 1990. The Basel Convention was negotiated under the auspices of the United Nations Environmental Program (UNEP). Fifty-three countries had initially signed the Convention, including the United States and Mexico.

As it is currently in force, the Convention prohibits Parties from engaging in the import or export of prescribed wastes, for disposal or recycling, with non-Parties.¹²⁰ However, pursuant to Article 11 of the Basel Convention transboundary shipments of

Signing of the Convention indicated that the signatory country agreed with the Convention goals and was moving toward ratification. Ratification signaled a country's ability to implement the provisions of the Convention. As of Feb. 5, 1992, twenty countries had ratified the Convention. On May 5, 1992, ninety days after the twentieth ratification, the Basel Convention entered into force for the ratifying countries. Any country that ratifies the Basel Convention after its entry into force will be subject to the Convention 90 days after that ratification date. Mexico has ratified the Convention, and the United States is moving toward ratification. The United States Hazardous Waste Management System; Notification Concerning the Basel Convention's Potential Implications for Hazardous Waste Exports and Imports, 57 Fed. Reg. 20602 (1992); *Senate Panel to Move On RCRA-Related Treaty*, NAT'L J. CONG. DAILY (Feb. 19, 1992); See USTR REVIEW, *supra* note 2, at 126-127.

¹²⁰The Convention defines the term "waste" broadly to include "substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law." Basel Convention, *supra* note 119, at art. 2, para. 1, *see also* art. 1, paras. 1-4. Compare 40 C.F.R. § 261.2 (which uses such terms as "discarded," "abandoned," "used in a manner constituting disposal," and "inherently waste-like" to define solid "waste"). Unlike RCRA, Section 3017, which applies only to exports of "hazardous wastes," the Basel Convention covers the broader spectrum of "other wastes." Basel Convention, *supra* note 119, at art. 1, paras. 1-4; 42 U.S.C. § 6938 (1988), 40 C.F.R. §§ 261.1-261.33 (1992). A foreign state objection to the receipt of nonhazardous waste, such as, household waste, or municipal incinerator ash, is not subject to EPA jurisdiction. However, that jurisdictional loophole may be closed by the United States ratification of the Basel Convention.

covered wastes may occur if there is a separate pre-existing bilateral or multilateral agreement between those countries which ensures the application of "environmentally sound" government management practices.¹²¹ Transboundary movements of Basel wastes may take place between the United States and Mexico, but only to the extent that such shipments conform to the existing U.S.-Mexican bilateral agreement, Annex III.¹²²

E. Bilateral Enforcement Breakdown

The number of maquiladora plants that generate hazardous waste has not been specifically identified, but in November 1990 SEDUE estimates ran as high as 1,035.¹²³ The type, amount, and

¹²¹Basel Convention, *supra* note 119, at art. 4, para. 5, art. 11, para. 1.

¹²²*Id.*, at art. 11; 57 Fed. Reg. 20,602 (1992).

¹²³That figure includes maquiladoras located along the border and in Mexico's interior. Of that number only 307 maquiladoras provided SEDUE with copies of the required hazardous waste manifests. MAQUILADORAS' WASTE, *supra* note 14, at 7. However, it should be noted that when the GAO (for a Feb. 1992 report) asked for data from the claimed 307 manifests SEDUE was unable to accommodate the request. *Id.*, at 7. In 1991, a SEDUE survey of 1,449 border plants revealed 800 hazardous waste generators, of which 446 were lawfully registered with the Mexican government. *Id.*, at 7. According to EPA records for 1988, fewer than one percent of the maquiladoras reported sending hazardous wastes back to the United States. Records indicate that one percent (7 out of 748) of the maquiladoras operating in the border states of Baja, California, and Sonora requested shipment of hazardous waste to the United States. WATER POLLUTION REPORT, *supra* note 16, at 2. EPA data also suggests that since 1987 about 91 maquiladora parent companies have returned waste through U.S. Customs ports in Texas. The number of hazardous waste shipments through Texas has

disposition of maquiladora hazardous waste remains unknown.¹²⁴ However, spot sampling of industrial effluent has revealed that the discharge of concentrated toxic wastes into the waterways is a prevalent practice in northern Mexico.¹²⁵ The soil and groundwater migration of contaminants¹²⁶ from domestic sewage, industrial

increased from 9 shipments (189.9 tons) in 1987 to 356 shipments (2,388.5 tons) in 1990. Inconsistencies in tracking may have resulted in an inaccurate estimation of the number of legal hazardous waste shipments from Mexico to the U.S. BORDER PLAN, *supra* note 2, at III-19 - III-20.

¹²⁴MAQUILADORAS' WASTE, *supra* note 14, at 7; GAO *Official Says No Data Available On Toxic Chemicals From Maquiladoras*, (BNA) Daily Report For Executives, Feb. 27, 1992, at A-5. Many of the materials handled by border industries are hazardous: solvents; acids; resins; paints; plastics; heavy metals; oils; and varnishes. BORDER PLAN, *supra* note 2, at III-19. As of 1991 over 50 percent of the maquiladoras were engaged in manufacturing processes that typically used hazardous raw materials. *Id.*, at Appendix B-11. The maquiladora industries involved in the production of hazardous waste include: semiconductor manufacturers; paint companies; electronic component producers; and component assembly and finishing plants. MAQUILADORAS' WASTE, *supra* note 14, at 2; *House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Joseph A. Kinney, Executive Director, National Safe Workplace Institute).

¹²⁵WATER POLLUTION REPORT, *supra* note 16, at ii, 26-31.

¹²⁶According to Nogales Water Project findings the region in and around the twin-cities of Nogales, Sonora and Nogales, Arizona has suffered significant environmental damage as a result of rapid industrial development and urbanization. In particular, there have been serious problems regarding the availability and quality of water, and waste-water treatment. The primary water supply for both communities is groundwater pumped independently by each community from aquifers which underlie the Santa Cruz River, Nogales Wash and other tributaries. The Nogales Water Project Report provides some illustration of the problem:

effluent, and abandoned or illegal hazardous waste sites is also a problem on both sides of the border.¹²⁷

Industrial and municipal discharges are collected and then treated at the international waste-water treatment facility on the Arizona side of the border. Overflows of untreated waste-water from the Sonoran sewerage system, as well as direct surface discharges of wastes, end up in Nogales Wash which drains both cities from south to north. A shallow alluvial aquifer underneath the wash is subject to contamination from these surface flows, as well as leakage from abandoned landfills, industrial facilities, waste-water lines, and septic systems. Shallow wells along the Nogales Wash are used to irrigate turf in Arizona and provide drinking water in Sonora. Previous studies by Prescott College in Sonora and by the Department of Environmental Quality in Arizona have indicated the possible contamination of both Nogales Wash and the shallow aquifer along the wash. Suspected contaminants include biological constituents and volatile compounds.

NOGALES WATER PROJECT, *supra* note 86, at 1.

¹²⁷ EPA has in place the Superfund program for handling abandoned or illegal hazardous waste sites in the U.S. See Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675 (1988). Approximately 450 potentially illegal storage and disposal sites have been identified on the U.S. side of the border. EPA has initiated remedial action for five of the identified locations. BORDER PLAN, *supra* note 2, at III-23. However, there is no Mexican equivalent of the U.S. Superfund law. REGULATIONS AND ENFORCEMENT, *supra* note 56, at 6; MEXICAN ENVIRONMENTAL LAW, *supra* note 56, at 1. Mexico does have a program through which SEDUE solicits voluntary contributions from industry for the cleanup of abandoned hazardous waste sites. SEDUE apparently implements the program by identifying the sites, selecting the remedial action and providing oversight. However, according to the EPA Report on Mexican Environmental Laws, Regulations and Standards: "To date, no systematic effort has been

Regarding air pollution, there is no current data upon which to accurately characterize air quality in the area south of the border. Although it is claimed that monitoring has recently begun in Ciudad Juarez and Tijuana, Mexico, the substance and quality of that monitoring is unknown.¹²⁸ On the U.S. side of the border monitoring does reveal that significant portions of the communities north of the border fail to meet one or more of the national ambient air quality standards.¹²⁹ In addition, cross boundary rivers in the U.S.-Mexican border area present health and environmental risks to both countries. Specifically, industrial waste poses a risk to transboundary ground water resources.¹³⁰ The problem is twofold:

made to identify the sites where releases pose a significant risk to human health or the environment." EPA concluded that the "voluntary fund" was not likely to be sufficient to meet Mexico's existing hazardous waste contamination problems. MEXICAN ENVIRONMENTAL LAW, *supra* note 56, at 18. On cue, SEDUE now claims that it is currently developing a program to remediate abandoned or illegal hazardous waste disposal sites and to ensure waste management. BORDER PLAN, *supra* note 2, at III-23.

¹²⁸BORDER PLAN, *supra* note 2, at III-12.

¹²⁹*Id.* Virtually nothing is known about the hazardous and toxic air pollutants in the border regions of Mexico or the U.S. because such non-criteria pollutants have not been monitored by either country. *Id.*, at III-13. However, monitoring on the U.S. side of the border will likely be enhanced under the regulatory implementation of the Clean Air Amendments of 1990, which established a major new program for control of toxic/hazardous air pollutants. 42 U.S.C. §§ 7401-7642 (1988), *amended by* Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (codified at 42 U.S.C.A. 7401-7671q (West Supp. 1991)).

¹³⁰BORDER PLAN, *supra* note 2, at III-3 - III-5; NOGALES WATER PROJECT, *supra* note 86, at 4. Although the U.S. side of the border has relatively little industry, as compared to the Mexican

inadequate industrial waste treatment or disposal¹³¹ and direct industrial discharge of concentrated toxic wastes into the waterways.¹³² Overall, health conditions along the U.S.-Mexico border are in dire need of attention. Lax Mexican environmental controls have resulted in abysmal health and environmental

maquiladora program, the living conditions north of the border have become a source of health and environmental problems. The rural, unincorporated subdivisions (colonias) in the U.S. border counties are characterized by inadequate housing, roads, drainage, and substandard or nonexistent water/sewage facilities. In fact, the colonias on both sides of the border face many of the same health risks that are the result of environmental violations and a population growth that has strained the capacity of existing border infrastructure. BORDER PLAN, *supra* note 2, at III-42; See U.S. GENERAL ACCOUNTING OFFICE, RURAL DEVELOPMENT: PROBLEMS AND PROGRESS OF COLONIA SUBDIVISIONS NEAR THE MEXICAN BORDER (Nov. 1990).

¹³¹According to SEDUE's Waste Director, additional hazardous waste treatment and disposal facilities are needed to handle the volume of waste generated. Mexico produces about 13,000 tons of hazardous waste daily, all of which must be handled by three treatment and ten disposal facilities. SEDUE is apparently working on the design and construction of new facilities. REGULATIONS AND ENFORCEMENT, *supra* note 56, at 5. The first Mexican toxic waste disposal sites were opened in 1981 - 16 years after the start of the maquiladora program. *House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Congresswoman Marcy Kaptur, Appendix 10). The sites do not meet U.S. standards and their capacity would be considered insufficient for handling the needs of Mexican-owned industries prior to the growth of maquiladora waste. *Id.* According to some observers the number of treatment and disposal facilities claimed by SEDUE may not be entirely precise. Reports on the quantity of improperly stored waste and the number of licensed storage sites varies widely. *Id.*

¹³²BORDER PLAN, *supra* note 2, at III-3 - III-5.

conditions on both sides of the border.

In Tijuana, Mexico, residents are confronted with maquiladoras that emit foul black smoke into the air and dump chemicals directly into the Tijuana River, that eventually results in the contamination of wells along the river's edge.¹³³ Although there is no comprehensive inventory of each plant's raw materials and hazardous waste generation, it has been estimated that three fourths of the Tijuana maquiladoras use manufacturing processes which generate hazardous waste.¹³⁴ The hazardous materials used by these industries include heavy metals, organic solvents, caustics and other toxic substances.¹³⁵ Heavy metals have been detected in the sediments of the Tijuana River, and in the tissue of fish and invertebrates at the Tijuana River Estuarine Sanctuary.¹³⁶ Tijuana children who are subjected to the offensive maquiladora emissions are typically afflicted with rashes, bronchial problems, and blisters.¹³⁷ Moreover, health officials have attributed incidents of hepatitis, vibrio cholera, amoebic dysentery, encephalitis and malaria to the sewage in the river.¹³⁸

"Near the town of Zaragosa, in the south valley below Ciudad Juarez, a pig wallows in an open canal of human excrement and urine.

¹³³MOYERS, *supra* note 3, at 8.

¹³⁴WATER POLLUTION REPORT, *supra* note 16, at 21.

¹³⁵*Id.*

¹³⁶*Id.*

¹³⁷*Id.*, at 21.

¹³⁸*River Sludge: Cleaning Up The Tijuana*, Washington Post, Oct. 25, 1989.

The channel flows toward cotton and vegetable fields, where it is used for irrigation."¹³⁹ Ciudad Juarez is a city of nearly two million people, but it has no sewage treatment capacity. The city's wastewater is either collected by a patchwork of decrepit leaky pipes or makeshift open ditches.¹⁴⁰ Infrastructure problems are compounded by the occurrence of illegal dumping of hazardous wastes. Lino Morales, a spokesperson for the Maquiladora Association in Ciudad Juarez, has estimated that more than 40 percent of the city's maquiladoras are involved in illegal hazardous waste disposal.¹⁴¹ The test results of pollution discharges in the Ciudad Juarez sewer system have revealed traces of lead, mercury, chromium, nickel and chlorine.¹⁴² "The highest level of toxic organic discharge found in

¹³⁹WATER POLLUTION REPORT, *supra* note 16, at 13.

¹⁴⁰*Id.*

¹⁴¹Silva, *Twin Plant Toxics May Reach Water Table*, El Paso Times, May 21, 1989.

¹⁴²WATER POLLUTION REPORT, *supra* note 16, at 11. Lead is a highly toxic metal which attacks the brain and nervous system. Mercury is perhaps the most toxic metal, which characteristically causes personality changes, brain damage, birth defects, and death. Chromium is a toxic metal with two common forms: chromium III, a cause of dermatitis and chromium IV, a carcinogen. Chromium is used in leather tanning and electroplating. Nickel by itself can be a cause of dermatitis and asthma. When combined with carbon monoxide, nickel becomes an acutely toxic metal associated with delirium and death. Chlorinated solvents include compounds of chloroform, methylene chloride, carbon tetrachloride, trichloroethylene, tetrachloroethane, and others. These chemical compounds cause damage to the brain, liver, kidneys, and nervous system. Many of the chlorinated solvents are also considered carcinogenic. *Id.*, at Appendix V.

Juarez was xylene, at 2009 parts per billion, apparently discharged from of Zenith Electronics' Zenco de Chihuahua to a sewer line at the Parque Aeropuerto."¹⁴³

In Matamoros, Mexico, the home of scores of maquiladoras, residents watch as the factories release unknown chemicals that ooze into nearby drainage ditches, and as fumes escape from large open chemical pools. Recurring explosions at nearby plants threaten family homes, health, and sense of well-being.¹⁴⁴ In addition, rare birth defects have become relatively commonplace.¹⁴⁵ Effluent sampling from maquiladoras in Matamoros detected high levels of toxic organics, volatile organic chemicals, and heavy metals. The

¹⁴³WATER POLLUTION REPORT, *supra* note 16, at 11. Xylene is an aromatic hydrocarbon, commonly used as a solvent and component of gasoline. Exposure to xylene causes respiratory irritation, brain hemorrhaging, other internal bleeding, birth defects, and lung, liver, and kidney damage. The EPA standard for drinking water is 440 parts per billion. *Id.*, at 6.

¹⁴⁴Cleeland, *supra* note 18, at A1, col. 1. Border water supplies have been subject to periodic testing which has consistently revealed that levels of chemicals used as industrial solvents exceeded standards set by the United States and Mexico. *Id.*, at A8; WATER POLLUTION REPORT, *supra* note 16, at 1-23.

¹⁴⁵Approximately 31 cases of anencephaly have been discovered on the Mexican side of the border. Anencephaly, is an extremely rare defect in which infants are born with only a partially formed brain. Most of the victims die within a few hours after birth. *The Poison Next Door*, ABC News, Primetime Live, June 11, 1992 (transcript), 3. There is also an astounding number of birth defects, ranging from malformation to retardation, that have been associated with the poor occupational health conditions of Mexican maquiladora workers. *House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Congresswoman Marcy Kaptur, Appendix 6).

testing of discharge from a General Motors affiliate detected xylene at a level of 2,800,000 parts per billion. That level of xylene was so extreme as to render the sample itself a hazardous waste.¹⁴⁶ Industrial effluent from the property of another maquiladora, affiliate of Stepan Chemicals, Northfield, Indiana, was tested and determined to contain 23,200,000 parts per billion of xylene.¹⁴⁷

Researchers from the National Toxic Campaign Fund (NTCF) have ultimately concluded that Matamoros has some of the worst conditions in the border region: "A dog was roaming near the Aldusa and Del Golfo industrial parks. It had lost all of its hair, and its skin was falling off. A goat which was being raised for food was seen drinking from a canal used for waste disposal. Children were observed playing along the banks of the same waste canal. Four Matamoros samples collected by NTCF contained pH levels so severe that contact would cause acidic or caustic burns to skin on contact."¹⁴⁸

Residents across the Rio Grande that separates Matamoros from Brownsville, Texas are also victims of unfettered toxic dumping by the maquiladoras.¹⁴⁹ Just as ecosystems are not static, neither is the pollution that threatens to destroy them. Consistent with the insidious nature of untreated waste, surface water that has

¹⁴⁶WATER POLLUTION REPORT, *supra* note 16, at 11.

¹⁴⁷*Id.*, at 13-14.

¹⁴⁸*Id.*, at 14.

¹⁴⁹Adler, *A Life and Death Puzzle: What's Causing Deadly Birth Defects in Texas?*, Newsweek, June 8, 1992, at 52.

been contaminated by the heavily industrialized city of Matamoros has migrated into Brownsville, Texas via the Rio Grande.¹⁵⁰ Health workers and doctors in Brownsville have noted a potentially related increase in rare birth defects.¹⁵¹

An initial investigation by a Brownsville doctor indicated that most of the mothers of the affected infants lived within two miles of the Rio Grande.¹⁵² About 98 percent of the drinking water used in the Lower Rio Grande Valley is drawn from the Rio Grande.¹⁵³ An increasing number of doctors and scientists are convinced that consumption of river water contaminated by toxins such as xylene is the cause of the unusual birth defect rate.¹⁵⁴ Despite high concentrations of xylene in their industrial effluent neither General Motors or Stepan Chemicals have acknowledged responsibility for the hazardous waste stream that eventually flows into the Rio Grande.¹⁵⁵

¹⁵⁰*Id.*; Cleeland, *supra* note 18, at A1, col. 1, A8.

¹⁵¹In less than a year dozens of infants have been stillborn with gaping holes in their heads, with missing or underdeveloped brains (anencephaly), and with eyes wide apart "like frogs." Other infants have been born with nerves dangling from holes in their spinal columns (spina bifida). Adler, *supra* note 149, at 52; Cleeland, *supra* note 18, at A1, col. 1, A8. In the period of a year and a half Brownsville documented 19 cases of anencephaly alone. Nationwide the unusual defect typically occurs in three out of every 10,000 births. *The Poison Next Door*, *supra* note 145, at 3.

¹⁵²*The Poison Next Door*, *supra* note 145, at 3.

¹⁵³WATER POLLUTION REPORT, *supra* note 16, at 11.

¹⁵⁴*The Poison Next Door*, *supra* note 145, at 3-5.

¹⁵⁵*Id.*, at 5.

According to an EPA official, if the maquiladora affiliates to General Motors and Stepan Chemicals had committed the same environmental violations in the United States then they would have been held financially responsible for the clean-up.¹⁵⁶ But, EPA does not have enforcement jurisdiction over maquiladora practices. Despite the existence of a Border Plan designed to engender binational cooperation, the EPA has no basis upon which to assert the right to inspect or sample maquiladora industrial effluent.¹⁵⁷ In relation to the environmental problems spilling over the border into the United States the EPA is still scrambling to gather data regarding the presence of toxic chemicals in the Rio Grande, and other rivers along the border.¹⁵⁸ In response to the alarming trends in birth defects the EPA recently initiated a two year study.¹⁵⁹

In May 1992 concerned Matamoros residents vainly sought assistance through SEDUE, Mexico's environmental agency. Instead of addressing resident complaints as to repulsive environmental conditions and illegal hazardous waste disposition SEDUE, officials informed the complainants that they were under investigation as foreign agents.¹⁶⁰ Although SEDUE and EPA recently pledged that environmental health and hazardous waste management were mutual

¹⁵⁶*Id.*, at 6; See Comprehensive Environmental Response compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675 (1988).

¹⁵⁷*The Poison Next Door, supra* note 145, at 5.

¹⁵⁸*Id.*, at 4-6; BORDER PLAN, *supra* note 2, at V-1 - V-54.

¹⁵⁹Adler, *supra* note 149, at 52.

¹⁶⁰*The Poison Next Door, supra* note 145, at 6.

priorities under the Border Plan,¹⁶¹ SEDUE seems to have developed short term memory loss regarding those priorities. Given Mexico's past and current track record for environmental protection the conduct of the SEDUE officials' was consistent with the Salinas government's method of doing business.¹⁶²

SEDUE's questionable track record in relation to environmental enforcement was sporadic prior to the completion of the Border Plan, and remains so today. The Border Plan has been touted as the means to "... strengthen the basis for continuing cooperation between Mexico and the United States in improving the environment of the Border Area."¹⁶³ The rise in birth defects, linked to an unrelenting maquiladora hazardous waste stream, and apparently apathetic attitudes of some SEDUE officials suggest that the Border Plan may be smoke and mirrors. Another recent event of significant health and environmental proportion tends to reinforce that conclusion.

On April 22, 1992, a chain reaction of about nine explosions was triggered in Guadalajara, Mexico by gasoline illegally dumped in the sewer system. The force of the explosions ripped open streets,

¹⁶¹BORDER PLAN, *supra* note 2, at IV-1 - IV-5.

¹⁶²*House Comm. on Ways and Means Hearings, supra* note 18, at (statements of Congresswomen Marcy Kaptur, Appendix 10; Pharis J. Harvey, Executive Director, International Labor Rights Education and Research Fund); *House Comm. on Small Business Hearings, supra* note 58, at (statement of Dick Kamp Director, Border Ecology Project); WATER POLLUTION REPORT, *supra* note 16; *The Poison Next Door, supra* note 145.

¹⁶³BORDER PLAN, *supra* note 2, at I-3.

flattened buildings, and hurled vehicles through the air. Approximately 200 people were killed and 600 injured. On April 21, 1992, residents of Guadalajara had reported "nauseating, eye-and-nose-stinging gases" escaping from sewer ducts, but no action was taken by government officials.¹⁶⁴ SEDUE inaction has been viewed as negligent.¹⁶⁵

One of the most serious environmental issues faced by Mexico is its inability to adequately cope with the disposal of hazardous and toxic wastes.¹⁶⁶ Based on the testing conducted by National Toxic Campaign Fund (NTCF) it seems that little effort has been made to segregate potentially hazardous wastes in the industrial waste disposal process. As a result, many hazardous wastes, mixed with municipal wastes, end up buried in ordinary landfills, and those mixed with sewage are released to waterways.¹⁶⁷

F. Corporate Relocation Facilitates Illegal Dumping of Hazardous Waste

On an international scale, the unlawful export or import of

¹⁶⁴Aguilar, *Blasts Rock Mexican City; Death Toll Approaches 200*, The Washington Times, April 23 1992, A1 and A10.

¹⁶⁵*The Poison Next Door*, *supra* note 141, at 6.

¹⁶⁶REGULATIONS AND ENFORCEMENT, *supra* note 56; *House Comm. on Ways and Means Hearings*, *supra* note 18, at (statement of Congresswoman Marcy Kaptur, Appendix 10); WATER POLLUTION REPORT, *supra* note 16, at 1-31.

¹⁶⁷REGULATIONS AND ENFORCEMENT, *supra* note 56, at 2; WATER POLLUTION REPORT, *supra* note 16. The NTCF conducted the testing of rivers along the U.S.-Mexican border area and prepared the referenced report. *Id.*

hazardous waste is one of the most notorious forms of environmental criminal activity. Ideally, the EPA and U.S. Customs Service should work together to prevent illegal transboundary waste disposition. However, they are not always successful. The obvious example of illegal international toxic trade involves the blatant disregard of pertinent import and export restrictions in the course of transporting hazardous waste from one country to another.¹⁶⁸ In

¹⁶⁸There are two noteworthy cases that vividly illustrate the obstructionist conduct of individuals involved in the illegal transboundary disposal of hazardous waste. The first case involves two American arms merchants, Jack and Charles Colbert, who contracted in 1983 with a Zimbabwean firm to ship chemicals for use in dry cleaning and degreasing heavy machinery. Instead, the Colberts shipped toxic waste that subsequently ended up in an abandoned mine shaft. That incident was just one of many illegal disposal schemes implemented by the brothers. Their large-scale waste trafficking activities stretched across eight U.S. states and more than 100 countries, most of which were in the Third World. The Colberts' toxic trade was finally terminated in 1986 when the brothers were tried and convicted for multiple counts of fraud and conspiracy. Both received 13 year sentences. MOYERS, *supra* note 3, at 35-49. The second case involved Raymond Franco and David Torres, who masqueraded as licensed waste handlers and contracted with businesses to dispose of their hazardous waste. Pursuant to the waste disposal contracts Torres would then transport the waste to Mexico. However, the transport was executed without the receiving country's consent. Their activities were eventually reported to the EPA, and on May 9, 1990, after sufficient investigative scrutiny, both were indicted for felony violations of RCRA. Specifically, the two men were charged with conspiracy and illegal transportation, disposal, and export of hazardous waste. *Id.*, at 52-56. On May 31, 1991, Franco pleaded guilty and was fined \$4,000. Note, *supra* note 3, at 901. Torres fled to Mexico after the indictment. Weinstein, *El Toro Man Sentenced In Hazardous Waste*

the area of U.S-Mexican hazardous waste disposition the maquiladoras represent a huge loophole in border safeguards, fostered by SEDUE and EPA acquiescence.¹⁶⁹

Maquiladoras are not properly managing toxic and hazardous waste. Moreover, contrary to the La Paz Agreement, Annex III, Article 11, the maquiladoras are not consistently shipping back the hazardous waste generated from the processing of raw materials that originated in the United States.¹⁷⁰ There are several factors that support this conclusion: the disproportionately small number of returned shipments of hazardous waste (356, from 1987 to 1990)¹⁷¹ in relation to the estimated number of maquila waste generators (1,035 in November 1990);¹⁷² the high toxic concentrations present in the border region rivers;¹⁷³ the extremely poor health conditions

Case, L.A. Times, Dec. 3, 1991.

¹⁶⁹*The Poison Next Door*, *supra* note 145, at 5-6; WATER POLLUTION REPORT, *supra* note 16. The EPA has been aware of the maquiladora problem but has failed to implement effective controls and monitoring of U.S. exports of hazardous raw materials to Mexico and the return of hazardous waste by-products to the U.S. Vincent Interview, *supra* note 47; BORDER INFRASTRUCTURE, *supra* note 49; MAQUILADORAS' WASTE, *supra* note 14, at 3, 8-9; BORDER PLAN, *supra* note 2, at III-18 - III-24.

¹⁷⁰ La Paz Agreement Annexes, *supra* note 84, at Annex III; MOYERS, *supra* note 3, at 58-62; *The Poison Next Door*, *supra* note 145; WATER POLLUTION REPORT, *supra* note 16; BORDER PLAN, *supra* note 2, at III-19 - III-22; *Hazardous Waste From Maquiladoras in Mexico Dumped Illegally*, Panel Told, 8 INT'L REP. (BNA) 1,737 (Nov. 27, 1991).

¹⁷¹BORDER PLAN, *supra* note 2, at III-19 - III-20.

¹⁷²MAQUILADORAS' WASTE, *supra* note 14, at 7.

¹⁷³WATER POLLUTION REPORT, *supra* note 16.

on both sides of the border;¹⁷⁴ the lack of information regarding hazardous waste generators;¹⁷⁵ lax enforcement by SEDUE;¹⁷⁶ inadequate binational tracking of hazardous or toxic materials, and hazardous wastes.¹⁷⁷

These conditions demonstrate and facilitate the large scale hazardous waste dumping by maquiladoras. Given the ever increasing expense of hazardous waste disposal in the developed segments of the world,¹⁷⁸ industrial profitability favors illegal

¹⁷⁴Cleeland, *supra* note 18, A1, A8; Adler, *supra* note 149, at 52; *The Poison Next Door*, *supra* note 145, at 2-6.

¹⁷⁵MAQUILADORAS' WASTE, *supra* note 14, at 7; *GAO Official Says No Data Available On Toxic chemicals From Maquiladoras*, (BNA) Daily Report for Executives, Feb. 27, 1992, at A5. SEDUE semiannual reports for hazardous waste generators are absolutely useless unless completion is an enforceable requirement. See MAQUILADORAS' WASTE, *supra* note 14, at 2-4.

¹⁷⁶Cleeland, *supra* note 18, at A8, col. 2; *House Comm. on Ways and Means Hearings*, *supra* note 18, at (statements of Congressman Terry L. Bruce; David L. Ortman, Northwest Representative, Friends of the Earth; Joseph A. Kinney, Executive Director, National Safe Workplace Institute; Dale L. Matschullat, Vice-President and General Counsel, Newell Company); Bradsher, *supra* note 18, at D2, col. 5.

¹⁷⁷Vincent Interview, *supra* note 47; BORDER PLAN, *supra* note 2, at V-29 - V-33; MAQUILADORAS' WASTE, *supra* note 14, at 9-11. The absence of linkage between the U.S.-Mexican manifests systems is a significant fault in the process. However, a complementary manifest system may already be under consideration in relation to the development of a central binational computerized tracking system. The Border Plan is not entirely clear on this point. BORDER PLAN, *supra* note 2, at III-18 - III-22, V-29 - V-33.

¹⁷⁸ *The Economist*, *supra* note 91, at 24.

disposition in a country such as Mexico.¹⁷⁹ In light of the troublesome border region health and environmental conditions¹⁸⁰ it would seem that a significant portion of the hazardous waste generating maquiladoras are engaging in unlawful disposal practices.¹⁸¹ The fact that a majority of the maquiladoras are affiliated with American businesses¹⁸² leads to the conclusion that the comparative ease of hazardous waste disposition in Mexico, as opposed to the United States, provided motivation for American corporate relocation.

III. FREE TRADE AND THE U.S.-MEXICO BORDER ENVIRONMENT

The health and safety issues that prevail along the border highlight the need for immediate effective enforcement by Mexican and U. S. authorities. Another priority should be the implementation of an information gathering and identification process in connection

¹⁷⁹*House Comm. on Ways and Means Hearings, supra* note 18, at (statements of Congressman Terry L. Bruce; Alfredo Salazar, Jr., Administrator, Economic Development Administration, Commonwealth of Puerto Rico; Congresswoman Marcy Kaptur, Appendix 10).

¹⁸⁰MAQUILADORAS' WASTE, *supra* note 14, at 7; WATER POLLUTION REPORT, *supra* note 16.

¹⁸¹In September 1991 SEDUE surveyed 1,449 border maquiladoras, and determined that 800 were generating hazardous waste, but that only 446 were registered. MAQUILADORAS' WASTE, *supra* note 14, at 7. The SEDUE survey did not include all of the border maquiladoras, which account for about 90 percent of the total number of maquiladora facilities. *House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Joseph A. Kinney, Executive Director, National Safe Workplace Institute).

¹⁸²MAQUILADORAS' WASTE, *supra* note 14, at 1-2.

with suspected polluters, a necessary subset of effective enforcement. Lax Mexican enforcement and insufficient information regarding sources of pollution are key elements in the formulation of a solution to border environmental problems.¹⁸³ The absence of these elements is further complicated by the logistical problems associated with binational and multiple agency coordination. If actual control of transboundary, multimedia pollution is the goal then coordination between the two countries must transcend the mire of separate cultures, languages, policies, practices, and legal systems. In response to an increasing need for environmental protection in the border area, Mexican and U.S. officials have on several occasions formally expressed the desire to enhance binational cooperation, and bridge the information/enforcement gap.¹⁸⁴

The success of past binational U.S.-Mexican efforts may best be reflected in the existing quality of the border environment. More recent efforts have yet to be tested by time. It is clear, however,

¹⁸³Rich, *supra* note 1, at 27-29; Cody, *supra* note 1, at A16, col. 1.

¹⁸⁴Water Treaty of 1944, United States-Mexico, 59 Stat. 1219, T.S. No. 944, art. 3; Memorandum of Understanding Between the Subsecretariat for Environmental Improvement of Mexico and the EPA of the United States, June 19, 1978, United States-Mexico, 30 U.S.T. 1574, T.I.A.S. No. 9264; Mexico-United States: Agreement of Cooperation Regarding Pollution of the Marine Environment, July 24, 1980, 32 U.S.T. 5899, T.I.A.S. No. 10021, 20 I.L.M. 696 (1981); Mexico-United States Agreement to Cooperate in the Solution of Environmental Problems in the Border Area, Aug. 14, 1983, 22 I.L.M. 1025 (1983), Annexes I-V; Border Plan, *supra* note 2.

that Mexico is not on the fast track to environmental recovery. It will take more than the Border Plan to shatter the apparent stronghold of political tyranny¹⁸⁵ and administrative lethargy¹⁸⁶ within the Mexican government. While increased SEDUE investigative capacity, training, and bilateral cooperation with EPA¹⁸⁷ are positive steps in the right direction, the focus of these measures represents the tip of the iceberg. In order for the Border Plan to be successful the entire Mexican social and political framework must undergo dramatic change.¹⁸⁸ It remains questionable as to whether Mexico is capable of implementing the necessary changes given a history that reveals a decidedly inflexible social and political construct.¹⁸⁹ It is with the knowledge of that

¹⁸⁵*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Pharis J. Harvey, Executive Director, International Labor Rights Education and Research Fund).

¹⁸⁶Aguilar, *supra* note 164, at A1 and A10; *The Poison Next Door, supra* note 145.

¹⁸⁷BORDER PLAN, *supra* note 2, at V-1 - V-7.

¹⁸⁸The recognition of human rights and acceptance of government responsibility to the Mexican citizenry are key elements in that much needed evolutionary process. See *House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Pharis J. Harvey, Executive Director, International Labor Rights Education and Research Fund). See also Aguilar, *supra* note 164, at A1 and A10; *The Poison Next Door, supra* note 145.

¹⁸⁹Mexico is a country in which a single dominant party, the Partido Revolucionario Institucional (PRI), founded in 1929, has controlled Mexican politics for sixty years. Drucker, *Mexico's Ugly Duckling -- The Maquiladoras*, Wall St. J., Oct. 4, 1990, at A22, Col. 3.

historical perspective that the Border Plan and the NAFTA should be evaluated.

The proposed NAFTA may potentially create or contribute to a number of adverse environmental impacts in the U.S.-Mexico border region, and throughout Mexico. It is reasonable to anticipate that a free trade agreement will prompt substantially increased investment and economic growth in Mexico.¹⁹⁰ The maquiladoras are already generating waste at a pace that exceeds Mexico's management capacity.¹⁹¹ The situation will likely deteriorate further as new firms and investments enter Mexico, spurred by the NAFTA,¹⁹² and the Mexican government's acceptance of environmental destruction.¹⁹³

According to some experts there is a growing trend away from the light industry, sub-assembly operations that formerly dominated the maquiladora industries. Instead, the production of chemicals and electronics prevail. In addition, more companies are focusing on sophisticated production processes.¹⁹⁴ These developments will typically involve increased use of hazardous raw materials and

¹⁹⁰USTR REVIEW, *supra* note 2, at 68-69.

¹⁹¹WATER POLLUTION REPORT, *supra* note 16.

¹⁹²*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Joseph A. Kinney, Executive Director, National Safe Workplace Institute).

¹⁹³*The Poison Next Door, supra* note 145, at 5-6; WATER POLLUTION REPORT, *supra* note 16.

¹⁹⁴*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Joseph A. Kinney, Executive Director, National Safe Workplace Institute).

subsequent generation of hazardous wastes.¹⁹⁵ If predictions regarding production trends are accurate the pending NAFTA will exacerbate existing health, safety and environmental problems. Moreover, a trade-orientated NAFTA that fails to secure an internationally binding obligation regarding environmental safeguards, could have the effect of weakening established health, safety and environmental strictures on both sides of the border. In order to fully appreciate the extent to which the pending NAFTA may impact such considerations it is necessary to first examine the body of international law that is relevant to free trade.

A. The General Agreement on Tariffs and Trade

Historically, international environmental issues have been resolved on a separate track from trade issues.¹⁹⁶ As increased trade liberalization and environmental agreements are pursued it is to be expected that disputes will arise as to whether international trade rules, or international environmental agreements, take precedence. In light of the recent General Agreement on Tariffs and Trade (GATT)¹⁹⁷ ruling on the tuna-dolphin dispute members of the

¹⁹⁵*Id.*

¹⁹⁶See Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, 26 I.L.M. 1541 (entered into force Jan. 1, 1989) [hereinafter Montreal Protocol]; Basel Convention, *supra* note 119; La Paz Agreement, *supra* note 80; La Paz Agreement Annexes, *supra* note 84.

¹⁹⁷General Agreement on Tariffs and Trade (GATT) with annexes and schedules, and protocol of provisional application. Oct. 30, 1947, 61 Stat. A3, T.I.A.S. No. 1700, 55 U.N.T.S. 194 (entered into force Jan. 1, 1948) [hereinafter cited as GATT]. Both the U.S. and

environmental community might effectively argue that international environmental agreements supersede trade rules.¹⁹⁸

Mexico are signatories to the GATT. Since its establishment, the GATT has been progressively amended by a series of protracted negotiations, each "round" lasting a number of years. The most recent Uruguay Round (named for its inception at Punta del Este, Uruguay, in 1986) has involved negotiations regarding harmonized health and environmental standards, premised on three principles: (1) the adoption of strict principles of national treatment in standard setting and enforcement; (2) decisions to permit or restrict the availability of a new product or technology will be based only upon "sound scientific evidence"; (3) international agencies, such as Codex Alimentarius, are the only legitimate sources of scientific information. In effect, the latest round could compromise existing U.S. environmental, health, and safety safeguards if harmonization results in setting standards below those already established by the U.S. regulatory regime. STANLEY, FRICTIONS BETWEEN INTERNATIONAL TRADE AGREEMENTS AND ENVIRONMENTAL PROTECTION, 14-15 (1992); ARDEN-CLARKE, THE GENERAL AGREEMENT ON TARIFFS AND TRADE: ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT, 9 (1991).

¹⁹⁸GATT, United States - Restrictions on Imports of Tuna (U.S. v. Mexico), DS21/R, Sept. 3 1991 [hereinafter cited as Tuna-Dolphin Dispute]. The 1979 Tokyo Round of GATT was in effect at the time of the tuna-dolphin dispute. As a result of these GATT rounds, a dispute resolution process is already in place that allows countries to challenge environmental and consumer laws as non-tariff trade barriers. Consistent with GATT rules, challenges are considered in secret by a specially appointed panel of three representatives from GATT member countries. Administration officials responsible for the negotiation of the agreement must defend pertinent U.S. health and environmental laws against challenges. The process does not allow affected citizens, consumer or environmental advocates to have access to the briefs and papers related to the challenge. *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statement of Lori Wallach, Staff Attorney, Public Citizens' Congress Watch). In brief summary, the tuna-dolphin dispute was

Persisting conflicts between international trade and environmental issues demonstrates that the integration of the two areas is a necessary pattern for the future.¹⁹⁹ Although the GATT has limited legal status and does not constitute a definitive treaty²⁰⁰ it remains the legal framework under which almost all trade among nations occurs.²⁰¹ Unfortunately, that original agreement was

the result of a U.S. ban on Mexican tuna imports, the product of fishing practices that posed a danger to dolphins. The ban was based on the Marine Mammal Protection Act (MMPA), 16 U.S.C. § 1371 *et seq.* (1990). In response to Mexico's challenge of U.S. "trade restrictions" the GATT Panel concluded that the ban was a trade-illegal, extraterritorial application of U.S. law. Such a finding indicates that the GATT supports the recognition of standards that apply to goods and services in trade, and not the process by which the goods or services are produced. However, the GATT ruling also suggested that, as an alternative to an "extraterritorial" ban, a formal international environmental agreement, or waiver of obligations under the GATT, may be the preferred and acceptable course of action for signatory countries. Tuna-Dolphin Dispute, paras. 6.3 and 6.4. See also Industrial Pollution Control and International Trade, GATT Studies No. 1, July 1971, at 18.

¹⁹⁹STANLEY, *supra* note 197; PEARSON, RECONCILING TRADE AND ENVIRONMENT: THE NEXT STEPS (1991).

²⁰⁰The GATT was originally drafted in 1947 as a temporary arrangement, subject to the formulation of the Havana Charter and the International Trade Organization (ITO). However, the Charter was never ratified. The GATT remains an institution, not an organization, based on an unratified agreement between governments--the "Contracting Parties." ARDEN-CLARKE, *supra* note 197, at 9.

²⁰¹There are over one hundred countries that are "Contracting Parties" to the GATT, which together account for 90 percent of all international trade. Contracting Parties are those countries that have agreed to follow the regulations set forth in the articles of the GATT, which establish limits on the use of trade restrictions. The GATT regulations address the use of tariffs (taxes, duties, or

negotiated without any express reference to the environment.²⁰²
Rather, its narrow focus is the promotion of trade.²⁰³

charges on traded goods) or non-tariff measures (quotas or other quantitative limitations) as trade restrictions. Trade distorting policies that involve export subsidies are also subject to the GATT. ARDEN-CLARKE, *supra* note 197, at 9. Disputes between Contracting Parties tend to focus on specific trade measures, and are settled through consultations between the parties or a formal Dispute Panel established by the GATT Council. *Id.*, at 9. The GATT Council is made up of 70 Contracting Parties with permanent representation in Geneva. *Id.* If a Contracting Party disregards a Dispute Panel decision, adopted by the GATT Council, the complainant Contracting Party may be authorized to implement countervailing trade restrictions. Non-complainant Contracting Parties are precluded from participating in such retaliatory measures. *Id.*

²⁰²The term "environment" does not appear in the original text of the GATT. The omission is indicative of the fact that the agreement pre-dates international concern regarding the concepts of environmental protection and sustainable development. GATT, *supra* note 197.

²⁰³ARDEN-CLARKE, *supra* note 197, at 13. Article I(1), the most favored nation (MFN) principle ensures that GATT members do not discriminate among imported products on the basis of their national origin. Article II(1), establishes negotiated maximum tariff levels, specifically provided for in GATT annexes. Article III(1) and (2), provide that GATT members will not discriminate against imported goods subsequent to importation. Article XI(1), prohibits parties from imposing quantitative restrictions (quotas) or prohibitions on imports. Article XVI(A) and (B), provide for the reduction of the effects of subsidies on trade. There are three exceptions to the basic GATT rule under Article XI(1): Article XI(2)(c)(i) permits import restrictions under limited circumstances; Article XX(g) on its face appears to permit trade measures designed to conserve "exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption;" Article XX(b) allows governments to impose trade measures such as import prohibitions, "necessary to

The two GATT provisions that have the greatest bearing on environment and trade issues are Articles XX(b) and XX(g).²⁰⁴ However, the substance of these exceptions does not provide adequate support for environmental protection where there are conflicts with trade issues.²⁰⁵ For example, GATT, Article XX(b)

protect human, animal or plant life or health." GATT, *supra* note 197. The two exceptions to trade measures, enunciated under Article XX, are probably the only GATT provisions which contain phraseology that suggests a direct connection with environmental issues. McStarrow, *International Trade and the Environment: Building A Framework for Conflict Resolution*, 21 ELR 10589, 10594 (Oct. 1991). In the late 1980s, the meaning of these "environmental" exceptions became the subject of trade disputes. Two of those disputes illustrate the GATT Panel's narrow trade oriented interpretation of these exceptions. Canada-Measures Affecting Exports of Unprocessed Herring and Salmon, Panel Decision (1988) and Canada's Landing Requirements for Pacific Coast Salmon and Herring, Panel Decision (1989). CHERNOVITZ, EXPLORING THE ENVIRONMENTAL EXCEPTIONS IN GATT ARTICLE XX, 47-51 (1991).

²⁰⁴See Environmental exceptions, GATT, *supra* note 197, at arts. XX(b) and XX(g).

²⁰⁵See Report of GATT Panel, No. L/6175 (June 5, 1987). A panel was convened under GATT to resolve an issue involving taxes imposed on imported petroleum products and certain hazardous substances by the Superfund Amendments and Reauthorization Act of 1986. The Panel determined that the petroleum tax violated the national treatment rule set forth in Article III, but found that the hazardous substances tax was an acceptable border tax adjustment. *Id.*, 24, 28. The Panel rejected the European Community (EC) contention that "[w]hat the United States was in fact doing under the label of border tax adjustments was to ask foreign producers to help defray the costs of cleaning up the environment for the United States industries." *Id.*, at 12. The United States countered that the tax measures were primarily motivated by fiscal, not environmental needs. While acknowledging that "[e]nvironmental policy principles related to trade could conceivably be incorporated into the GATT

exception for regulations "necessary to protect human, animal, or plant life or health," does not define what is "necessary."²⁰⁶ The absence of such a definition requires a case-by-case resolution.²⁰⁷ Moreover, there are two qualifications to the GATT Article XX exceptions: environmental protection and conservation measures may not "discriminate between countries where the same conditions prevail;"²⁰⁸ and the exceptions are "subject to" the preclusion of "disguised restriction[s] on international trade."²⁰⁹ As a whole the qualifications are ambiguous, and may be subject to interpretations that could be favorable to either environmental or trade concerns.

As a result of the GATT Tokyo Round negotiations two documents emerged as having some bearing on trade and environment issues: the Standards Code²¹⁰ and the Subsidies Code.²¹¹ The

legal system," the United States maintained that "such a far-reaching step require[ed] the cooperation of all contracting parties..." *Id.* It was the rationale voiced by the United States that was eventually embraced by the GATT Panel.

²⁰⁶GATT, *supra* note 197, at art. XX(b).

²⁰⁷See Canada Brief, *infra* note 214, at 17.

²⁰⁸GATT, *supra* note 197, at art. XX. There is no clarification regarding the nature of the "conditions" relevant to the inquiry. *Id.*

²⁰⁹*Id.*

²¹⁰The formal name for the Standards Code is the Agreement on Technical Barriers to Trade (Apr. 12, 1979), *reprinted* in GATT Law, II.C.4.

²¹¹The formal title of the Subsidies Code is the Agreement on Interpretation and Application of Articles VI, XVI and XXIII of the GATT (Apr. 12, 1979), *reprinted* in GATT Law, II.C.1. Not all members of the GATT agreed to either the Subsidies or Standards Code. The United States' implementing legislation of the Subsidies Code is found at 19 U.S.C. §§ 1671-1671f.

Subsidies Code is designed to avoid "harmful effects [of subsidies] on trade and production," to ensure that "countervailing measures do not unjustifiably impede international trade," and to regulate subsidies and countervailing measures under the code.²¹² There are some exceptions to these provisions, such as those subsidies that provide for "the elimination of industrial economic and social disadvantages of specific regions."²¹³ Although a liberal interpretation of the above-referenced portion of the Subsidies Code may allow for some environmental safeguards, there is no explicit provision, or assurance of such application.²¹⁴

The Standards Code, directed at the technical specifications relating to products,²¹⁵ potentially provides a framework for

²¹²Subsidies Code, preamble; *see supra* note 198, at arts. 1-8. "Countervailing duty" is defined as "a special duty levied for the purpose of off-setting any bounty or subsidy bestowed directly or indirectly upon the manufacture, production or export of any merchandise...." *Id.*, at 4.

²¹³Subsidies Code, *supra* note 211, at art. 11(1)(a).

²¹⁴*Id.*

²¹⁵Standards Code, *supra* note 210, at annex 1, pt. 1 [defining a "technical specification" as a specification which "lays down characteristics of a product such as levels of quality, performance, safety or dimensions]. In a situation in which the environmental standard involves a product ban, an argument may be made that the Standards Code applies. *See e.g.*, Brief of Amicus Curiae, Government of Canada, at 17, filed May 22, 1990, Donald N. Dewees, Faculty of Law, University of Toronto [hereinafter Canada Brief], *related to* Corrosion Proof Fittings v. EPA, No. 89-4596 (5th Cir. complaint filed 1989). In that case the U.S. banned asbestos after medical evidence established its deadly effects. Toxic Substances Control Act (TSCA) 15 U.S.C. § 2605(a) (1988); *see* 54 Fed. Reg.

harmonizing standards on an international basis. However, there is no specific guidance regarding a signatory country's obligation to promulgate internal laws and regulations that conform to minimum international standards for the protection of health, safety, or the environment.²¹⁶ The only normative guidance is that standards should not create "unnecessary obstacles to international trade."²¹⁷ As is the case with the GATT, Article XX(b) exception the determination of what are "necessary" or "unnecessary" standards is at best uncertain.

Ultimately, it is possible to utilize the existing GATT as a means of addressing environmental and trade concerns. However, GATT Panel decisions have demonstrated that what is lacking are principles to guide conflicts between competing substantive values as they arise between signatory countries. On the subject of challenges, the Tokyo Round of the GATT has been used by Mexico to challenge the Marine Mammal Protection Act,²¹⁸ it has been used to undermine Danish recycling laws, Canadian fish conservation rules,

29460 (1989), codified at 40 C.F.R. pt. 763. A Canadian asbestos producer challenged the regulations promulgated by the EPA by instituting the above-cited action. In turn, the Canadian government filed a Brief of Amicus Curiae in support of the Canadian asbestos producer's challenge which averred that the EPA asbestos ban was subject to and violated the Standards Code. In response to the claimed application of GATT, Article XX(b), Canada argued that because the international consensus recognized that particular asbestos products were amenable to safe regulation a ban was not "necessary" under GATT. Canada Brief, at 17.

²¹⁶Standards Code, *supra* note 210, at art. 2.2.

²¹⁷*Id.*, at art. 2.1.

²¹⁸16 U.S.C. § 1371 *et seq.* (1990).

and the Thai cigarette advertising ban.²¹⁹ In the future, the Uruguay Round is expected to enhance a Contracting Party's ability to challenge health, safety and environmental laws as technical barriers to trade.²²⁰

The successful completion of the Uruguay Round remains a goal. The fledgling round remains at an impasse as a result of unresolved issues.²²¹ A major step toward resolution was taken in December 1991 when Arthur Dunkel, Director, GATT, submitted a comprehensive proposal. It is the Dunkel text that serves as a basis for ongoing negotiations.²²²

In relation to the GATT Standards Code provision that favors the elimination of "unnecessary obstacles to international trade"²²³

²¹⁹*House Comm. on Energy and Commerce Hearings, supra* note 20, at (statement of Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

²²⁰*Id.* See also Draft Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, MTN.TNC/W/36/Rev. 1/, GATT Secretariat UR-90-0834, Dec. 3, 1990, 161-181. In relation to food safety standards contained in the draft GATT text would compel the U.S. to accept the health and safety standards set by international commissions unless it can be established that there is a "reasonable scientific justification" for maintaining the more stringent U.S. requirements. *Id.*

²²¹*Inside GATT: US Politics Muddle GATT Prospects*, International Reports, 9 (July 17, 1992); See *Trade Negotiations and the Environment*, International Environmental Daily (BNA) (Mar. 27, 1992).

²²²Dunkel Agreement, GATT Doc. MTN.TNC/W/FA [hereinafter cited as Dunkel Agreement]. International Environment Daily, *supra* note 221.

²²³Standards Code, *supra* note 210, at art. 2.1.

the Dunkel text would strengthen that mandate by requiring that regulations "shall not be more trade restrictive than necessary to fulfill a legitimate objective...."²²⁴ Next, the Dunkel text imposes additional constraints under the Standards Code in connection with the principle of national treatment. Currently, the GATT provides that import regulations cannot be stricter than those that apply to domestic products.²²⁵ Under the proposed agreement, if an environmental objective can be achieved through the application of the least trade-restrictive option, import regulations could be subject to challenge regardless of existing identical domestic requirements.²²⁶

Another proposed change reinforces the GATT subnational conformity requirement by making parties "fully responsible" for the formulation and implementation of state and local standards

²²⁴Dunkel Agreement, *supra* note 216, at Section G., art. 2.2. While the Dunkel text recognizes health, safety, and environmental issues as "legitimate" concerns, it would invite the challenge of many environmental regulations that may be perceived as negatively impacting trade. The premise of the challenge would be that non-trade measures could serve as an adequate substitute. *Id.* Likely targets for such challenges would be recycling and disposal laws that apply to imports. For example, the EC has in effect a similar trade-restrictive provision and the Court of Justice applied it in overruling a Danish Law that established limits on the sale of non-reusable beer containers. *Re: Disposable Beer Cans: E.C. Commission v. Denmark*, [1989] 1 C.M.L.R. 619 (E. Comm. Ct. J); See *International Environment Daily*, *supra* note 221.

²²⁵GATT, *supra* note 197, at arts. I and III.

²²⁶Dunkel Agreement, *supra* note 222.

that are consistent with the GATT trade provisions.²²⁷ Based on that requirement, the federal governments of the signatory countries could be called upon to enact legislation that would preempt state and local standards.²²⁸

The Dunkel text also sets forth lengthy requirements regarding sanitary and phytosanitary (S & P) standards, related to the health of human, animal or plant life. Although the proposed agreement permits countries to implement standards that exceed international requirements certain criteria must be met.²²⁹ The Dunkel text preamble is also subject to the interpretation that GATT, Article XX(b) is strictly related to S & P measures. In turn, the Dunkel text gives S & P measures a parochial connotation that could further

²²⁷*Id.*, at art. 3.5. See GATT, *supra* note 197, at art. XXIV. GATT provisions are not self-enforcing. International Environment Daily, *supra* note 221.

²²⁸International Environment Daily, *supra* note 221.

²²⁹*Id.* The six most significant criteria will be discussed herein. (1) S & P measures cannot arbitrarily discriminate between countries with "identical or similar conditions." The Dunkel text replaced the term "same" in the GATT, Article XX, with "similar," allowing for fewer trade restrictions. Dunkel Agreement, *supra* note 222, at Section G, art. 2, para. 7. (2) S & P measures must have "a scientific justification." *Id.*, at para. 22. (3) Arbitrary or unjustifiable distinctions in health risk levels must be avoided. *Id.*, at para. 20. (4) The potential damage that is the result of inadequate health standards and the cost-effectiveness of alternative measures must be considered. *Id.*, at para. 18. (5) The minimization of negative trade impacts "should be considered." *Id.*, at para. 19. (6) The S & P measures must be "the least restrictive to trade, taking into account technical and economic feasibility." *Id.*, at para. 21. See International Environment Daily, *supra* note 221.

narrow the application of GATT, Article XX(b) to a country's domestic interests.²³⁰

Overall the Dunkel text strengthens the trade perspective of the GATT. Although the proposed agreement addresses the health exception set forth in GATT, Article XX(b), it fails to mention the conservation exception under GATT, Article XX(g).²³¹ The Dunkel text provides for a more restricted application of the health exception that is addressed.

B. Free Trade Agreements Under The GATT

Co-Existing with the GATT are a wide range of additional regional and bilateral trade agreements that effect the patterns of national and international trade. The two significant agreements in North America are the U.S.-Canada Free Trade Agreement (CFTA),²³²

²³⁰Dunkel Agreement, *supra* note 222. Such an interpretation could have the effect of codifying the Tuna-Dolphin Dispute decision. See International Environment Daily, *supra* note 221.

²³¹Dunkel Agreement, *supra* note 222; International Environment Daily, *supra* note 221.

²³²United States-Canada Free Trade Agreement (CFTA), H.R. Doc. No. 216, 100th Cong., 2d Sess. (1988) [hereinafter cited as CFTA]. On January 2, 1988, the United States and Canada entered into a Free Trade Agreement, which became effective January 1, 1989. The countries negotiated the agreement with the goal of eventually eliminating trade barriers to improve market access for each country's goods and services. Incorporated into the agreement is a mutual agreement by the parties to eliminate virtually all tariffs between the countries within ten years. U.S. GENERAL ACCOUNTING OFFICE, AGRICULTURAL TRADE: GOVERNMENT SUPPORT CALCULATIONS UNDER THE U.S.-CANADA FREE TRADE AGREEMENT, 2 (Aug. 1990).

and the ongoing negotiations for the trilateral NAFTA among the United States, Canada, and Mexico. The CFTA was predicated on the GATT model, and a similar result can be expected with respect to NAFTA negotiations.²³³

The terms of a free trade agreement generally provide for preferential treatment of imports from other parties to the agreement, but do not necessarily result in harmonization of external tariffs for the rest of the world. Such agreements represent a departure from the fundamental principle of nondiscriminatory, "most favored nation" (MFN), treatment that GATT members have agreed to extend each other.²³⁴ In anticipation of free trade agreements GATT, Article XXIV, sets forth strict conditions for the terms of such agreements: (1) it must cover substantially all trade; (2) it must provide for elimination of duties among its members, on a fixed and "reasonable" timetable; (3) the duties and other regulations of commerce maintained by the parties to the agreement with respect to non-participants shall not be higher or more restrictive than those maintained prior to the agreement.²³⁵

GATT contracting parties are further obligated under Article

²³³House Comm. on Energy and Commerce Hearings, *supra* note 20, at (statements of Craig Merrilees, Western Director, Fair Trade Campaign and Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

²³⁴GATT, *supra* note 197, at art. I(1).

²³⁵USTR REVIEW, *supra* note 2, at 57; GATT, *supra* note 197, at art. XXIV.

XXIV to take all reasonable measures to ensure that GATT provisions are complied with at subnational levels, including actions of regional, state, and local governments. Conflicting state, local, and regional environmental laws and regulations could place a contracting party in violation of its GATT obligations. Such obligations could potentially impede a contracting nation's implementation of viable environmental laws at the national and subnational level.²³⁶ Based on a trilateral concurrence it is expected that the pending NAFTA will ultimately be fully consistent with GATT requirements, and will be presented to the GATT contracting parties.²³⁷ With or without the Uruguay Round, the GATT could be used as a means of challenging health, safety and environmental strictures that may overlap with issues involving free trade.

A full appreciation of the environmental impacts of liberalized trade also requires a comprehension of the attendant industrial practices associated with an increased movement of tradeable goods. First, free trade could impede the safeguards related to global commons issues, as was the case in the Tuna-Dolphin Dispute.²³⁸ Second, both the production and transportation of goods have ramifications related to energy use and depletion of natural resources.²³⁹ Third, increased transportation enhances the

²³⁶STANLEY, *supra* note 197, at 8.

²³⁷USTR REVIEW, *supra* note 2, at 57-58.

²³⁸Tuna-Dolphin Dispute, *supra* note 198.

²³⁹USTR REVIEW, *supra* note 2, at 71.

possibility of environmental accidents, particularly where hazardous material or wastes are involved.²⁴⁰ Fourth, free trade may potentially have a chilling effect on a country's ability to maintain high health and environmental standards.²⁴¹ Finally, expanded free trade could enhance already existing incentives for industrial relocation to Mexico.²⁴²

Integral to the maquiladora expansion, the principles of deregulated trade have in the past operated to undermine environmental regulation by facilitating corporate relocation to

²⁴⁰*Id.*, at 68-71. The La Paz Agreement, Annex II and the accompanying binational Joint Contingency Plan was intended to prevent "Bhopals" in the U.S-Mexican border area. However, on July 14, 1990, the Quimica Organica Plant ruptured a tank of toxic hydrosulfonic acid. The result of the toxic release:

Thousands were evacuated in the surrounding squatter community and an unknown number were hospitalized. In one newspaper photo, the fire department responded wearing handkerchiefs. Nobody notified EPA despite a well-publicized Calxico-Mexicali Joint Response Plan that was being developed under EPA-SEDUE auspices. It was a BEP [Border Ecology Project] consultant and native of Mexicali who found out about the problem locally and faxed important risk and response data to agencies and responders in Mexicali.

House Comm. on Energy and Commerce Hearings, supra note 20 at (statement of Dick Kamp, Director, Border Ecology Project, Inc.).

²⁴¹USTR REVIEW, *supra* note 2, at 70, 72.

²⁴²*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of David Ortman, Northwest Representative, Friends of the Earth).

foreign jurisdictions with less environmental costs.²⁴³ The result is that a poor, less developed nation, such as Mexico, is subject to the pressure of exchanging reduced environmental standards for increased investments. Moreover, corporate polluters have been known to use the implied or explicit threat of disinvestment and plant closures to mobilize opposition to environmental safeguards and occupational health regulation.²⁴⁴ The Canadian Chemical Producers Association's response to proposed worker and community "right to know" legislation is indicative of that corporate mentality:

It is a fact that if unnecessary or excessive costs are introduced unilaterally by any country, (or province), innovation and development will simply cease or be transferred to jurisdictions with a more favorable business climate. Should this happen in Canada, it would be quickly reduced to a warehouse of chemicals.²⁴⁵

²⁴³*Id.*, at (statements of Congressman Terry L. Bruce; Alfredo Salazar, Jr., Administrator, Economic Development Administration, Commonwealth of Puerto Rico; Congresswoman Marcy Kaptur, Appendix 10; Joseph A. Kinney, Executive Director, National Safe Workplace Institute, Chicago, Illinois); TEXAS COMPTROLLER, *supra* note 25, at 3; Bradsher, *supra* note 18, at D2, col. 5.

²⁴⁴*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of David Ortman, Northwest Representative, Friends of the Earth); *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statement of Alex Hittle, International Coordinator, Friends of the Earth).

²⁴⁵CANADIAN ENVIRONMENTAL LAW RESEARCH FOUNDATION, ROUNDTABLE DISCUSSION ON TOXIC CHEMICALS LAW AND POLICY IN CANADA, Appendix C (1981).

In a GATT study, which specifically addressed an environmental facet of international trade, the corporate stronghold was further described:

[The] polluting industries in the countries with the most exacting standards would thus become relatively less profitable, their expansion would slow relatively to that of corresponding industries, and there would be a tendency for these industries to move out of countries with relatively heavy direct costs of pollution abatement....²⁴⁶

The negotiation of the CFTA offered several illustrations of the corporate community's leveraging of investment interests against environmental strictures. In the United States, the National Coal Association used the agreement to justify the removal of "regulatory disincentives" that inhibited the growth of coal-fired power plants.²⁴⁷ In Canada, the Ontario Chamber of Commerce maintained that air pollution regulations should be "relaxed" in order to allow businesses to compete in the free trade environment.²⁴⁸

²⁴⁶GATT: STUDIES IN INTERNATIONAL TRADE, INDUSTRIAL POLLUTION CONTROL AND INTERNATIONAL TRADE, 11 (GENEVA, JULY 1971)[hereinafter cited as GATT: STUDIES IN INTERNATIONAL TRADE].

²⁴⁷*Hearings Before the Senate Energy and Resource Comm.*, 100th Cong., 1st Sess. (April 21, 1988) (statement on behalf of the National Coal Association on the Canada-U.S. Free Trade Agreement).

²⁴⁸Nikiforuk, *Free Trading Our Environment*, Nature Canada, Summer 1986, at 40.

As a result of free trade in hazardous waste, one Canadian waste management company has used the absence of stringent U.S. liability requirements as an advertising ploy designed to foster transactions with American businesses.²⁴⁹ That economic incentive was so deeply rooted that when the United States considered strengthening hazardous waste export controls by requiring that other jurisdictions meet U.S. standards the Canadian government became the principle lobby opposing the initiative.²⁵⁰

Under the CFTA a company will not be subject to challenge in the event that the competitive edge is promoted at the expense of the environment. Moreover, a GATT study concluded that the export of polluting industries to less regulated countries is not necessarily an undesirable result: "...it would not seem desirable for any country to adopt measures designed to stem such flows of investment and trade as might result from international differences in pollution control norms."²⁵¹

The resulting CFTA is silent on the subject of health, safety and environmental standards, with the exception of references to federal technical standards, pesticides, and food safety standards.²⁵² Those provisions were intended to promote

²⁴⁹ENVIRONMENTAL MATTERS (INDUSTRY'S GUIDE TO THE ISSUES, THE CHALLENGES AND THE SOLUTIONS) (June 1990), 10.

²⁵⁰*Id.*

²⁵¹GATT: STUDIES IN INTERNATIONAL TRADE, *supra* note 246.

²⁵²*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of David E. Ortman, Northwest Representative, Friends of the Earth). The CFTA has triggered the elimination of meat

harmonization of standards, testing procedures, and regulations.²⁵³ However, harmonization has a dual meaning: it may reference the raising or lowering of standards to reach a common denominator. Under the CFTA it has come to mean the lowering of U.S. standards.²⁵⁴ As a general principle, the ambiguity of the term "harmonization" has invited an international discourse that could result in an amended GATT that would reflect an environmental consensus amenable to corporate influence.²⁵⁵

Both the CFTA and the NAFTA have been a source of environmental consternation. Specifically, the proposed NAFTA is at the forefront of trade/environmental debates in the United States. Particular concern has been expressed regarding the disparity between U.S. and Mexican enforcement of health, safety, and

inspection for transports into the United States. Only about one truck in 15 is stopped and the driver, not the inspector, selects the sample for inspection. One USDA inspector reported a horrifying increase in meat contamination with feces, glass and metal. U.S. border inspectors are only allowed to reject the samples inspected, the remainder of the shipment is processed through the border checkpoint. *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statement of Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

²⁵³ *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statement of Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

²⁵⁴ *Id.*

²⁵⁵ *Id.* See generally Dunkel Agreement, *supra* note 222. For further references to the Uruguay Round, see ARDEN-CLARKE, *supra* note 197, at 24-31.

environmental strictures.²⁵⁶ Given the lack of internationally enforceable safeguards, a NAFTA that is narrowly focused on trade would encourage future Mexican trade rule challenges under the GATT. Such challenges would potentially impede the preservation of U.S. health, safety, and environmental standards, and the corresponding enforcement mechanisms.²⁵⁷

In the absence of environmentally favorable GATT reforms, either a NAFTA that adequately integrates trade and environmental interests,²⁵⁸ or a complementary trilateral environmental agreement that upwardly harmonizes the internal environmental policies of the United States, Canada and Mexico may serve to

²⁵⁶MAQUILADORAS' WASTE, *supra* note 14; *House Comm. on Energy and commerce Hearings*, *supra* note 20, at (statement of Richard Kamp, Director, Border Ecology Project); Cody, *supra* note 1, at A8; Cleeland, *supra* note 18, at A1.

²⁵⁷GATT, *supra* note 197, at Articles I and III. That threat exists, with or without the NAFTA, but would grow in proportion with the increase in import and export activities that would be consistent with free trade. See Tuna-Dolphin Dispute, *supra* note 198, at 6.3 and 6.4.

²⁵⁸Explicit recognition of the legitimacy of a *bona-fide* measure to protect the global commons could be accomplished by including in the NAFTA an improved version of GATT, Article XX(b) and (g). Such a version would leave no doubt as to the environmental application of the exceptions. See *Hearing Before the Subcomm. on Rules of the House Comm. on Rules*, 102d Cong., 2d Sess. (Oct. 16, 1991) (statement of Stewart J. Hudson, Legislative Representative, International Affairs Department, National Audobon Society).

appease both interests.²⁵⁹ Ideally, such an agreement should incorporate trade and environmental considerations in the promotion of sustainable development. In this context, sustainable development would require the balancing of natural resource preservation and economic growth as interdependent interests.

C. NAFTA Negotiations

The NAFTA negotiations represent a formal recognition of the already burgeoning trade among the three parties to the pending trilateral agreement. U.S. trade with Canada and Mexico more than doubled in the last decade, from \$109 billion in 1980 to \$234 billion in 1990. Those figures indicate that 25 percent of U.S. international

²⁵⁹Such a trilateral solution was endorsed in the text of the GATT Panel Decision on the Tuna-Dolphin Dispute:

If the CONTRACTING PARTIES were to decide to permit trade measures of this type in particular circumstances it would therefore be preferable for them to do so not by interpreting Article XX, but by amending or supplementing the provisions of the General Agreement or waiving obligations thereunder. Such an approach would enable the CONTRACTING PARTIES to impose such limits and develop such criteria.

Tuna-Dolphin Dispute, *supra* note 198, at 6.3:

These considerations led the Panel to the view that the adoption of its report would affect neither the rights of the individual contracting parties to pursue their internal environmental policies and to cooperate with one another in harmonizing such policies, nor the right of the CONTRACTING PARTIES acting jointly to address international environmental problems which can only be resolved through measures in conflict with the present rules of the General Agreement.

Id., at 6.4.

trade is conducted with its two North American border countries.²⁶⁰ Such trade figures suggest that the NAFTA would merely facilitate the development of an already expanding North American market. Some proponents predict that a successful NAFTA would create a market of 360 million consumers, with a total economic output of \$6 trillion, making the three North American nations the single most powerful economic region in the world.²⁶¹

While there are many economic incentives underlying the proposed NAFTA, there remain many areas of concern. American organized labor opposes the agreement because of the potential threat to the U.S. unskilled labor force.²⁶² Environmental organizations argue that increased economic activity in the U.S.-Mexican border area, absent proper environmental strictures, will serve to exacerbate existing ecological degradation.²⁶³

²⁶⁰U.S. CHAMBER OF COMMERCE REPORT, *supra* note 20, at i.
²⁶¹*Id.*

²⁶²*Senate Comm. on Finance Hearings, supra* note 20, at (statement of Thomas R. Donahue, Secretary and Treasurer, AFL-CIO, Washington, D.C., accompanied by Robert M. McGlotten, Director, Department of Legislation, AFL-CIO, also accompanied by Mark Anderson, Assistant Director, Department of Economic Research, AFL-CIO).

²⁶³*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of David Ortman, Northwest Representative, Friends of the Earth); *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statements of Craig Merrilees, Western Director, Fair Trade Campaign; Richard Kamp, Director, Border Ecology Project; Alex Hittle, International Coordinator, Friends of the Earth; Peter M. Emerson, Senior Economist, Environmental Defense Fund; Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

The CFTA, which entered into effect on January 1, 1989, has served as a framework for NAFTA negotiations that began on June 12, 1991.²⁶⁴ In turn, environmental opposition to the NAFTA has been heightened by problems arising out of the CFTA. Although the CFTA set forth a commitment to harmonize each nation's environmental standards and regulations, it failed to draw a connection between increased trade and corresponding environmental impacts.²⁶⁵ The concern among many environmental interest groups is that the NAFTA would primarily mirror the "trade perspective" of the CFTA, and concordantly neglect issues related to the environmental impacts of increased trade.²⁶⁶ Critics have argued that the CFTA has been used as a sword against domestic environmental regulation and as a shield permitting reduced environmental and health standards.²⁶⁷ Perhaps the CFTA gap

²⁶⁴U.S. CHAMBER OF COMMERCE REPORT, *supra* note 20, at i; INTERNATIONAL REPORTS, *supra* note 8, at 10; Mcslarrow, *International Trade and the Environment: Building A Framework for Conflict Resolution*, 2 ELR 10589, 10594 (Oct. 1991). NAFTA negotiations began with a meeting of trade ministers in Toronto, Canada. At that juncture, the trade ministers determined that the negotiations would be broken into six broad areas: market access; trade rules; investment; services; intellectual property rights; and dispute settlement. Under these heading the three countries have established about 19 working groups to negotiate agreement positions. USTR REVIEW, *supra* note 2, at 58.

²⁶⁵McSlarrow, *supra* note 264, at 10596.

²⁶⁶*Id.*

²⁶⁷Hearings Before the Subcomm. on International Economic Policy and Trade and Western Hemisphere Affairs of the House Comm. on Foreign Affairs, 102d Cong., 1st Sess. (Mar. 6, 1991)

between trade and environmental issues is best evidenced by the Canadian action to force the United States to accept Canada's exportation of banned asbestos.²⁶⁸ In that instance, the Canadian government asserted that the U.S. ban on asbestos constituted an "unnecessary" barrier to trade.²⁶⁹

In relation to the NAFTA, public debate over the U.S.-Mexican trade and environmental issues emerged in connection with President Bush's March 1, 1991 renewal request for "fast-track" authority from the Congress to enter into a free trade area negotiation with Mexico and Canada.²⁷⁰ Although environmental interest groups have failed to develop a unified position regarding the U.S.-Mexican border area, there are three prevailing categories of concern: (1) transboundary pollution problems; (2) dissimilar

(statement of Stewart J. Hudson, National Wildlife Federation); *House Comm. on Ways and Means, supra* note 18, at (statement of David Ortman, Northwest Representative, Friends of the Earth); *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statements of Craig Merrilees, Western Director, Fair Trade Campaign; Richard Kamp, Director, Border Ecology Project; Alex Hittle, International Coordinator, Friends of the Earth; Peter M. Emerson, Senior Economist, Environmental Defense Fund; Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

²⁶⁸Canada Brief, *supra* note 215.

²⁶⁹*Id.*

²⁷⁰Under the fast-track procedure, Congress must approve or reject any trade agreement without amendments. Proponents of granting President Bush fast-track authority have maintained that Mexico would be reluctant to negotiate an agreement that could be renegotiated by Congress. On May 23 and May 24, 1991 both the House of Representatives and the Senate voted to extend "fast-track" negotiating authority to the President until May 31, 1993. U.S. CHAMBER OF COMMERCE REPORT, *supra* note 20, at i-ii.

production; (3) disparate environmental enforcement by Mexican authorities.²⁷¹ In a nutshell, the motivating factor in addressing any one of these categories is the perception that free trade means the lowering of health, safety, and environmental standards on both side of the border.²⁷² This perception is not necessarily inaccurate. In a developing country, such as Mexico, the scarcity of technical and financial resources may undercut any effort to establish and enforce the same level of health, safety, and environmental standards that exist in an industrialized country.²⁷³ In turn, the United States may

²⁷¹*House Comm. on Ways and Means, supra* note 18, at (statement of David Ortman, Northwest Representative, Friends of the Earth); *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statements of Craig Merrilees, Western Director, Fair Trade Campaign; Richard Kamp, Director, Border Ecology Project; Alex Hittle, International Coordinator, Friends of the Earth; Peter M. Emerson, Senior Economist, Environmental Defense Fund; Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

²⁷²*Id.*; STANLEY, *supra* note 194, at 17-34.

²⁷³The successful implementation of the NAFTA will not alone be sufficient to raise the Mexican standard of living to a level that would ensure that nation's economic wherewithal in the facilitation of necessary environmental safeguards. In Mexico, assembly line wages peak at about \$6.00 per day. Even if wages were subject to a 220 percent increase in the next quarter century, as some economists project under the NAFTA (returning wages to 1980 levels in U.S. dollars) a vast majority of the population would remain impoverished. It is uncertain as to whether the Mexican economy is prepared for free trade. *Hearing on the North American Free Trade Agreement Before the Subcomm. on Regulation, Business Opportunities, and Energy of the House Comm. on Small Business*, 102d Cong., 2d Sess. (Feb. 21, 1992) (statement of Dick Kamp, Director, Border Ecology Project) [hereinafter cited as *House Comm. on Small Business Hearings*]; *Senate Comm. on Finance Hearings*,

find itself on the receiving end of increased Mexican challenges to U.S. health, safety and environmental strictures that may be susceptible to "trade restrictive" assertions.²⁷⁴

As part of the process of securing renewal of the fast-track authority, the Administration agreed to submit an action plan addressing the environmental and trade issues which had been raised in connection with the proposed NAFTA. These issues were addressed in the March 7, 1991 joint letter to the President from Senate Finance Committee Chairman Lloyd Bentsen and House Ways and Means Committee Chairman Dan Rostenkowski.²⁷⁵ The President's response was submitted on May 1, 1991.²⁷⁶

In its May 1, 1991 "Response to Congress on Issues Raised in Connection with the Negotiations of a North American Free Trade Agreement" (Action Plan),²⁷⁷ the Administration made a number of firm commitments concerning the negotiation of the NAFTA. These include: (1) avoid dislocations to industries that are vulnerable to imports; (2) consider transition periods in excess of those provided in the CFTA (i.e. 10 years); (3) provide effective procedures to

supra note 20, at (statement of Wires Washington).

²⁷⁴See Tuna-Dolphin Dispute, *supra* note 198.

²⁷⁵Hearing on the President's United States-Mexico Free Trade Letter Before the Senate Comm. on Finance, 102d Cong., 1st Sess. (May 7, 1991), (statement of Senator Lloyd Bentsen).

²⁷⁶Hearings Before the Senate Comm. on Finance, *supra* note 20, at (statement of Senator Lloyd Bentsen).

²⁷⁷Letter from President Bush to Senator Lloyd Bentsen, Chairman, Senate Committee on Finance (May 1, 1991) [hereinafter cited as Action Plan].

prevent injury from increases in imports; (4) apply strict rules of origin; (5) maintain the right to exclude products that do not meet health and safety requirements of the U.S.; (6) maintain the right to impose stringent pesticide, energy conservation, toxic waste, and health and safety standards; (7) maintain the right to limit trade in products controlled by international treaties.²⁷⁸ It is apparent that commitments regarding health, safety, and the environment were designed to assuage fearful predictions regarding the lowering of U.S. regulatory standards as a result of expanded trade.²⁷⁹ However, it is not evident that there is any intent to incorporate such commitments into the body of the NAFTA.

The Action Plan Executive Summary outlines an "ambitious program of cooperation" to be pursued "in parallel to the FTA negotiations."²⁸⁰ In the context of the Action Plan the Administration made a commitment to ensure that environmental groups were given an opportunity to participate in key trade policy

²⁷⁸*Id.*

²⁷⁹*House Comm. on Ways and Means, supra* note 18, at (statement of David Ortman, Northwest Representative, Friends of the Earth); *House Comm. on Energy and Commerce Hearings, supra* note 20, at (statements of Craig Merrilees, Western Director, Fair Trade Campaign; Richard Kamp, Director, Border Ecology Project; Alex Hittle, International Coordinator, Friends of the Earth; Peter M. Emerson, Senior Economist, Environmental Defense Fund; Lori Wallach, Staff Attorney, Public Citizens' Congress Watch).

²⁸⁰Action Plan, *supra* note 277.

advisory committees. A commitment that was subsequently met.²⁸¹ Moreover, environmental officials have been included in the U.S. NAFTA negotiating team.²⁸² According to Charles Ries, Deputy Assistant, U.S. Trade Representative for North American Affairs:

[E]nvironmental interests and concerns are most directly engaged in the negotiations of NAFTA provisions relating to standards and technical regulations. We are committed to ensuring that any prospective NAFTA provisions on standards do not weaken U.S. health, safety

²⁸¹*Hearing on Environmental Issues Associated with the Proposed North American Free Trade Agreement Before the Subcomm. on Rules of the House Comm. on Rules, 102d Cong., 1st Sess. (Oct. 16, 1991) [hereinafter cited as House Rules Comm. Hearings] (statement of Timothy Atkinson, Assistant Administrator, Office of International Activities, EPA) . John Adams, Executive Director of the Natural Resources Defense Council has participated on the USTR Agricultural Policy Advisory Group; Jay D. Hair, President of the National Wildlife Federation, has participated on the USTR Investment Policy Advisory Group; John Sawmill, President and CEO of the Nature Conservancy, was appointed to the USTR Industrial Policy Advisory Group; and James Strock, Secretary of the California Environmental Protection Agency (formerly EPA's Assistant Administrator for Enforcement), has participated on the USTR Intergovernmental Policy Advisory Group. *Id.**

²⁸²*Id.*, at (statement of Charles Ries, Deputy Assistant USTR for North American Affairs). Linda Fisher, Assistant Administrator, EPA, has been included in Ambassador Katz' policy-level delegation to meetings of the chief negotiators. In addition, Linda Fisher, Dan Esty, Deputy Assistant Administrator, EPA, and Dr. Stuart Nightengale, Assistant FDA Commissioner, form part of the "core group" interagency backstopping committee responsible for fashioning and coordinating U.S. positions in the NAFTA negotiations. *Id.*

or environmental standards or technical regulations, or our ability to enforce and verify such measures. In particular, we will preserve the right of the U.S. to apply standards and technical regulations more stringent than international standards to protect, plant or animal health, safety or the environment, based on a scientific justification and a domestic assessment of risk.²⁸³

Although the statement is reassuring, it fails to specify what concrete safeguards are actually being negotiated in relation to health, safety and environmental concerns. Nor is there any indication of the extent to which environmental interests are actually influencing the negotiation process.

The Administration also undertook to provide a review of U.S.-Mexican environmental issues, with particular emphasis on the possible environmental effects of the NAFTA.²⁸⁴ One professed objective of the review was to apprise NAFTA negotiators of the environmental issues, for consideration in the context of negotiations.²⁸⁵ The resulting environmental Review provided the following conclusions: (1) the United States and Mexico have an existing

²⁸³*House Rules Comm. Hearings, supra* note 281, at (statement of Timothy Atkinson, Assistant Administrator, Office of International Activities, EPA).

²⁸⁴USTR REVIEW, *supra* note 2. The Review was conducted by an interagency task force coordinated by the Office of the U.S. Trade Representative. *Id.*, at Executive Summary.

²⁸⁵*House Rules Comm. Hearings, supra* note 281, at (statement of Charles Ries, Deputy Assistant, U.S. Trade Representative for North American Affairs).

cooperative relationship on the resolution of environmental issues in the border area; (2) cooperation between the United States and Mexico has developed in proportion to the momentum of NAFTA negotiations; (3) environmental action is a high priority for both countries and is built upon existing bilateral agreements, international agreements, statutes and enforcement authorities; (4) bilateral cooperation and environmental effectiveness will be enhanced by the Integrated Environmental Plan for the Mexican-U.S. Border Area (Border Plan).²⁸⁶

Given its focus on upward harmonization of the Mexican environmental program, it would seem that the Border Plan represents the Administration's keystone in preserving U.S. health, safety and environmental standards. However, the Border Plan has failed to quiet the anti-NAFTA outcry.²⁸⁷ Absent an internationally enforceable integration of trade with health, safety and

²⁸⁶BORDER PLAN, *supra* note 2. On November 27, 1990, the Presidents of Mexico and the United States met in Monterrey, Mexico and issued a joint communique emphasizing the need for ongoing cooperation between the two countries in the area of environmental protection. The joint communique "...instructed the authorities responsible for environmental affairs of their countries to prepare a comprehensive plan designed to periodically examine ways and means to reinforce border cooperation in this regard, based on the 1983 Bilateral Agreement." USTR REVIEW, *supra* note 2, at 31.

²⁸⁷*House Comm. on Small Business Hearings, supra* note 58, at (statement of Dick Kamp, Director, Border Ecology Project); Craig, *Border Plan Fails to Entice Environmentalists*, North American Report On Free Trade (Mar. 23, 1992); *International Trade, Texas Governor's Environmental Advisor Calls Mexican Border Plan 'Disappointing,'* (BNA) (Feb. 27, 1992).

environmental requirements, future trade disputes may demonstrate that such criticism is well-founded.²⁸⁸

Overall it is evident that the U.S. Administration has expressed a commitment to pursuing NAFTA negotiations on a parallel track with health, safety and environmental issues. While NAFTA opponents might maintain that the preferable approach is to address such issues as a part of the trade negotiation agenda, it is worth noting that for the first time in history environmental issues have been formally included in international trade policy discussions.²⁸⁹ On the other hand these positive measures do not guarantee that the final product will promote sustainable development in a manner that is cognizable under the GATT.

IV. CONCLUSION

The severe environmental problems that currently plague the U.S.-Mexican Border area have been primarily attributed to Mexico's long-standing acceptance of foreign industrialization.²⁹⁰ In turn, the Mexican maquiladora program has become corporate America's

²⁸⁸GATT, *supra* note 197, at art. I and art. III; Tuna-Dolphin Dispute, *supra* note 198, at 6.3 and 6.4.

²⁸⁹*House Rules Comm. Hearings, supra* note 281, at (statement of Stewart J. Hudson, Legislative Representative, International Affairs Department, National Wildlife Federation).

²⁹⁰*House Comm. on Energy and Commerce Hearings, supra* note 20, at (statements of Craig Merrilees, Western Director, Fair Trade Campaign; Richard Kamp, Director, Border Ecology Project; Alex Hittle, International Coordinator, Friends of the Earth; Peter M. Emerson, Senior Economist, Environmental Defense Fund; Lori Wallach, Staff Attorney, Public Citizens' Congress Watch; Congresswoman Marcy Kaptur).

preferable economic alternative to skyrocketing U.S. environmental costs, particularly in the area of hazardous waste disposition.²⁹¹ Lax Mexican enforcement has encouraged and sustained that corporate shift, while contributing significantly to the untenable border conditions.²⁹² Until there is a level regulatory playing field between Mexico and the United States, corporate relocation is expected to continue, in concert with the degradation of the border environment.²⁹³

In addition, if NAFTA negotiations fail to integrate internationally binding health, safety and environmental standards with the GATT principles of free trade, the resulting agreement will likely aggravate existing U.S.-Mexican border problems.²⁹⁴

²⁹¹*House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Congressman Terry L. Bruce); WATER POLLUTION REPORT, *supra* note 16; *The Poison Next Door, supra* note 145; Vincent Interview, *supra* note 47.

²⁹²*House Comm. on Ways and Means Hearings, supra* note 18, at (statements of Joseph A. Kinney, Executive Director, National Safe Workplace Institute, Chicago, Illinois; Congresswoman Marcy Kaptur); TEXAS COMPTROLLER, *supra* note 25, at 3; Bradsher, *supra* note 18.

²⁹³*See House Comm. on Ways and Means Hearings, supra* note 18, at (statements of Joseph A. Kinney, Executive Director, National Safe Workplace Institute, Chicago, Illinois; Congresswoman Marcy Kaptur, Appendix 10). A linkage between the U.S and Mexican regulatory process will be a key element in leveling the field. That border connection is a particularly important aspect of effective transboundary tracking of hazardous wastes and materials.

²⁹⁴*See generally* GATT, *supra* note 197; Tuna-Dolphin Dispute, *supra* note 198, at paras. 6.3 and 6.4. An integrated approach may involve NAFTA provisions that specifically address health, safety

Ultimately, Mexico's ability to cope with the ramifications of free trade are questionable.²⁹⁵ Although a U.S.-Mexican free trade agreement may be viewed as inevitable, present and future trade impacts on health, safety and environmental issues cannot be discounted. At this juncture Mexico has not met the prevailing environmental enforcement needs in the border area.²⁹⁶ To suggest that Mexico is now prepared for the additional problems associated

and environmental issues, or a related trilateral agreement with a similar focus. *Id.* Either the NAFTA or the agreement should, at a minimum, incorporate the following elements: (1) terms that recapture some of the benefits of free trade in order to facilitate the funding of an environmental program; (2) terms that guarantee the right of state, local or national governments to maintain the highest environmental or consumer protection laws deemed necessary; (3) terms that require participating nations to domestically apply stringent enforcement measures; (4) dispute resolution mechanisms that promote health, safety and environmental protection; (6) provisions that allow for the formulation of national energy policies. *House Rules Comm. Hearings, supra* note 281, at (statement of Stewart J. Hudson, Legislative Representative, International Affairs Department, National Wildlife Federation).

²⁹⁵Socially, politically, and financially Mexico is in the very early stages of a national development that will eventually render it capable of fostering future free trade agreements. Existing circumstances along the border demonstrate that that time has not yet arrived. BORDER PLAN, *supra* note 2, at V-1 and V-50; *House Comm. on Small Business Hearings, supra* note 58, (statement of Dick Kamp Director, Border Ecology Project); *House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Pharis J. Harvey, Executive Director, International Labor Rights Education and Research Fund); Branigan, *The New Image of Mexico's Ruling Party Tamished*, *Washington Post*, July 17, 1989; Aguilar, *supra* note 164, at A1 and A10; *The Poison Next Door, supra* note 145, at 4-6.

²⁹⁶BORDER PLAN, *supra* note 2, at V-1 - V-52.

with free trade reflects a disregard for the facts.

The expressed good intentions underlying the Border Plan do not alter the reality of Mexico's need for further development of environmental safeguards, especially in the area of environmental monitoring and enforcement.²⁹⁷ While the Border Plan provisions may portray an initial commitment to rectify the situation, bottom-line economics may dictate a contrary result. Over a twenty-five year period economic incentives motivated Mexico's promotion of foreign investment and trade through the maquiladoras, at the expense of environmental considerations.²⁹⁸ In effect, Mexico's border industrialization is a prime example of what happens when environmental concerns are not adequately integrated with the principles of trade. There is no assurance that unfettered Border Plan promises will alter that historical trend. Moreover, lack of assurance along these lines will encourage corporate America's

²⁹⁷*Id.*, at V-1 - V-5 and V-50; *House Comm. on Small Business Hearings, supra* note 58, at (statement of Dick Kamp Director, Border Ecology Project); *House Comm. on Ways and Means Hearings, supra* note 18, at (statement of Pharis J. Harvey, Executive Director, International Labor Rights Education and Research Fund); Aguilar, *supra* note 164, at A1 and A10; *The Poison Next Door, supra* note 145, at 4-6.

²⁹⁸The environmental abuses inherent to the development of the maquiladora program, and cases such as the Tuna-Dolphin Dispute provide strong indications of Mexico's past priorities regarding trade/economic interests. See Tuna-Dolphin Dispute, *supra* note 198.

continued relocation south of the border.²⁹⁹

²⁹⁹*House Comm. on Ways and Means Hearings, supra* note 18, at (statements of Congressman Terry L. Bruce; Alfredo Salazar, Jr., Administrator, Economic Development Administration, Commonwealth of Puerto Rico; Congresswoman Marcy Kaptur, Appendix 10; Joseph A. Kinney, Executive Director, National Safe Workplace Institute, Chicago, Illinois); TEXAS COMPTROLLER, *supra* note 25, at 3; Bradsher, *supra* note 18, at D2, col. 5.