Third North American Symposium
on Assessing the Environmental
Effects of Trade

Montreal / 30 November – 1 December 05

RESEARCH PAPER

Environmental Policy Implications of Investor-State Arbitration Under NAFTA Chapter 11

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Date: February 2006

* My thanks for insightful and invaluable research assistance to Mr. Luis Suarez, LL.M. degree candidate at the University of Houston Law Center. The final paper has also benefited from careful and thoughtful comments on earlier drafts by anonymous reviewers. Finally, my personal thanks to the CEC staff for efficient administration of the entire contract and review process.

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Third North American Symposium on Assessing the Environmental Effects of Trade

This research paper was prepared for the CEC Secretariat as part of its Third North American Symposium on Assessing the Environmental Effects of Trade (2005). The opinions, views or other information contained herein are those of the author(s) and do not necessarily reflect the views of the CEC or the governments of Canada, Mexico or the United States.

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I. INTRODUCTION

Foreign direct investments underlie much of international trade. Multinational corporations and other businesses make investments in foreign countries in commercial and industrial real estate, production facilities, transportation infrastructure and equipment, financial institutions, communications systems, and other assets, which contribute in turn to the cross-border flow of goods and services. Beginning with the Canada-US Free Trade Agreement of 1989, most international trade liberalization agreements contain provisions on the treatment of foreign direct investors and their investments to go along with the traditional trade-liberalizing rules affecting exchanges of goods and services between the participating countries. Through these investment agreements, countries that are the sources of most foreign direct investment seek enhanced legal protection for the rights of their investors, while destination countries were motivated to assure a more secure legal framework for foreign investors in order to encourage the inflow of foreign direct investment (Gantz 1993; Pettigrew 2001; Sandrino 1994).

These complementary motives were very much in play during the negotiation of the North American Free Trade Agreement (NAFTA). Chapter 11 of NAFTA, titled simply "Investment," has been called an "essential element" of NAFTA (Pettigrew 2001). Chapter 11 seeks to encourage foreign direct investment by nationals of any NAFTA country in any of the other countries by giving foreign investors rights of legal recourse against potential discriminatory treatment or uncompensated expropriations of investments by the host country. As part of the system of protection against discrimination, it allows a foreign investor whose investments are impaired by government actions alleged to be in violation of Chapter 11 to bring a claim for compensation to a neutral forum for arbitration.

In all NAFTA countries, investments in new construction, manufacturing, waste disposal, and many other commercial or industrial activities are subject to environmental regulation. NAFTA Chapter 11 therefore includes a paragraph, Article 1114(1), stating clearly that the investor protections of the chapter should not be construed "to prevent a Party from adopting, maintaining or enforcing any measure . . . appropriate to ensure that investment activity in its territory is undertaken in a manner sensitive to environmental concerns." By the same token, the governments also mutually committed themselves not to relax environmental requirements as a means of attracting or retaining foreign investment (NAFTA Article 1114(2)).

The governments and outside observers alike were thus surprised when the first claims filed under Chapter 11 involved a complaint by a US corporation against Mexico over the siting of a hazardous waste facility and a complaint by another US corporation against Canada because of a trade restriction on a product in the name of protection of public health from air contaminants. After the government of Canada rescinded its restriction and paid compensation to the company to settle the latter case, a number of other investors filed claims against government environmental measures, including one against the United States by a Canadian company, and another one against Canada by a US company. By one count, more than half of the arbitration claims filed by the end of 2000 involved environmental issues (International Institute for Sustainable Development 2001).

Procedural issues added to the concerns of the environmental community over this raft of investment claims. NAFTA Article 1120 designated pre-existing arbitration systems as the fora

for arbitrating investment disputes, one specifically designed to arbitrate disputes between a State and an investor, the other originally designed for commercial arbitration between private firms. Both systems operated under strict rules of confidentiality of the proceedings. The secrecy surrounding the investor-State arbitration process fueled suspicion of Chapter 11 in the environmental community (DePalma 2001, quoting Joan Claybrook of the group Public Citizen). One American environmental spokesman, Dan Seligman of the Sierra Club, saw in NAFTA Chapter 11 cases the danger of "a wholesale overturning of the regulatory state, which took 100 years to build." (Pfaff 2000, 25).

In 2005, after more than ten years of NAFTA implementation, there is now a longer history of Chapter 11 arbitrations to consider than when Claybrook and Seligman made their comments. In the intervening years, more arbitration claims have been filed, but almost none of the recent cases involve environmental factors. The three governments, meanwhile, have made some adjustments to the arbitration process to address the secrecy concerns. Finally, enough time has passed since the early environment-related investor cases to enable an assessment of their consequences for the environment itself and for environmental regulation by governments. It is now possible, in short, to offer a preliminary empirical assessment about whether the fears that Seligman and others articulated five years ago have been realized.

To provide the basis for that assessment, this report undertakes an empirical review of four of the most famous environment-related arbitrations under NAFTA Chapter 11. The empirical analysis focuses on two key questions posed about Chapter 11:

Do the facts, circumstances and results of the Chapter 11 cases objectively indicate that investors have thwarted or escaped the fair application of effective and appropriate environmental protection measures?

Do the actions and reactions of governments and private investors to the Chapter 11 arbitration awards to date indicate that those awards are discouraging governments from taking environmental protection measures they would otherwise want to take?

The first question can be answered in concrete and generally objective terms by looking at the behavior of the complaining investors and the responding governments before, during, and after the arbitration proceedings. The contextual description of each case takes up the bulk of Part IV.

The second question above, while clearly more interesting in terms of the future evolution of investment agreements in general and investor-State arbitration in particular, is much more difficult to answer clearly or objectively. The concern in the environmental community is that giving private parties strong rights to challenge public environmental measures will either induce a weakening of existing environmental protections or discourage ("chill") the pursuit of new or more stringent environmental measures. The motivations of legislatures and executive agencies in adopting new environmental measures or modifying current measures are notoriously multivariate. Environmental science usually plays a role, but so do political ideology, partisan political conflict, and the perennial quest by governments for economic advantage. Private parties such as industry groups work hard to influence public policy through lobbying and litigation; environmental advocacy groups work equally hard to advance

their particular agendas. Academic analysts disagree sharply on whether government efforts to shape environmental policy in ways favorable to business lead to more efficient environmental regulation or to a "race to the bottom" in environmental standards (Compare Revesz 1992 with Engel 1997). Even these analyses, however, do not break out efforts to attract foreign direct investment (FDI) as a separate factor influencing policy.

A recent economics study probes the influence of foreign direct investment on environmental standards, concluding that whether the influence of FDI leads to stronger or weaker environmental regulation is conditional on the corruptibility of the host government, with sufficiently high levels of corruptibility associated with weaker environmental regulation and sufficiently low levels with stronger regulation (Cole et al. 2004). This is consistent with the theory of Saleska and Engel that the incentives of individual state regulators may account for their economically "irrational" behavior in relaxing environmental standards to attract business investment (Saleska and Engel 1998). The question of corruption is specifically relevant to Chapter 11 in light of the recent final award in the Methanex case, discussed below, in which the tribunal took seriously the legal claim that evidence giving rise to reasonable inferences of corruption might establish discriminatory intent on the part of the responding government (though the tribunal found no corruption in the Methanex case)(Mann 2005).

Regulatory chill is even more difficult to detect than pollution havens. For researchers, it is almost impossible to know why governments decide *not* to act. As a partial surrogate for a direct answer to the second question, this report will provide as much information as possible on how governments have reacted to the specific regulatory issues raised by the cases. While obviously a second-best approach, such verifiable government behavior at least sheds some light on the broader policy question of how much government decisions have been influenced by the actuality or potential of investor challenges to changes in environmental regulation.

Part II of the report gives a brief overview of the substantive provisions of Chapter 11, and the procedures for arbitration of investment claims. Part III describes the research methodology employed. Part IV gives the substantive analysis of each of the four selected cases. The studies will emphasize the factual background of each case and the environmental and policy consequences of the Chapter 11 outcomes. Drawing from the four cases studies, Part V offers a general assessment of the environmental policy implications of Chapter 11.

II. OVERVIEW OF CHAPTER 11

Although thought by many to be a NAFTA innovation, the investment provisions of Chapter 11 simply adapted pre-existing US and Canadian investment policy to the new trinational economic relationship (Price 2001). Throughout the 1980s and 1990s, both Canada and the United States negotiated bilateral investment treaties (BITs) with developing countries around the world (Canada called them "Foreign Investment Protection and Promotion Agreements") (Gantz 2001). More specifically, Chapter 11 builds on the Canada-US Free Trade Agreement, which had much the same core liberalization disciplines on investment restrictions, national treatment of investors, and protection of investors from direct or indirect expropriation of their investments.

Under Chapter 11, NAFTA-country investors have rights of compensation against government actions that fail to treat foreign investors the same as domestic investors, that fail to meet minimum international standards of fair treatment, or that expropriate the investment (or have an effect tantamount to expropriation) without compensation. Investors who believe their rights have been infringed may initiate an arbitration proceeding against the national government (so-called investor-State arbitration). In the 11 years that NAFTA has been in force, investors have submitted approximately 38 notices of intent to initiate arbitration proceedings, of which some 13 have resulted in definitive rulings by arbitral tribunals (naftaclaims.com). Perhaps nine or ten of the notices of intent have involved challenges to decisions by governments under local, state/provincial, or federal environmental laws and regulations, or government decisions under other legal authorities with the purported purpose of avoiding environmental harm. In three of the environmental cases to date, the government has made compensatory payments to the foreign investor.

A. Substance

Article 1101 of NAFTA declares a broad scope, applying to "measures" adopted or maintained by a government "relating to" investors or investments of another NAFTA Party. "Measure," defined in NAFTA Article 201(1), includes "any law, regulation, procedure, requirement or practice." The term "investment," defined in Article 1139, encompasses almost every conceivable form of investment, including enterprises themselves, equity or debt securities in enterprises, loans, rights to a share of profits, real estate and tangible and intangible property, and contractual or other interests associated with capital commitments. Only claims to money, sales of goods and services, or credit associated with such sales are specifically excluded.

Articles 1102 and 1103 impose on investment measures the familiar core trade obligations of national treatment (nondiscrimination between domestic and foreign investors) and most-favored-nation treatment (nondiscrimination between foreign investors from different countries). Article 1105 obliges the governments to comply with basic norms of international law, "including fair and equitable treatment and full protection and security." This is understood to encompass, among other matters, minimum standards of administrative and judicial due process. Another important substantive rule, Article 1106, protects foreign investors and investments against "performance requirements," such as minimum export sales, local sourcing of raw materials or supplies, or minimum "domestic content" requirements. There are, however, exceptions embedded within Article 1106. A country may require the use of a particular technology "to meet generally applicable health, safety or environmental requirements" on a nondiscriminatory basis. Moreover, the rules against local sourcing and domestic content requirements are subject to an exception for measures "necessary to protect human, animal, or plant life or health" or "necessary for the conservation of living or non-living exhaustible natural resources."

Article 1110 sets forth the important rule against uncompensated expropriation. Expropriation itself is not forbidden, by the NAFTA or by any rule of international law. What Article 1110 prohibits is direct or indirect nationalization or expropriation or any "measure tantamount to nationalization or expropriation" of the investment of an investor of another country <u>unless</u> the expropriation is

(a) for a public purpose;

(b) on a non-discriminatory basis;

(c) in accordance with due process of law and Article 1105(1); and

(d) non payment of compensation . . . .

Note that all four conditions must be satisfied. That is, even a national measure for a public purpose applied through due process of law and without discrimination may give rise to a claim for compensation if the result is "tantamount to expropriation." The key interpretive question about Article 1110(1) thus becomes the meaning of "expropriation" and the phrase "measure tantamount to Y expropriation."

A final note is in order about Article 1114, which was touted as one of NAFTA=s "green" provisions. Art. 1114(1) provides:

> Nothing in this Chapter shall be construed to prevent a Party from adopting, maintaining or enforcing any measure *otherwise consistent with this Chapter* that it considers appropriate to ensure that investment activity in its territory is undertaken in a manner sensitive to environmental concerns. [Emphasis added.]

Article 1114 thus explicitly reserves each nation=s sovereign right to adopt laws or policies of general application controlling or regulating or restricting investments so as to preserve or protect the environment. This broad right covers everything from environmental impact assessment requirements to pollution control requirements to generally applicable restrictions on land use or prohibitions on the production of certain chemicals. But the italicized phrase is critically important; the Chapter 11 environmental cases all involve claims that the government's environmental measures in question were inconsistent with the substantive provisions outlined above.

B. Procedure

The arbitration provisions of NAFTA Chapter 11 allow investors to pursue legal remedies against government measures under the laws of that country, but then offer investors the option to bring their claims against a State directly to international arbitration through the procedures and services of several international arbitration entities. The investor-State arbitration provisions build on a process first established by the World Bank in 1966 and subsequently incorporated into many of the bilateral investment treaties of the United States and Canada (Gantz 2001).

Two of the international arbitration systems available under Chapter 11 (at the choice of the investor, subject to the coverage of each system) are administered by the World Bank=s International Center for the Settlement of Investor Disputes (ICSID). ICSID originally had jurisdiction only when both the State and the home nation of the investor were parties to the ICSID Convention. Later, ICSID established an "Additional Facility" authorized to handle disputes where only one of the nations was an ICSID party. Among the NAFTA countries, only the United States is an ICSID party at this time, so by default only the Additional Facility is

currently available to handle Chapter 11 disputes. The third arbitration system with jurisdiction under Chapter 11 is the UNCITRAL Arbitration Rules, adopted in 1976. The boundaries between these systems are not ironclad. In at least one arbitration, S.D. Myers, ICSID has served as the agency to appoint the UNCITRAL arbitrators (S.D. Myers, Inc. and Government of Canada 2000), and in other Chapter 11 arbitrations, Glamis Gold, Ltd. v. The United States of America and the Methanex case, the UNCITRAL rules are being used but the arbitration is being administered through the ICSID Additional Facility (ICSID 2005a; ICSID 2005b).

Lack of public transparency in the arbitration process has been a major concern. The standard rules under each of these systems result in an inherently obscure arbitration process. There is no formal or public process for notification of claims, and once a tribunal has been appointed the representations of the parties have traditionally been handled confidentially and the hearings before the tribunal took place behind closed doors. Finally, there is no requirement that the tribunal=s decision be made public, and some rules against publication without the agreement of the parties. The lack of transparency raised concern in civil society because investor claims based on government measures necessarily involve issues of public policy (Bill Moyers 2002). In response to this concern, the NAFTA parties have taken several steps. The governments now maintain their own public dockets of the Chapter 11 cases. In 2001, the trade ministers of the NAFTA parties issued a Ajoint statement@ pledging to publish all documents submitted to or issued by arbitral tribunals (NAFTA Free Trade Commission 2001). Subsequently, following an earlier lead of Canada and the United States, all three NAFTA governments committed to request any Chapter 11 tribunal to make its hearings open to the public (NAFTA Free Trade Commission 2004). The Methanex tribunal acceded to an open hearing request for its second hearing in 2004. (ICSID 2005b, Preface, para. 8), and the Glamis Gold parties have agreed to make their hearings open (ICSID 2005a), in both cases via closed-circuit television. In another step toward a more open process, the NAFTA trade ministers adopted a statement urging arbitral tribunals to adopt rules to permit nonparticipating parties, such as nongovernmental environmental organizations, to file amicus briefs in arbitral proceedings (NAFTA Free Trade Commission 2003).

Another concern sometimes expressed about the routinely closed nature of the arbitration process has to do with the effective representation of the real parties in interest. Because state and local government actions may give rise to an investor’s claim, while the federal government is always the responding party, the states and localities are not able to fight their own battles to protect their environmental actions from the challenge by foreign investors. The circumstances of particular cases raise complex issues, however. In the Metalclad case, for example, the final award of compensation was based on the action of a state governor during his last days in office. It cannot be assumed that the new governor or his administration would have wished to defend that action. Moreover, with the federal government as respondent, state and local authorities are freed of the burden and expense of litigating the claim. Finally, one would expect the federal authorities to consult with and gain input from state or local officials, and that seems to have happened. For example, California representatives were part of the defense team for the United States in the Methanex case. In any event, it should be noted that subnational governments in the arbitrations resolved to date have not raised public complaints about the legal representation of their interests by their federal representatives.

III. RESEARCH METHOD AND APPROACH

The research objective for this report is not one that is susceptible to testing by quantitative empirical data or quantitative analysis. Nevertheless, there are verifiable factual elements to the Chapter 11 cases, including some quantitative data that can be gathered and analyzed to shed light on the questions presented. The research has stressed the development of this fact-based analysis.

A. Selection of Cases for Study

The first step in case selection was to identify the universe of Chapter 11 claims. Unfortunately, there is no official comprehensive record of claims, though each of the governments now maintains a website on investor claims to which it is party, with links to the others. The best single source is a privately-maintained website, <http://www.naftaclaims.com> that is widely respected for reliably tracking all the known Chapter 11 claims. The following data are derived from that website.

Under Chapter 11, potential claimants first file a notice of intent to submit a claim. As of January, 2006, 43 notices of intent to file a claim for arbitration under Chapter 11 have been recorded, 12 against Canada, 15 against Mexico, and 16 against the United States.

From among the 43 cases, we identified those in which the basis of the claim involves the application of some environmental measure, broadly construed as any measure regarding control of pollution or the management of natural resources. We identified 14 environmental claims using this broad definition: five against Canada, four against Mexico, and five against the United States. We immediately eliminated from that list, however, four cases that have not gone beyond the early procedural stages of arbitration. For three of these four there is no record beyond the filing of the notice of intent or the ensuing notice of arbitration. Two such cases—claims by Sunbelt and by Ketcham against Canada—were initiated in 1998 and 2000 respectively and appear to have been abandoned by the claimants. One other—Texas Water Claims (a claim by farmers in Texas against Mexico concerning alleged diversion of water)—was filed in 2004 but has not proceeded beyond a notice of intent. The last of this group is a claim by Glamis Gold, Ltd. of Canada against the United States alleging effective expropriation of certain mining investments by the State of California, which adopted stringent new mine reclamation rules after Governor Gray Davis announced his opposition to Glamis Gold's plans for a new gold mine in the southern California desert. This case is active, and is scheduled for briefing and for arbitration hearings on the merits in July 2006.

The third step in screening the cases was to undertake an abbreviated review of the claim to determine whether the environmental issues, as broadly construed in step two above, were central to the investor=s claim or whether they were tangential to a claim fundamentally grounded in commercial considerations. In this step, we eliminated six more cases from further consideration.

The claim of Pope & Talbot, Inc. against Canada targets the application to Pope & Talbot of certain Canadian export restrictions on lumber from British Columbia, Alberta, Ontario, and

Quebec imposed under agreement with the United States in the long-running controversy over Canadian softwood lumber management practices. It is clear from the statement of its claim that Pope & Talbot contested the commercial consequences of certain features of the Canadian rules, not the merits of any underlying forest management program of which they are a small part. Three other arbitration claims against the United States that are still at the pre-hearing stage—Canfor Corporation, Tembec Inc., and Terminal Forest Products—are also outgrowths of the endless contentions between the United States and Canada over softwood lumber sales and pricing practices. The last three were consolidated into a single arbitration in September 2005.

The claims of Robert Azinian and of Waste Management, Inc., both against Mexico, concerned breaches of contract for waste disposal services. Although waste management regulation might appear to be a factor in these cases, the specific nature of the claims makes clear that they concerned financial and contractual questions, not substantive questions about waste management practices or policies. Moreover, each case was dismissed on jurisdictional grounds without addressing the merits of the respective claims.

Thus, of the 14 cases that might have had some connection with environmental protection and resource management, we have eliminated ten from further consideration. That leaves a sample of four cases that have proceeded through some or all of the arbitration process in which environmental regulation had a central role. The four leading cases to be examined are:

- Ethyl Corp. and Government of Canada (no arbitral award on the merits).
- Metalclad Corporation and the United Mexican Status (award, ICSID 2000a; appeal, British Columbia Supreme Court 2001).
- S.D. Meyers, Inc. and Government of Canada (award on the merits, 2000; on compensation, 2002; appeal, Canada Federal Court 2004).
- Methanex Corporation and United States of America (final decision, ICSID 2005).

The fullest available documentation for each of these cases can be found at the naftaclaims.com website. The governments have paid compensation to the investors in each of the first three cases. The fourth case, Methanex, was dismissed on the tribunal’s determination that it lacked jurisdiction over the claim under Chapter 11.

B. Framing the Issues for Empirical Study

As indicated at the beginning of this part, the “empirical” focus of this report is on the facts surrounding these four cases. The facts include those that appear on the record of the arbitration, but also encompass other available and relevant facts that help to put these Chapter 11 cases into context. We are particularly interested in subsequent developments involving the investors and the environmental regulations at issue. The facts fall into four broad categories:

1. Physical facts preceding the investor’s claim, including:

    $ the nature, scale, and location of the actual or proposed operation at issue;

- $ the materials (e.g., products; wastes) of environmental relevance; and
- $ the ecological or human health risks presented, or arguably presented, by the activity.

2. The facts about the explanations the government gave for its action, including:

- $ the elements of the government=s explanation;
- $ the information supportive of the government=s explanation; and
- $ the information, from the investor and from other sources, that contradicted the government=s explanation.

3. The actual consequences of the government action for environmental conditions:

- $ What effect did the government action have or was it likely to have on the environment or the public health?
- $ What was the response to the government action from other persons or interests?
- $ If the government revoked or modified the contested measure before the disposition of the case, what were the environmental consequences of that change in policy?

4. The actual consequences of the award(s) by the NAFTA arbitral tribunals and courts.

- $ How did the outcome of the Chapter 11 proceedings affect the activity of the foreign investor? Did the activity begin or resume, and if so to the extent originally intended?
- $ Did the government agencies or officials involved change their policies or practices after the final award or settlement?
- $ Is there any evidence that related or future government actions in the same subject area have been influenced by the arbitral award(s)?

C. Information Sources

The factual investigations for the first two categories of facts—the factual background to the case and the government=s explanation of its measure—begin with the arbitration documents. The arbitral awards (as the decisions of the arbitral tribunals are called) typically contain an extensive presentation of the factual background to the case. Documents submitted by the parties to the arbitral tribunal provide additional information.

To a limited extent we were able to supplement this documentary record with telephone or e-mail interviews. In the end, however, it proved more difficult than anticipated to elicit meaningful responses to questions from persons, other than advocates, with personal knowledge of relevant facts. For each of these cases we also searched for secondary source materials written by people who either had a close connection to the case or who have researched a particular case

intensively. For example, for one case we reference a Ph.D. dissertation. For some facts, we have been forced to rely on journalist accounts.

For facts in the third and fourth categories—governmental and private sector response to the Chapter 11 cases—we have used government documents, public records and other publicly available information, such as business reports, government reports, government data, and government or private sector websites.

IV. THE CASE STUDIES

A. Metalclad and Mexico

1. A Brief History of the Case

Metalclad is a US company that decided in the early 1990s to get into the waste management business in Mexico. Some of the facts surrounding its claim against Mexico are controverted, but multiple sources agree on the following basic story (Cronin 2002; ICSID 2000a; Public Citizen 2001, 10-13; Quiñones 1997 and 2000; British Columbia Supreme Court 2001).

In 1990, a Mexican company, *Confinamiento Tecnico de Residuos Industriales, SA de CV* (Coterin), obtained authorization from federal environmental officials to build and operate a waste transfer facility in ALa Pedrera,@ a valley in the *municipio* (county) of Guadalcázar in the state of San Luis Potosí (SLP). The site is in a sparsely-inhabited rural zone of the *municipio*; only 800 people live within 10 kilometers of the site. Unauthorized storage of thousands of barrels of waste at the site by Coterin, however, led the government to close Coterin=s operation in 1991. Continuing illicit disposal of wastes after the official closure led local citizens to block the road to the site, and all disposal activity ceased.

In 1992, Coterin applied to Mexico's federal environmental authorities (at that time the Secretariat for Urban Development and Ecology (*Secretaría de Desarollo Urbano y Ecología* [Sedue]) for construction and operating permits for a full-fledged hazardous waste landfill on the same site. In early 1993, with NAFTA signed and Mexican officials publicly speaking of Mexico=s need for modern hazardous waste disposal capacity, Metalclad took an option to buy Coterin. In April 1993, SLP held a special election for state governor after allegations of electoral fraud in the earlier election, bringing into office a governor from the PRI (*Partido Revolucionario Institucional*, Mexico's long-time ruling party), but with weak ties to the central PRI hierarchy.

After the federal environmental authorities granted the construction and operating permits to Coterin later in 1993, and after the new governor of SLP supposedly gave assurances of his support for the project, Metalclad exercised its option and bought Coterin. Shortly thereafter, however, local opposition to re-opening the facility surfaced and the governor began to speak out against the facility. After consulting with federal environmental officials and despite persistent local protest actions, including a legal dispute with municipal officials over a local construction

permit, Metalclad proceeded with construction of the landfill facility, receiving extensions of time on its federal permits to do so. Construction was completed in early 1995. Local protestors, however, prevented the site from operating. In late 1995, the federal environmental agency (now named the Secretariat for Environment, Natural Resources and Fisheries (*Secretaría del Medio Ambiente, Recursos Naturales y Pescas* [Semarnap]), having audited the completed facility, announced an agreement (*convenio*) with Metalclad under which Metalclad would be allowed to operate the facility provided it took steps to remediate the 20,000 tonnes of hazardous waste still on the site from its earlier use by Coterin. Metalclad also agreed to establish an environmental buffer zone around the facility and to undertake some community-related activities.

Two weeks after the *convenio* was announced, the municipal council of Guadalcázar voted to deny Metalclad's long-pending application for a municipal construction permit. (Whether such a permit is required or what conditions it could legitimately impose is a matter of dispute among Mexican lawyers.) The municipal authorities also filed an administrative complaint with Semarnap contesting the validity of its *convenio* with Metalclad. When Semarnap dismissed that complaint, the municipality went to court under Mexico=s *amparo* process (a process for citizen recourse against abuse of government authority) and obtained an injunction against the operation of the facility. Throughout 1996, federal officials, Metalclad, and state and local officials sought a negotiated settlement of the dispute, without success. On January 2, 1997, Metalclad filed its notice of intent to file a claim against Mexico under the arbitration provisions of NAFTA Chapter 11. Notably, this was the first investor claim submitted under NAFTA.

The last, and ultimately decisive, act in the story took place on September 16, 1997, Mexico's Independence Day, when the Governor of SLP, just days before leaving office, signed an executive order with a decree establishing a Aprotected natural area@ of 188,758 hectares in the form of a "state reserve with characteristics of a biosphere reserve," primarily for the protection of some 68 cactus species, of which 18 are endangered, including 5 endemic to the Guadalcázar region (San Luis Potosí 1997). The protected natural area surrounds and includes the Metalclad facility site; Article 14 of the decree prohibits the deposition of any contaminants into or on the soil or waters of the protected area, effectively precluding Metalclad from operating its already-constructed facility.

Metalclad's arbitration proceeding under NAFTA Chapter 11 has a long and complex history. Because this report focuses on the consequences of the Chapter 11 cases rather than the fine points of legal analysis, we omit a detailed discussion of the award (decision) of the arbitral tribunal, issued on August 30, 2000. Suffice it to say that the arbitrators found that Mexico had denied Metalclad "fair and equitable treatment" in violation of NAFTA Article 1105 and found further that the actions of Mexico were tantamount to an uncompensated expropriation of Metalclad's investment in violation of NAFTA Article 1110. The tribunal denied Metalclad's claim for lost profits, but awarded Metalclad recovery of its expenses in constructing the now-useless facility (Metalclad Corporation and The United Mexican States 2000). Mexico appealed that award to the courts of the locus of the arbitration, which in this case was Vancouver, British Columbia. The British Columbia Supreme Court (a lower-level court) ruled on the appeal in 2001. Although the justice hearing the appeal took issue with the legal conclusions of the arbitral tribunal on the issue of fair and equitable treatment, he found sufficient evidence on the record to

uphold the tribunal=s conclusion that Mexico had in effect expropriated Metalclad=s investment. The judge relied on the fact that the SLP governor's ecological decree, proclaimed more than two years after construction was complete, prevented Metalclad from operating the completed facility and thus realizing any value from its investment (British Columbia Supreme Court 2001). Late in 2001, Mexico paid Metalclad the amount of the final award, with interest, a sum of approximately US$16.7 million. In return, Metalclad deeded title to the property to the Mexican government.

2. Subsequent Developments

Developments since 1997 on five separate fronts relate to the environmental effects of the Metalclad facility and the implications of the award for environmental policy in Mexico. First is the condition of the site itself. Second is the history of Metalclad's other waste management projects in Mexico. Third is the occurrence of another dispute between Mexico a foreign investor in waste management. Fourth is the larger context of hazardous waste management in Mexico. Fifth are changes in Mexico's management of environmental policy.

a. The Site Itself

Had Metalclad been allowed to operate its facility under the terms of its 1995 *convenio* with Semarnap, Metalclad would have been legally obligated to complete remediation of Coterin's wastes before accepting any new wastes for treatment or disposal. Because of the dispute with Metalclad and Metalclad's ultimate return of the site to Mexico, that work was never performed. To the best of our knowledge as of August 2005, the 20,000 tonnes of hazardous waste materials left at the site illegally by Coterin remain at the site unremediated, although some intended government actions towards remediation were announced in May 2004 (San Luis Potosí 2004).

Meanwhile, the former governor's declared intention to protect rare cactus and other biodiversity of the region through the 1997 ecological decree remains, more than seven years later, an unfulfilled promise. The government of SLP has, as yet, not promulgated any management regulations to implement protections for the protected natural area, nor has it established any administrative structure to carry out or enforce protective measures. To compound the difficulties, it turns out that the boundaries of the protected area set forth in the decree itself inadvertently encompass some parts of the neighboring state of Nuevo Leon. This means that the governor of SLP exceeded his legal authority in the 1997 decree, as promulgated. In May 2004, federal officials remarked on this problem and indicated federal monies for the protected area could not be disbursed until the boundaries of the protected area were officially redefined to limit its reach to areas within the state of SLP (San Luis Potosí 2004).

b. Metalclad's Role in Hazardous Waste Management in Mexico

Metalclad's business plans to provide hazardous waste management services in Mexico were not limited to the La Pedrera site in Guadalcázar. At about the time that Metalclad was filing its arbitration claim in early 1997, it was still involved with several other hazardous waste projects or proposals in Mexico (Cronin 2002). A year later, as the Chapter 11 arbitration was moving forward, Metalclad announced the beginning of construction of a non-hazardous waste landfill and treatment center in the state of Aguascalientes. None of these ambitions were to be

realized. In spite of support for the Aguascalientes project from the then minister of Semarnap, Julia Carabias, other parts of the Mexican government were less supportive of, it not actively opposed to, Metalclad's plans. More importantly, there was a tightly-contested race for governor in Aguascalientes in the summer of 1998, and the Metalclad facility became an issue in the campaign. Local citizens then began to speak out against the project, and construction was halted. With no major sources of revenue and the expenses of the Chapter 11 case mounting, Metalclad withdrew from the Aguascalientes project. By the time of the initial award in the Chapter 11 case in 2000, Metalclad's stock price was less than ten percent of its value in 1995-96, and the company had decided to withdraw completely from the waste management market in Mexico (Cronin 2002; Quiñones 2000). In conjunction with the events described in the next section, Metalclad's withdrawal has significantly slowed the development of modern capacity for hazardous waste treatment and disposal in Mexico.

c. Disputes over Hazardous Waste Management Operations by other Foreign Investors

Metalclad was not the only foreign investor facing obstacles to entry into the hazardous waste management business in Mexico. The US firm Chemical Waste Management had to cancel several projects (Quiñones 1997). Another case, involving a Spanish firm, shows striking similarities to the Metalclad dispute.

In July, 2000, a few weeks before the announcement of the tribunal award in the Metalclad case, the Spanish firm *Tecnicas MedioambientalesTECMED S.A.* (TECMED) filed a claim for arbitration under the 1995 investment treaty between Mexico and Spain. In 1988, the state of Sonora built an industrial waste landfill near Hermosillo. Beginning in 1994, an agency of the city assumed operational control of the facility under an environmental permit of indefinite duration from the federal National Institute of Ecology (*Instituto Nacional de Ecología*) (INE). In 1995, the state passed title to this facility to the city, and in early 1996, the city auctioned the landfill to TECMED. TECMED immediately transferred ownership and operation to its Mexican subsidiary, Cytrar. At first, Cytrar continued the operation under a temporary extension of Hermosillo's permit. When Cytrar applied to INE for its own permit, INE issued a one-year renewable permit in November 1996. This permit was renewed once, but in 1998, at the end of the second year, INE denied Ctyrar's application for another renewal (ICSID 2003, paras. 35–39).

In the arbitration proceeding, Mexico argued that INE had discretion whether or not to renew the permit. It also argued that the refusal to renew the permit was based on repeated citations to Cytrar for violations of the permit conditions. TECMED alleged that INE's refusal to renew the permit came after a change in government in Sonora and Hermosillo in 1997 and was a response to local efforts, culminating in public demonstrations from late 1997 through 1998, to get the facility relocated. TECMED argued that failure to renew the permit for that reason was arbitrary and unjustified and constituted an expropriation of its investment under the terms of the investment treaty between Spain and Mexico, which is similar to NAFTA Chapter 11 (ICSID 2003, paras. 41–50).

In its award in the TECMED case, the arbitral panel found that Cytrar's operations had never threatened public health or the environment, and that the violations cited by INE were of a

minor and technical nature. It concluded that INE's refusal to renew the permit was motivated rather by its desire to satisfy local demands to relocate the landfill. The tribunal found Mexico=s actions in this regard constituted an expropriation, and awarded TECMED recovery of its purchase price, post-purchase improvements, and lost profits for two years (after which the landfill would inevitably have had to be relocated) (ICSID 2003, paras. 148–151).

d. Hazardous Waste Management Capacity in Mexico

At present, there is only one operating, licensed hazardous waste landfill in Mexico. This facility, owned and operated by *Residuos Industriales Multiquim, SA de CV* (Rimsa) is located in Mina, Nuevo Leon, northwest of Monterrey. The Rimsa facility was originally established by a wholly Mexican-owned company, but has had several owners in recent years. It is currently owned by the French environmental services conglomerate Veolia (formerly a part of the conglomerate Vivendi). Mina is about 12 hours by truck from the Mexico City region, which continues to have the largest concentration of industries generating hazardous waste.

From the early 1990s to present, the federal environmental agencies of the Mexican government have announced various plans and programs to augment Mexico's very limited hazardous waste disposal capacity. At times the government plans have included or pre-supposed foreign direct investment to establish the necessary facilities. Notwithstanding the participation of Veolia in the Rimsa facility, the experiences of Metalclad, Chemical Waste Management, TECMED appear to have discouraged other foreign investors.

e. Reforms of Mexican Environmental Regulation

The aftermath of Metalclad brought several changes to Mexican environmental laws and their enforcement that represent further steps toward international norms for environmental decision making. These changes are attributable, no doubt, to broader political and social changes and are not simply a reaction to the arbitral award. This suggests, however, that the governor's actions to prevent Metalclad from operating its facility may not have been within the mainstream of Mexico's political and legal evolution.

Prior to Metalclad, the federal government customarily failed to pay serious attention to concerns about legal, social, or technical issues from state governments, municipal administrations, or citizens at large. The efforts exerted by the State of San Luis Potosí and the municipality of Guadalcázar show that such disregard can now be politically risky. In general, communications between federal, state, and local agencies and the citizenry have improved considerably; environmental impact statements are required for major projects, the guidelines for preparing them have been strengthened, and executive summaries of these statements are published through the internet. Recent legislation provides for citizen participation in the process of deciding on federal environmental permits, although such participation is still limited the right to information, not the right to make comments. Similarly, at the state level, the environmental commission of the State of San Luis Potosí has adopted practices for better communication with its citizens (Medellín 2002).

The publicity surrounding the Metalclad arbitration and the final award of compensation also engendered unprecedented initiatives toward greater regulatory transparency in Mexico. The Mexican Senate expressly cited NAFTA's espousal of clear and transparent regulations as

beneficial for both national and foreign investors (Senate of Mexico 2002). In June 2002, Mexico=s President Fox signed the Federal Law for Transparency and Access to Public Governmental Information, which prescribes a streamlined process for obtaining information and records from all federal agencies and federal government officials (Mexico Federal Law 2002). Pursuant to that law, the Mexican Senate implemented rules for the internet posting of its proceedings and records (Senate of Mexico 2003). In March 2003, the legislature of SLP enacted a corresponding state Law for Administrative Transparency and Access to Public Information, which imposes duties for transparency and disclosure of government information on state agencies and on all municipalities within SLP (San Luis Potosí 2003). Other recent and even more ambitious proposals have included bills introduced in the federal Senate to create a Mexican national institute that would coordinate industrial development among federal, regional, and state authorities and to create a center for international studies that would guide the Senate in integrating international norms and standards into Mexican economic legislation (Senate of Mexico 2004a; 2004b).

On October 8, 2003, the Mexican government officially published a new General Law for the Prevention and Control of Wastes, including hazardous wastes, effective on January 8, 2004. The new law, drafted by several committees of the Mexican Congress and three political parties, was instigated by Mexico's Green Party. This law establishes definitions of waste in general and hazardous waste in particular that closely track similar legislation in other countries. It allocates responsibility for waste management within the federal government and among the federal, state, and local governments. Generally speaking, responsibility for hazardous wastes is assigned to the federal level, specifically including the identification of appropriate sites for waste management facilities, the formulation of a plan for prioritizing facility development in regions of the country with inadequate infrastructure, and the responsibility to attract investment for the creation of the needed infrastructure (del Carmen Carmona Lara 2004a). Although the law establishes a clearer and more comprehensive legal framework for issues such as siting and operation of hazardous waste landfills, commentators have noted that Mexico still lacks the financial, economic, human, or institutional resources or the infrastructure for the implementation of the goals of the law (del Carmen Carmona Lara 2004b). Hazardous waste management in Mexico continues to be hampered by inadequate identification of hazardous waste generators, the unreliability of waste generation data from registered generators, and poor practices in manifesting and tracking hazardous waste. One study suggests that, although there are 27,280 registered hazardous waste generators, the true number is probably in excess of 100,000 (Cortinas de Nava 2004). The number of hazardous waste recycling and treatment facilities has increased greatly in the last ten years, but there are still very few waste incinerators and only one licensed landfill for the whole country (Cortinas de Nava 2004).

3. Analysis

From an environmental protection perspective, two scientific issues about the Guadalcázar waste site remain perplexing. On the one hand, the geologic suitability of the site for long-term disposal of hazardous waste remains contentious and unresolved. On the other

hand, there is little specific scientific information in support of the governor's decree placing the site in a protected natural area.

About the suitability of the site, the best that can be said is that some studies pointed to geologic and other factors making the site a poor choice for a hazardous waste facility, but the federal government itself relied on other assessments in support of its decision to grant the construction and operating permits to Metalclad. We are not aware of any studies of existing soil or groundwater contamination beyond the boundaries of the site from the 20,000 tonnes of waste casually disposed there about 15 years ago, which would seem to be one obvious way to establish the potential for migration of contaminants off site. It is well beyond the scope of this report or the technical capacity of its author to venture an opinion about the relative technical merits of the competing studies. It can, however, be argued that the unresolved technical disputes and lack of recent studies point up serious shortcomings in the environmental regulatory process.

The obscurity of the scientific basis for the ecological decree creating the protected natural area and prohibiting disposal of wastes is perhaps more troubling because it casts doubt on the validity of this exercise of governmental authority for the protection of biodiversity. To the best of our information, the Governor of San Luis Potosí signed the decree by fiat, without receiving public comment or inviting scientific peer review. The available documentary record contains no legislative or regulatory history leading up to the decree. The presence of diverse cactus species, including some rare and endemic species, in the general region of the southern Chihuahuan desert is not in question. Even so, the decree and the studies it cites make no specific reference to the La Pedrera valley as uniquely important in terms these species. The decree also fails to offer any scientific explanation why the deposition of contaminants on a limited parcel within the vast span of the protected natural area would be incompatible with its conservation objectives. This omission becomes more perplexing in view of the exceptions the decree makes for activities in already populated zones of the natural area. Public statements about the governor=s intentions shed no helpful light on these issues. On one side, he asserted that the decree cancelled all possibility that Metalclad would operate the disputed landfill (Metalclad Corporation and The United Mexican States 2000, paras. 60-61; González Vázquez 1997). On the other side, the governor made reference to studies by scientists from the National Autonomous University (UNAM) establishing the rich variety of cactus species in the region (González Vázquez 1997).

Without the benefit of any record of public discourse about the scientific studies or ecological investigations that might have led the Governor to issue the decree, the objective facts in the record of the Metalclad claim arguably present, not an overriding urgency of environmental protection at some incidental cost to foreign investors, but a political response by elected and appointed officials to a classic NIMBY ("not in my back yard") pattern of persistent and sometimes vehement protests of local citizens. This inference gains strength from the fact the same pattern was repeated in at least two other cases involving foreign investors trying to gain permission for the continued operation of pre-existing waste disposal facilities in Mexico.

Although we see a NIMBY process at work in the Metalclad case, we are not suggesting that the local opposition had no basis in concerns for local community health and environmental protection. Indeed, in each of the Mexican waste cases it appears that poor management practices

by previous owners or operators heightened local concerns and sensitivities. It is also possible that faulty or corrupt decisions about where to site the facilities in the first place gave additional credence to the local opposition. Nevertheless, as a matter of environmental policy and regulation, two separate tribunals of international jurists have concluded that secretive or deceptive political decisions to mollify NIMBY feelings violate international norms. Even if that legal conclusion is controversial, surreptitious procedures and deceptive government statements about the basis for decisions are inimical to an open and legally regular process for communities and governments to debate and decide on measures to protect environmental resources and avoid health hazards.

Finally, it bears reiterating that general principles of international law offer remedies to foreign investors who become trapped in such situations. The government retains its full sovereign rights to respond to the concerns of local citizens, but it violates international norms when it tries to invoke the mantle of discretionary environmental regulation to justify decisions that are not objectively grounded in scientific concerns. NAFTA Chapter 11 simply reflects and incorporates those long-established and widely-shared legal principles.

B. Ethyl Corporation and Canada

1. The History of the Case

The Ethyl case presents another complex set of facts and circumstances (Soloway 1999; Wagner 1999). Ethyl Corporation, a US company, manufactures the gasoline additive methylcyclopentadienyl manganese tricarbonyl, or MMT. An octane booster that enhances fuel efficiency, MMT was widely used in Canada after the phase-out of lead in gasoline. The manganese in MMT raised two significant environmental concerns: potential health effects from manganese oxides in tailpipe emissions; and possible interference by manganese with the onboard diagnostic systems that are a key emissions control component in automobiles. Despite widespread concern about the effects of inhalation of manganese in the United States as well as Canada, however, multiple scientific studies of MMT's health effects and human exposure in both Canada and the United States, both before and after the case discussed here, repeatedly conclude that there is little or no human risk from automobile emissions. Similarly, the claims about interference with emissions control systems are questionable at best, as will be briefly discussed below.

The story of this case begins years before the Canadian measure at issue. Ethyl developed MMT after the enactment of the US Clean Air Act Amendments in 1977 and after the US EPA had moved to sharply reduce use of, and ultimately phase out, Ethyl's previous gasoline additive, tetraethyl lead. Under the terms of the Clean Air Act, new additives to gasoline were restricted. For many years, EPA had denied Ethyl's request for a waiver of this restriction on MMT because it supposedly interfered with automotive emission control systems. After Ethyl conducted studies that refuted those concerns, EPA switched ground and continued to deny the waiver because of

apprehensions about the effects of manganese exposure on public health. Ethyl contested that decision by EPA, and in 1995 a US federal court of appeals ruled that EPA had no authority under the fuels section of the Clean Air Act to deny a waiver for MMT on public health grounds, though it could regulate or ban MMT under other provisions of the Act if it found a danger to public health. An EPA risk assessment in 1994 noted some concerns about MMT's health effects, but EPA concluded that these concerns were not sufficiently robust to support health-based regulation of MMT under the law (Soloway 1999; ICCT 2004, 6; National Round Table 2001, 51). So EPA relented and granted Ethyl's waiver application, making MMT legal to use as an automobile fuel additive in the United States.

Meanwhile, much the same debate about MMT was playing out in Canada, except that MMT had already come into wide use in Canada in the 1980s. Canada had been assessing potential health risks associated with MMT for a number of years (National Round Table 2001, 55–56). In 1994, the Minister of Environment Canada, Sheila Copps, announced her intention to have MMT removed from Canadian gasoline by August, 1995. The minister claimed to be motivated by public health considerations, but like her US EPA counterpart she concluded that the scientific evidence of health effects was insufficient to allow her to use federal administrative authority under the Canadian Environmental Protection Act (CEPA) to impose a national ban on MMT. She therefore pursued another legal strategy: in 1995, the government submitted in Parliament Bill C-94, which would have banned the importation and inter-provincial sale of manganese-based products. Because Ethyl was the sole supplier of MMT to the Canadian market and blended MMT in Ontario through its subsidiary, Ethyl Canada, for sale to refiners in other provinces, the bill would effectively end the sale of MMT anywhere in Canada. After a national election and much debate and lobbying by the automobile industry, Parliament in 1997 enacted virtually the same legislation as Bill C-29, the Manganese-based Fuel Additives Act, banning the import or inter-provincial trade of MMT. The ban on trade in MMT took effect in June1997; even before then, Ethyl filed a claim under NAFTA Chapter 11.

Lurking in the background of the scientific and technical controversies over MMT in both countries are two economic struggles (Soloway 1999). First, the mineral-based MMT competes against alternative fuel additives such as ethanol, which is aggressively advocated by corn growers and processors. Second, automobile manufacturers have been engaged in long-standing struggles with petroleum refiners over which industry should shoulder the major responsibility of meeting ever-more-demanding automotive pollution control standards. The automobile manufacturers are instinctively suspicious of an additive to gasoline that might impair the operation of the catalytic converters and onboard diagnostic systems that are the major automotive technology for pollution control. In Canada, these economic conflicts had a substantial inter-provincial aspect, pitting western grain and fuel-producing provinces like Alberta against the automotive industry centered in Ontario.

While Ethyl's NAFTA claim was pending, two domestic legal challenges to the Manganese-based Fuel Additives Act took shape. On one front, Ethyl Canada filed suit in the Ontario Court of Justice General Division, arguing on Canadian constitutional grounds that the Act was beyond the power (ultra vires) of the federal government to regulate trade and commerce, and was rather in the nature of an environmental measure, a matter for provincial

regulation. The court case never proceeded beyond rulings on some pre-trial motions. Interestingly, though, the government's "statement of defence" in that case characterized the environmental aspects of the trade ban as "marginal and 'irrelevant to the issues raised'" in the case (Soloway 1999 at 77).

In another forum, Alberta and three other provinces (Saskatchewan, Quebec, and Nova Scotia) instituted a proceeding against the inter-provincial trade ban under the Canada's Agreement on Internal Trade (AIT). The AIT, which came into force in 1995, is a detailed trade agreement among the federal government of Canada and the provincial governments setting forth principles for trade within Canada akin to those in the constitutional systems of the United States and the European Community. The AIT includes a dispute resolution system and calls on the governments to comply with the rulings of AIT panels. The AIT proceeding moved expeditiously; the panel made a final ruling in favor of the provinces in June 1998 (AIT 1998). The panel did not directly question the public health purposes of the federal measure and confirmed protection of public health as a legitimate objective that could justify an internal restriction on trade. Nonetheless, the panel found no urgency to the federal government's health concerns and therefore determined that the government could have met its legitimate objective through less trade restrictive means (AIT 1998, 9–10). On this basis, it concluded that the ban on inter-provincial trade of MMT was an undue burden on internal commerce in Canada and thus a violation of the AIT.

A month after the AIT ruling, the Canadian federal government amended the Act to remove MMT from the list of substances covered by the trade ban. It then settled Ethyl's Chapter 11 claim for US$13 million to cover Ethyl's legal expenses and for lost profits during the year of the trade ban. Ethyl Canada, in turn, dropped its Ontario court case. Finally, as part of the settlement the government publicly declared that there was no scientific basis to prohibit MMT under Canadian federal law, explicitly acknowledging that "[c]urrent scientific information fails to demonstrate that MMT impairs the proper functioning of automotive on-board diagnostic systems . . . and there is no new scientific evidence to modify the conclusions drawn by Health Canada in 1994 that MMT poses no health risk" (Environment Canada 1998).

2. Subsequent Developments

The debate over MMT has continued to percolate since the settlement of Ethyl's Chapter 11 claim. In 2001, Canada's National Round Table on the Environment and the Economy included a case study of MMT in its "state of the debate" report on the management of potentially toxic substances (National Round Table 2001). Later in 2001, the ministers of Health Canada and Environment Canada responded to citizen petitioners concerned about air quality in southwestern Ontario in the summer of 2001 (Health Canada 2001; Environment Canada 2001). In 2002, the Canadian Motor Vehicles Association and other auto industry groups released a report that it claimed demonstrated adverse effects of MMT on automobile emission control systems (CVMA 2002). In late 2003, Environment Canada proposed an independent third-party review of the auto industry study (Environment Canada 2003). In September 2004, an international automobile industry coalition called the International Council on Clean Transportation issued a "status report" on the use of MMT in gasoline (ICCT 2004). In late 2004, the Sierra Club of Canada announced that only two gasoline refiners in Canada have not begun

to phase out the use of MMT in their gasoline (Sierra Club 2004). Meanwhile, Ethyl Corporation has gone through management and structural changes; as of 1 July 2004 its gasoline additives business is being operated by a sister company, Afton Chemicals.

a. Health Effects of MMT

The National Round Table report confirms the account of MMT regulation given above, with considerable documentary support and many additional details. In particular, the National Round Table recapitulates the technical and scientific disputes over the effects of MMT on automobile emission control systems and the differences among scientific experts about the likelihood of public health effects from manganese exposure at the low concentrations of manganese in the atmosphere attributable to MMT use in gasoline. It is interesting to note that Canadian researchers were more concerned than their US counterparts with industrial emissions of manganese as a more significant health risk than automotive emissions. Nevertheless, the United States and Canada come to very similar conclusions about the threshold level of manganese in the air that would trigger health concern; ambient levels in both countries are substantially below the concern level. (National Round Table 2001).

More tellingly, the ministerial responses to the 2001 citizens' petition on air quality and health effects reinforce the official view on MMT expressed in the public statements by Canadian officials associated with the settlement of Ethyl's NAFTA claim. In his short response, Minister of the Environment David Anderson focuses on other toxic constituents in gasoline. With respect to MMT, he only promises that the government "will asses the results of future tests on the effects of MMT" and take action under the CEPA if warranted (Environment Canada 2001). The response of Health Canada to the petition is much more specific on the petitioners' claims regarding MMT. Health Canada restates and reaffirms the conclusion of its 1994 risk assessment that "'airborne manganese resulting from the combustion of MMT in gasoline-powered vehicles is not entering the Canadian environment in quantities or under conditions that may constitute a health risk.'" In his cover letter to the department's response, Health Minister Allan Rock strongly reaffirms Health Canada's continuing position that it "has no objection to the use of MMT." (Health Canada 2001).

More recent information, however, including new studies of the health effects of chronic exposure to manganese and data from the studies of MMT by the automobile industry have reportedly caused both Environment Canada and Health Canada to propose or to undertake new assessments. A check of Environment Canada's website on August 29, 2005 indicates that Environment Canada has not yet implemented its 2003 draft framework for a third-party review of the automobile industry studies suggesting that MMT results in higher emissions of several automotive pollutants with sustained use. Similarly, any review of the 1994 risk assessment of MMT combustion by Health Canada has yet to produce publicly available results, although an independent source reported that the review was to have been completed by April 2005 (ICCT 2004, 6–7).

b. Other Issues

Further health effects studies may be academic anyway. The ICCT indicates that only about 5% of gasoline being sold in Canada in 2004 contained MMT. This information is

consistent with the claims of the Sierra Club of Canada of voluntary avoidance of MMT by almost all Canadian refiners (ICCT 2004, 5; Sierra Club 2004). Although MMT is also a legal product in the United States (except California), most US refiners responded about a decade ago to pressure from the public and environmental groups and voluntarily agreed not to use MMT in their gasoline products. Indeed, the ICCT reports that many other countries have either banned MMT or not approved its use in gasoline. A Mexican government official reported that the government of Mexico dissuaded Ethyl from plans to market MMT to the state oil company, Pemex.[1]

3. Analysis

The Ethyl claim has been lamented for being the first Chapter 11 case where a government paid compensation to a foreign investor who complained of the business effects of a measure putatively designed to protect public health (IISD 2001, 73–74). The subsequent course of events, however, does not show any effect on or threat to Canadian environmental policy. Instead, the Ethyl dispute reaffirms important domestic legal principles against economic discrimination, principles embedded in the US Constitution and in Canada's AIT. Government authority to impose trade restrictions as indirect environmental regulations is thus tightly limited.

The Manganese-based Fuel Additives Act did not meet the demanding criteria for an "environmental" trade ban. By banning the importation and inter-provincial trade of MMT without prohibiting its use within provinces, the bill implicitly conceded what Health Canada and EPA had already openly determined—that the health effects and exposure data did not show a public health risk from MMT in gasoline.

From another perspective, Ethyl's successful challenge could be viewed as a salutary check on the legislative power of special interest groups. The AIT panel expressly found that the automobile manufacturers were the Adriving force@ behind bill C-29 (AIT 1998, 7). Their formidable lobbying influence apparently persuaded government leaders to make commitments to legislation unsupported by sufficient data. It could be said that Ethyl's opportunity to seek a remedy contributed to a process in which sympathetic domestic interests were able to use domestic remedies (the AIT in this case) to counteract efforts to deploy questionable science into pursuit of special interests. To this extent, giving rights to foreign investors pressures government officials to hew to a more balanced and open decision-making process. Two Canadian scholars have concluded: ACanadians as a whole benefited from a strong affirmation of the rule of law and the reversal of policies that were found to be both capricious and discriminatory." (Hart & Dymond 2002).

The implications of the Ethyl dispute for reform of Canada's environmental legislation are less clear. In the aftermath of Ethyl, the Canadian environment minister reported that certain key provisions of CEPA were being rewritten in a way that could allow a future ban on the use of MMT (Sforza and Vallianatos, no date). That could be done, presumably, by incorporating a broad form of the precautionary principle into the legislation. Existing environmental legislation in most countries already affords government officials discretion to act on reasonable suppositions or predictions of harmful consequences without need for definitive scientific

1 Adrian Fernández-Bremauntz, President of the Instituto Nacional de Ecología, personal communication, 2005.

findings that such harms are already occurring. More explicit precautionary language in legislation might give environmental decision makers even more flexibility to act preventively when the scientific evidence is preliminary or indefinite. If such legislative amendment were perceived or intended to allow the government to be responsive to strongly-felt health concerns among the public, however, it would risk departure from objective criteria for science-based environmental decision making. The fundamental predicament remains that science often cannot provide the guidance regulators need for their decisions (Adelman 2005). In any event, the Canadian government has not yet formally proposed to incorporate the precautionary principle into CEPA. It is hard to say whether the failure to follow through on the plan to amend CEPA represents a reticence arising out of the Ethyl episode, or merely a change in ministers and a shift in government policy. In the meantime, the success of the informal campaign to persuade refiners not to use MMT in gasoline demonstrates that a precautionary approach may be more easily achieved through market pressures than through environmental law reform.

C. S. D. Myers, Inc. and Canada

1. Case History

This story concerns a claim for compensation by a US company, S.D. Myers, Inc. (SDMI), against Canada for measures affecting the export of polychlorinated biphenyls (PCBs) from Canada to the United States for incineration. In this case, environmental policy and economic policy decisions in both the United States and Canada converged and diverged in ways that undercut a business plan by SDMI to compete for PCB remediation business in Canada through a Canadian subsidiary. The following account relies heavily on the partial award on the merits of the NAFTA Chapter 11 arbitral tribunal (ICSID 2000b).

PCBs are a family of chemical compounds that are nonflammable and do not conduct electricity. For that reason, they were marketed and used widely as a dielectric fluid for electricity transformers and other heavy duty electrical equipment. In the late 1960s and early 1970s, toxicity studies showed high human and environmental toxicity from polychlorinated compounds such as PCBs. As early as 1973, the Organisation for Economic Cooperation and Development called on member governments to reduce use of PCBs. In 1976, when the US Congress enacted the Toxic Substances Control Act, it included a separate article on PCBs, calling for an immediate halt to their manufacture and sale in the United States and banning importation of PCBs. In 1977, Canada also moved to phase out use of PCBs (Hilborn and Hart 1998). Nevertheless, Canada had already imported 40,000 metric tonnes of high-concentration PCBS, resulting in an enormous inventory of electrical equipment containing PCBs. This presented a long-term challenge about how to dispose of the PCBs as this equipment was taken out of service (Environment Canada 1998b).

SDMI, based in Tallmadge, Ohio, started as a family-owned electrical equipment repair and maintenance company. In the 1980s, as an outgrowth of its core business, it developed a separate business of remediation of PCB-contaminated electrical equipment through incineration of PCBs. By 1990, SDMI was a leading company in US PCB disposal, and had established PCB remediation operations in Australia, Mexico, and South Africa. The heavily populated areas of

eastern Canada have a large inventory of used electrical equipment containing PCBs but no local disposal capacity; in the early 1990s, only one Canadian PCB disposal and destruction facility was available, the Alberta Special Waste Treatment Centre in Swan Hills, Alberta, northwest of Edmonton.[2] SDMI decided that the eastern Canada PCB wastes presented an attractive business opportunity for SDMI with its Ohio incineration facility close to eastern Canada. But it faced a legal obstacle in the US ban on imports of PCBs.

In 1993, SDMI began a concerted effort to overcome this obstacle and obtain the Canadian business. The owners of SDMI incorporated and heavily financed (but did not own shares in) a separate company, S.D. Myers Canada, Inc., and began lobbying both US and Canadian environmental officials. The terms of the bilateral Agreement on the Transboundary Movement of Hazardous Wastes between the United States and Canada allowed for cross-border movement of waste for environmentally-sound disposal and Canadian PCB waste export regulations authorized export to the United States with the consent of the US EPA. Myers was supported in this effort by many eastern Canadian firms who believed that disposal of their PCBs by SDMI in Ohio would be less expensive than shipping to Swan Hills.

EPA began public consideration of SDMI's request for a relaxation of the US import ban in early 1995. SDMI had an excellent performance record in incineration of US PCB wastes and the transportation risks of bringing PCBs from Canada to Ohio were slight, so EPA searched for options to allow the PCBs to be imported. On 26 October 1995, EPA issued to SDMI a written notice of "enforcement discretion" under which EPA promised, in effect, not to enforce the import ban for PCBs from Canada for disposal (by destruction) by SDMI in the United States between 15 November 1995 and 31 December 1997.

Canadian environmental officials, as well as the commercial company operating the Swan Hills treatment center, Chem-Security, had been monitoring the EPA developments closely. In July 1995, before final EPA action, Canada's environment minister responded to a parliamentary question by enunciating a government position that, "the handling of [Canada's] PCBs should be done in Canada by Canadians." No sooner had EPA announced its "enforcement discretion" policy than Chem-Security wrote to the minister urging a quick Canadian response to the imminent opening of the US border to trade in PCBs. On 16 November 1995, one day after the border was "opened" under the EPA policy, the Environment Minister signed an Interim Order in Council amending Canada's PCB Waste Export Regulations to prohibit the export of Canadian PCBs, thus effectively closing the border from the Canadian side. The Privy Council confirmed the Interim Order on 28 November 1995. Less than a year later, on 5 October 1996, the government published a proposal to once again allow export to the United States for proper treatment and disposal (CEC 1996). A new Order in Council to this effect was adopted on 4 February 1997, and new PCB Waste Export Regulations issued that allowed PCB shipments to the United States. Five months after that, however, after a US court held that EPA had no legal authority to issue its enforcement discretion, EPA withdrew the enforcement discretion and in essence re-established the US ban on all imports of PCBs.

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2 The arbitral tribunal award mentions another Canadian firm, Cintec, but Cintec's business, centered in Quebec, emphasizes decontamination of PCB equipment. PCBs accumulated by Cintec still require ultimate disposal at the Swan Hills facility.

Only after all these events did SDMI file a notice of intent to submit a claim against Canada under NAFTA Chapter 11; it submitted the claim on 30 October 1998. SDMI alleged four violations of Chapter 11: failure to afford national treatment to S.D. Myers Canada; failure to afford S.D. Myers Canada fair and equitable treatment; imposition of improper performance requirements; and effective expropriation of the investment in S.D. Myers Canada as a result of the first three violations. At the outset, Canada raised an important challenge going to the validity of the claim, namely that S.D. Myers Canada was merely a Canadian company and not an "investment" owned or controlled by a "foreign investor," that is, SDMI. The tribunal determined that although SDMI did not "own" S.D. Myers Canada, it did effectively finance the company and control its activities, making S.D. Myers Canada an "investment" of SDMI under Chapter 11 rather than a company based on Canadian investment. This determination was later upheld on appeal to a Canadian court (Federal Court 2004).

In its partial award on the merits of SDMI's claim, the arbitral tribunal found that the actions of Canada in closing the border to PCB waste exports were not grounded in or justified by concerns about environmental risks of export of PCBs or considerations of environmental policy, but were motivated instead by an interest in maintaining the flow of waste materials to the Swan Hills facility. The tribunal refers, for example, to an internal briefing paper of Department of the Environment officials recommending support for the EPA enforcement discretion proposal "because it represents a technically and environmentally sound solution for the destruction of some of Canada's PCBs" (ICSID 2000b, para. 173). The tribunal sums up its review of the evidence as follows:

> Insofar as intent in concerned, the documentary record as a whole clearly indicates that the Interim Order and the Final Order were intended primarily to protect the Canadian PCB disposal industry from U.S. competition. CANADA produced no convincing witness testimony to rebut the thrust of the documentary evidence.
>
> The tribunal finds that there was no legitimate environmental reason for introducing the ban. Insofar as there was an indirect environmental objective – to keep the Canadian industry strong in order to assure a continued disposal capability – it could have been achieved by other measures. (ICSID 2000b, paras. 194-195). In its final award on damages, the tribunal awarded SDMI CAN$6.05 million plus interest for its lost business opportunity during the period of the Canadian closure of the border to PCB exports (ICSID 2002b).

2. Additional Facts and Subsequent Developments

When SDMI established S.D. Myers Canada and sought to do business in Canada, the two primary options for disposal of the PCB wastes in eastern Canada that the Canadian government had in view were the SDMI option of export for incineration in Ohio or the shipment of the waste to Swan Hills, Alberta for treatment and destruction at the Alberta Special Waste Treatment.

Center (Hilborn & Hart 1998). Several additional facts are pertinent to an evaluation of the relative environmental merits of the two options.

The PCB Regional Action Plan of the Sound Management of Chemicals Project of the Commission for Environmental Cooperation, agreed to by the three NAFTA governments and issued in December 1996, identifies three principles relevant to the "shared regional management of PCB wastes": 1) the proximity principle; 2) the self-sufficiency principle; and 3) the least transboundary movement principle (CEC 1996). These principles derive from the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal. The PCB regional action plan emphasizes that the three principles should be considered "jointly and in balance." The task force that developed the plan specifically addresses transboundary shipment of PCB wastes in the following terms:

> The countries believe, in particular, that the regional management of PCB wastes, including a more open but well-managed and controlled border policy among the three countries, could increase the pace of proper treatment/disposal of PCB wastes and the associated reduction of risk to human health and the environment. Further, by removing certain barriers to transboundary shipments and providing for greater use of existing, environmentally sound treatment/disposal facilities, resources that otherwise would be needed to develop new treatment/disposal capacity can be dedicated to other environmental needs, benefiting overall regional ecological management(CEC 1996).

In terms of proximity, shipment of PCB wastes from eastern Canada to Swan Hills, 160 kilometers northwest of Edmonton, Alberta, requires transport over 3000 kilometers or more. This clearly presented a higher transportation hazard than shipment some hundreds kilometers to Tallmadge, Ohio. In fact, in 1985 there had already been a serious spill of PCBs during transport from Ontario to Swan Hills (Pembina Institute 2002, 3).

Another environmental factor is the reliability and performance of the disposal facilities. The US EPA provided SDMI with its "enforcement discretion" exemption after having determined that SDMI had operated its Ohio facility in an exemplary fashion and that the PCB destruction capability of its incinerator was extremely high, above 99.9999% destruction. The Swan Hills facility also featured high-temperature incineration capability, but its performance history had been uneven. When it first opened, Swan Hills was a joint venture between the province of Alberta and a private company, and focused on treatment and disposal of Alberta wastes (Starr 2003). In 1995, just as SDMI was beginning its effort to do business in Canada, the facility was authorized to import PCB wastes from other Canadian provinces, though Alberta has maintained a prohibition on imports of PCB wastes from outside Canada (CEC 1998). In the hands of private contractors, however, operational controls were not fully maintained. Local citizens, workers, and First Nations complained of contamination of the workplace and the environment from facility operations, including PCB incineration (Alberta Federation of Labor 2000). In 1996, during the period of Canada's export ban, a mechanical failure at Swan Hills led to a release of PCBs, and formal government charges against the facility. A few months later, the Provincial Health Officer issued an advisory against eating wild game from within a 30 kilometer radius of the facility. In July 1997, an explosion at an incinerator forced it to be shut down. Eventually, the private company sold its share back to the province, and operations were temporarily contracted out to another firm. As of 2003, the facility is owned and operated by

Earth-Tech, but operates with a much-reduced staff and at only partial capacity. It is unclear whether the new owner has the financial capacity to make necessary improvements, such as upgrading or replacing its incinerator capacity, now more than 10 years old (Starr 2003).

Other facilities in Canada have an equally sketchy history. A PCB incineration facility was built in Ontario in 1999 by SRBP Resource Recovery, but the facility has been the target of investigation and legal charges regarding air pollution (Pembina Institute 2002). Another US company operates PCB remediation at Kirkland Lake, Ontario, but does not provide PCB destruction capability (<http://www.tci-pcb.com>). This company was recently found guilty of an environmental violation in 2001 in attempting to send an illegal shipment of "mixed waste" including PCBs to Swan Hills (Ontario 2004). Yet another firm had plans for an incinerator at Kirkland Lake, but abandoned those plans after intense local opposition and an audit by the United Nations Human Rights Commission were followed by a "deficiency statement" from Ontario officials on the firm's environmental review statement (Angus 1999; United Nations 2003, paras. 41-45).

In hindsight, technological developments since the S.D. Myers case have eroded the very premises of the two-option analysis of the mid-1990s. PCB remediation technology has advanced away from large fixed incinerators toward smaller mobile units. Consequently, in 1999, less than a year after submitting its Chapter 11 claim, SDMI sold its US and Canada-based PCB remediation business and its Tallmadge, Ohio facility to Safety-Kleen Corporation, in order to focus on mobile PCB remediation services in other countries (Hazmat 1999).

3. Analysis

Canada claimed that the export ban was based on environmental policy, in particular the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal, to which Canada is a party. As noted above, that convention articulates a self-sufficiency principle (Article 4(2)(b), "ensure the availability of adequate disposal facilities, to the extent possible, within its own boundaries") and a principle of minimizing transboundary movements of waste (Article 4 (2)(d), "ensure that the transboundary movement of hazardous wastes and other waste is reduced to the minimum consistent with the environmentally sound and efficient management of such wastes"). Notwithstanding these provisions, Canada had long maintained a policy of allowing PCB waste exports to the United States even after suspending export to other countries in 1990. This policy accorded with the consistent advice of senior officials in Environment Canada that the allowance of PCB waste exports was consistent with Canada's interpretation of the Basel Convention, with Canada's bilateral Agreement on the Transboundary Movement of Hazardous Wastes with the United States, and with an objective assessment of the relative environmental risks of shipment of PCB wastes to Ohio as compared to Alberta. Canada had also consistently expressed the view in international negotiations that Article 4(2) should not be construed to bar environmentally sound transboundary movements of waste.

The strongest environmental policy argument for the Canadian export ban was the Basel self sufficiency principle, the obligation to assure adequate domestic disposal capability. To begin with, the United States had, for many years, maintained a strict prohibition on import of PCB wastes, even from Canada. The Canadian government doubted, rightly as it turned out, that EPA's "enforcement discretion" for SDMI offered a durable or reliable alternative to PCB waste

disposal in Canada. If Canada had allowed its inventory of PCB wastes to be shipped to Ohio, Chem-Security might have been left with an insufficient volume of waste to sustain its continued operation. As it is, the facility has never made a profit for its commercial operators. On this point, the tribunal simply asserted that Canada's objective "could have been achieved by other measures." This conclusion is consistent with the conclusion of the Canadian AIT panel in the MMT case: trade restrictions in pursuit of environmental goals should not impose undue burdens on the free movement of goods and services. Yet the tribunal's analysis is too glib on this point. When faced with a shortage of local wastes for disposal, commercial operators exert tremendous pressure on their government regulators to relax import restrictions so that the facility can tap a broader market. This was what S.D. Myers was doing when it lobbied EPA to allow it to import Canadian PCB wastes for destruction in Ohio. Similarly, the operators of Swan Hills had already persuaded Alberta to allow import of wastes from outside the province. Some facility operators, such as TCI in Kirkland Lake, have even sought to import wastes from overseas. In the face of SDMI's competitive advantage in handling eastern Canada PCB waste, it is not obvious that there were practical "other measures" to foster and maintain PCB disposal capacity in Canada.

That still leaves the question of how best to manage a complex situation like the environmentally sound management of Canada's stockpile of PCB wastes. In the end, given the operational deficiencies at Swan Hills and its remoteness from the wastes in eastern Canada, the S.D. Myers option had substantial environmental advantages for Canada, as well as offering major cost savings to those having the burden of getting their wastes destroyed. S.D. Myers might have been able to expedite destruction of high-level PCB wastes in Canada. Even after the reclosing of the border from the U.S. side, Swan Hills has remained an unattractive option. Only recently have mobile incinerators have begun to offer reliable and cost-effective options for eastern Canadian companies and government agencies still holding these wastes.

Even if there are some environmental arguments to be made in defense of maintaining a source of PCB wastes to develop Canadian disposal capacity, the NAFTA arbitrators in the S.D. Myers case should not be castigated for undue interference or second-guessing of a legitimate government decision. The paper trail of the decision to close off exports to the United States vividly showed that it was taken against the advice of professional staff experts at Environment Canada and was closely linked to personal interventions by Chem-Security at the highest political levels. Even in the face of that record, the tribunal made meticulously clear their disinclination to pass judgment on Canada's environmental policy discretion:

> When interpreting and applying the "minimum standard", a Chapter 11 tribunal does not have an open-ended mandate to second-guess government decision-making. Governments have to make many potentially controversial choices. In doing so, they may appear to have made mistakes, to have misjudged the facts, proceeded on the basis of a misguided economic or sociological theory, placed too much emphasis on some social values over others and adopted solutions that are ultimately ineffective or counterproductive. The ordinary remedy, if there were one, for errors in modern governments is through internal political and legal processes, including elections (ICSID 2000b, para. 261)

Moreover, the tribunal concluded that Canada's action in this case did not constitute an "expropriation" under NAFTA Article 1110. In so holding, the tribunal took a view of regulatory expropriation very much along the lines advocated by environmental law commentators. In particular, the tribunal held that, in general, "expropriation" connotes a "taking" of private property by, and the transfer of such property's ownership to, a government. Expropriations involve the deprivation of ownership rights or a lasting removal of private economic rights. Regulations involve a lesser interference with economic rights. Regulatory action does not generally amount to expropriation, so regulatory conduct by a government is unlikely to support a legitimate complaint under Article 1110. The panel found Canada's actions were regulatory measures with improper intent that imposed restrictions on S. D. Myers for more than a year but did not amount to an expropriation within the terms of Art. 1110 (ICSID 2000b, paras. 280–284).

In addition, the panel sided with Canada in rejecting S. D. Myers's contention that the meaning of the phrase "tantamount to expropriation" in NAFTA's Article 1110(1) should extend beyond the customary scope of the term "expropriation" in international law. Instead, the tribunal narrowly interpreted the term "tantamount to expropriation" as merely embracing the concept of so-called "creeping expropriation" but without expanding the internationally accepted scope of the term "expropriation" (S.D. Myers, Inc. and Government of Canada 2000, paras. 285–286). Subsequent Chapter 11 tribunals have followed this interpretation.

As with the other NAFTA Chapter 11 cases, it is difficult to discern from the record of the arbitration or from the response of the government to the findings of the arbitral tribunal any extra burden on the normal processes of environmental regulatory decision making. When Canada adopted the export ban, it had not established, or even thought of establishing, any scientific foundation for the ban through health studies, environmental evaluation, risk assessment, or other evidence showing that exporting PCBs for disposal by S. D. Myers created a health or safety risk different from or greater than the risk associated with shipment to Swan Hills. Within less than a year, Canada reversed the export ban for its own reasons, long before SDMI filed its Chapter 11 claim. Finally, the NAFTA tribunal did not care whether the measure bore an "environmental" or an "economic" label, but looked to the documented intent of the officials involved and the demonstrable effect of the regulations on the environment as well as on trade and investment.

D. Methanex and the United States

1. Case History

Methanex Corporation ("Methanex"), based in Vancouver, British Columbia, Canada, is the world's largest producer and marketer of methanol, accounting for about one-quarter of world usage (Methanex 2002; ICSID 2005, part II.D., para. 3 [giving a figure of 17% of world capacity]). Methanex currently has, and had for the relevant period of this case, two methanol production facilities in western Canada, one in Chile, and one in New Zealand. Methanex owns a methanol production facility in Fortier, Louisiana, but that facility has been idle since 1999.

Methanol is an alcohol typically extracted from natural gas, and is widely used as an intermediary chemical to manufacture such chemicals as formaldehyde and acetic acid, and thus

used to make many industrial and consumer products from plastics and adhesives to windshield washer fluid. The methanol-based product of interest in this case is methyl tertiary-butyl ether ("MTBE"), an oxygenate additive for gasoline that promotes cleaner air by significantly reducing harmful emissions from motor vehicles through more complete fuel ignition in internal combustion engines. For this use, MTBE competes against other oxygenates such as ethanol (an alcohol fermented from corn or other grains) and certain ethers.

The 1990 amendments to the US Clean Air Act addressed a number of gasoline characteristics contributing to air pollution and called for EPA regulations setting standards for gasoline constituents in "reformulated gasoline." The reformulated gasoline regulations include requirements for adding oxygenates to enhance combustion and reduce the emission of the precursors to urban ozone pollution. MTBE quickly captured a large part of the oxygenates market; the only significant competitor was corn-based ethanol, used primarily in the US Midwest. As of the late 1990s, about 87% of reformulated gasoline in the United States contained MTBE as an oxygenate (EPA 2005). Methanex was the dominant supplier to the California MTBE market in the period 1993-2001; only 10% of the methanol used to manufacture MTBE for the California market came from U.S. sources, while 72% came from Canada. (ICSID 2005, part II.D., para. 3) As the NAFTA arbitral tribunal points out, though, Methanex Corporation itself never manufactured or sold MTBE. (ICSID 2005, Part I, para. 1) This turns out to be a crucial point in the legal resolution of Methanex's claim for compensation.

In 1994, in order to comply with the regulations under the1990 amendments to the U.S. Clean Air Act, California prescribed the use of oxygen-enriched reformulated gasoline to reduce ozone emissions in major metropolitan areas. MTBE was the oxygenate of choice for California fuel refiners because it blends more readily and is easier to transport than ethanol. As late as 2002, California consumed about 32% of the MTBE in the United States (Energy Information Administration 2003). But the practice of adding MTBE to gasoline became an issue after trace amounts of MTBE started to appear in ground and surface waters in the mid 1990s. MTBE possesses a foul turpentine-like taste and smell detectable at extremely low levels. In 1996, MTBE contamination caused the City of Santa Monica, California to close groundwater wells that had supplied half of its drinking water. Similar contamination caused the California town of Glennville to cease using residential drinking water wells and rely on alternative sources for drinking water. Dozens of other California communities experienced MTBE contamination at drinking water sites.3

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3 Gasoline releases to the environment can occur under several circumstances: leakage from underground storage tanks, above-ground storage tanks, and pipelines; spillage while dispensing from tank trunks into storage tanks or from fuel pumps into motor vehicles; escape after motor vehicle collisions; improper consumer disposal; and from operation of watercraft with two-stroke engines. Releases of conventional gasoline normally do not threaten drinking water supplies because the chemical components of conventional gasoline biodegrade in a relatively short time and are not highly soluble in water. Releases of gasoline containing MTBE, on the other hand, pose a more substantial threat to potable water sources because MTBE is highly soluble in water and biodegrades slowly. Consequently, MTBE can reach deep underground aquifers by traveling faster and for longer periods than conventional gasoline. Moreover, MTBE's affinity for water and resistance to degradation render its cleanup more costly and time-consuming.

In October 1997, the California legislature responded to MTBE groundwater contamination by unanimously enacting Senate Bill 521 ("SB521") to appropriate $ 500,000 for the University of California to conduct a "thorough and objective evaluation of the human health and environmental risks and benefits" of MTBE as compared with other methyl and ethanol oxygenates (the "UC Report"). SB521 prescribed peer review of the draft of the UC Report by the US Geological Survey and the US Centers for Disease Control as well as public hearings to receive public testimony. The final UC Report was to be submitted to the governor, who was then required to make a written certification about the human health and environmental risks of using MTBE in gasoline in California. If the governor certified that there was a significant risk from MTBE, SB521 required him to take appropriate action to protect public health and the environment (ICSID 2005, part II.D. paras. 8-11).

The final UC Report, issued in November 1998, concluded there were significant risks of water contamination from MTBE and costs associated with water treatment. It also noted that MTBE is a carcinogen in some animal tests and has the potential to cause cancer in humans. The report recommended that California consider phasing out the use of MTBE in gasoline. Although SB521 called for the governor to certify the results of the UC Report within 10 days, it was submitted just after a gubernatorial election. The outgoing governor took no action; it was not until 25 March 1999 that the newly-elected governor, Gray Davis, issued an Executive Order certifying that, on balance, there is a significant risk to the environment from using MTBE in gasoline in California. The Executive Order instructed California environmental agencies to develop a timetable for removing MTBE from gasoline at the earliest possible date, but not later than December 31, 2002. (This deadline was later extended to the end of 2003.) The state legislature and various California agencies then proceeded to adopt regulations to implement the Governor's directive.

About four months after Gov. Davis's Executive Order, in July 1999, Methanex filed a Chapter 11 notice of intent to submit a claim to arbitration, followed by a Statement of Claim filed in December 1999. The Statement of Claim identified SB521 and the resulting Executive Order as collectively constituting a "measure" that violated the NAFTA's Art. 1105 standard of fair and equitable treatment toward Methanex. In particular, Methanex alleged the measure taken by the California Governor was arbitrary and lacked substantive fairness because it was based solely on the UC Report which had reached "unfounded conclusions" and offered "unjustifiable recommendations" as the result of various flaws in the study—such as underfunding, failure to compare risks of MTBE with other oxygenates, incomplete methodology, faulty science, and disregard of public testimony and peer review. Without asserting a loss of physical property, Methanex nonetheless labeled the measure as "both directly and indirectly tantamount to an expropriation" that damaged two Methanex subsidiaries in the United States—namely, Methanex US, a Texas general partnership that purchases methanol from Methanex for resale to the North American market, and Methanex Fortier, a Delaware corporate owner of a Louisiana methanol production facility shut down since early 1999 due to worldwide methanol oversupplies —and their customer base, goodwill, and market for methanol in California and elsewhere. Methanex sought compensation of US$970 million.

The United States vigorously contested virtually every factual allegation and legal proposition advanced by Methanex. The United States also questioned the jurisdiction of the NAFTA panel on the ground that NAFTA's Art. 1101(1) limits investor-State arbitrations to measures "relating to" investors of another Party and their investments. The United States contended that the California measures, which pertained only to MTBE, did not have a legally significant connection with—and therefore did not "relate to"—Methanex or its investments in the production of methanol (United States 2000).

In February 2001, Methanex filed an amended pleading raising a new issue, asserting improper influences on Governor Davis exerted by the Archer-Daniels-Midland Corporation ("ADM"), the producer of more than 70% of US ethanol. According to Methanex, in August 1998, during his campaign to become California's governor, Gray Davis flew on ADM's corporate jet to a "secret" dinner with top executives at ADM headquarters in Illinois. Even though ADM had only minimal business interests in California, it subsequently donated $160,000 to Mr. Davis' gubernatorial campaign and made another $50,000 contribution after he became Governor and banned MTBE by his Executive Order. Three months later, ADM announced plans to build an ethanol facility in California, at the same time characterizing methanol and MTBE as "foreign products" in contrast to ethanol as a "domestic American product."

Methanex's amended pleading also dropped SB521 from the case, focusing instead on the manner in which the Executive Order of March 1999 breached NAFTA obligations, and added as offending measures various California fuel regulations adopted in 1999 and 2000 to implement the Executive Order. Methanex pointed out that, besides banning MTBE, the Executive Order had ordered an official evaluation of the potential for developing a California ethanol industry, and that one of the California regulations prohibited the use of any gasoline oxygenate other than ethanol after December 31, 2002, unless an official assessment determined such other oxygenate did not pose a significant risk to public health or the environment. Methanex asserted that those California measures were intended to replace MTBE ("the 'foreign' methanol product") with the "'domestic' ethanol product," thereby violating the national treatment discipline of Art. 1102. It argued that those measures also violated NAFTA's Art. 1105 requirement of fair and equitable treatment in accordance with international law because they were arbitrary ("Governor Davis lacked the fairness and independence required of neutral decision-makers under international law"), unreasonable ("there were better alternatives for solving the problem of MTBE in drinking water" than banning MTBE, such as ordering the upgrade of all existing underground fuel tanks), and lacking in good faith (Methanex 2001).

The arbitral tribunal, in its Preliminary Award on Jurisdiction and Admissibility, upheld the Art. 1101 jurisdictional objection raised by the United States. The tribunal agreed that the California measures restricted MTBE, and not methanol. Methanex, which does not produce MTBE, but merely sells methanol to those who produce MTBE, had failed to allege facts sufficient to establish a legally significant connection between the California measure and its methanol production and marketing business investments in the United States (ICSID 2002a). The tribunal observed that accepting jurisdiction under these circumstances would mean that any NAFTA foreign investor indirectly affected by government regulation could resort to Chapter

11, a result that the tribunal believe would be inconsistent with the objectives of NAFTA's investment protections.

The tribunal noted, however, that the United States had conceded during oral argument that a measure intended to harm foreign investors or investments on the basis of nationality "relates to" the foreign investor or investment and satisfies the Art. 1101 threshold. Methanex had alleged that Gov. Davis intended to benefit the domestic ethanol industry and to penalize foreign methanol producers such as Methanex. The tribunal ventured that the Methanex claims of the Governor's alleged anti-foreigner intent might meet the Art. 1101 jurisdictional test, but did not consider the evidence clear enough to decide the issue. Instead, it gave Methanex the opportunity to submit a fresh pleading setting out specific factual allegations about the contacts between Governor Davis and ADM, to be followed by a second hearing on the merits restricted to the alleged "intent" behind the California measures to favor the U.S. ethanol industry and to penalize foreign methanol producers such as Methanex.

Accordingly, Methanex filed a Second Amended Statement of Claim in 2002 raising two main points. First, Methanex sought to establish California's improper intent to discriminate by discrediting the UC Report and thus inferring that Governor Davis's decision to ban MTBE was motivated by his personal interest in giving competitive advantages to ADM's ethanol business. Second, Methanex argued its US methanol business stands in "like circumstances" to the U.S. domestic ethanol industry. Methanex stressed "like circumstances" parity in part to allow it to claim a violation of the Art. 1102 national treatment protection (which is limited expressly to domestic and foreign investors "in like circumstances") and in part to serve as fulcrum for a finding of improper intent to discriminate in order to cross the "relating to" jurisdictional threshold of Art. 1101.

In its final award, issued on 3 August 2005, the arbitral tribunal exhaustively examined all elements of Methanex's second amended statement of claim on the merits. Finding each of Methanex's arguments without merit, the tribunal adhered to its earlier determination that it lacks jurisdiction to hear Methanex's claim (ICSID 2005).

The tribunal first considered the objectivity of the UC Report on MTBE. After a full review of the procedures followed by the UC study team, the scientific methodologies it employed, and the conclusions it reached, along with full consideration of the testimony of expert witnesses for Methanex and cross-examination testimony of expert witnesses for the United States, the tribunal has no trouble concluding that the UC Report provides a "serious, objective and scientific approach to a complex problem" and was not a "political sham" as alleged by Methanex (ICSID 2005, part III.A., para. 101). To be absolutely clear, the tribunal states its conclusion that the ban on MTBE was initiated by the California legislature and made contingent on the results of the UC Report, a policy based in good faith and grounded in reasonable scientific concern about the difficulty of cleaning up MTBE contamination of groundwater. The tribunal finds no credible evidence that the writers of the UC Report intended to benefit ethanol producers or injure methanol producers.

The tribunal then takes up the allegation that Governor Davis had made a "deal" with ADM at the allegedly "secret" 1998 dinner with ADM executives to ban MTBE in return for financial contributions to his campaign. This proved to be a particularly difficult argument for

Methanex because it expressly disavowed any claim that ADM's contributions to Governor Davis's political campaign were illegal under US law. Based on testimony before the tribunal from a former ADM executive who was present at the dinner and considering the circumstances of Governor Davis's action under the mandate of SB521, the tribunal concluded that the record contradicts Methanex's inferences of an improper arrangement with ADM (ICSID 2005, part III.B., para. 59). It goes on to find specifically that Governor Davis, in issuing his executive order, had no intent either to harm the methanol industry or to benefit the ethanol industry (ICSID 2005, para. 60).

The tribunal turned next to the issues raised by Methanex's legal argument that it was in "like circumstances" with the U.S. ethanol industry but was not afforded national treatment as required by Art. 1102. The tribunal explored the legal meaning of "like circumstances" and then considered the competitive position of Methanex and US businesses in the market for oxygenates. The tribunal concluded that Methanex is not in "like circumstances" with U.S. ethanol producers on two grounds. As a general matter, the tribunal found that "like circumstances" should not be used to compare Methanex to domestic ethanol producers when there are domestic methanol producers whose circumstances are identical to Methanex, and the California measures do not discriminate between Methanex and those US methanol producers (ICSID 2005, part IV.B., paras. 17-19).

The tribunal nevertheless explored Methanex's broader argument based on a competitive relationship between methanol and ethanol. It finds that this comparison does not meet the "like circumstances" criterion, though, because methanol, as such, is not usable as a gasoline additive (indeed it is banned as a gasoline additive because of its corrosivity). Methanol is only a feedstock for producers of MTBE, and thus does not compete directly with ethanol. In its discussion, the tribunal notes approvingly the arguments in an amicus filing by the International Institute for Sustainable Development that one must be careful in drawing on trade law principles such as the "like products" test to determine issues in an investment context (ICSID 2005, part IV.B., paras. 27-28).

In other portions of the final award, the tribunal disposes of other contentions by Methanex. It finds no unfair treatment of Methanex violative of international law norms under NAFTA Article 1105, and it finds no expropriation or measure tantamount to expropriation under Article 1110. In this latter respect, the tribunal announces an interpretation of unfair-treatment-amounting-to-expropriation that should please the environmental community:

> But as a matter of general international law, a non-discriminatory regulation for a public purpose, which is enacted in accordance with due process and, which affects, inter alios, a foreign investor or investment is not deemed expropriatory and compensable unless specific commitments had been given by the regulating government to the then putative foreign investor contemplating investment that the government would refrain from such regulation (ICSID 2005, part IV.D., para. 7)

2. Additional Developments

Methanex argued that California had an intent to benefit the US ethanol industry at the expense of the largely foreign-sourced methanol-based oxygenate MTBE. It also argued that the MTBE ban was based on poor scientific analysis and was an inefficient approach to the problem of MTBE contamination of drinking water supplies. Although California was the first state to take action to regulate MTBE, many other states followed suit as MTBE contamination became more widespread, or at least more widely known.

California was the first to take definite action on MTBE because it has the most widespread automotive air pollution problem in the United States, and consequently the most complex gasoline regulatory structure. The state has closely examined its options for oxygenates in fuels before and after the decision to phase-out use of MTBE. Immediately after he issued the executive order, and before Methanex filed its NAFTA arbitration claim, Governor Davis initiated a request to the US EPA for a waiver of the statutory oxygenate requirements. In the view of California's air pollution experts, the year-round use of oxygenates was interfering with its efforts to reduce emissions of ozone precursors beyond the minimum federal requirements and actually increased other automotive pollutants (CARB 2005). For example, the volatility of ethanol creates problems in the summer months. The Clinton Administration EPA officials shared California's concern about MTBE and were therefore receptive to California's waiver request and worked with California on the necessary technical documentation (Perciasepe 2000). But the Bush Administration EPA denied the waiver application on June 12, 2001. California challenged that denial in court, ultimately gaining a decision from the US ninth circuit court of appeals in 2003 vacating EPA's decision and sending it back to the agency. Current California Governor Schwarzenegger renewed the waiver request in 2004, but this too was denied by EPA on 21 June 2005. California finally gained the relief it sought from the oxygenates requirement through the US Congress, which repealed the oxygenates requirement for reformulated gasoline as part of the national energy legislation enacted in 2005.

Following California's action and early moves against MTBE in Maine, 14 other states in the United States, including Connecticut, New York, and North Carolina and every major corn-growing state in the Midwest also took steps to restrict or eliminate use of MTBE (EPA 2004). MTBE was little used in the Midwest (many of the states there are not covered by the reformulated gasoline program at all) so their restrictions have had little practical consequence of the MTBE market. That suggests that the strong support for MTBE bans in corn-producing states reflects the influence of corn farmers, growers of the ethanol feedstock, who see themselves in competition with the methanol-based MTBE. If Methanex had major market interests in the Midwest, it might have had a strong claim of deliberate commercial discrimination. But by the time these states acted, Methanex had already filed its arbitration claim against the imminent California ban, and restrictions in major eastern states like New York and Connecticut were in process, reflecting, as in California, an environmental contamination concern quite separate from any local commercial interest. Meanwhile, MTBE continues to be widely used in Europe as an octane booster rather than an oxygenate (Lidderdal 2003).

3. Analysis

This is the only case of the four studied that resulted in a final decision to deny compensation to the claimant. As a strict matter of law, the ground for denial of compensation

was the tribunal's decision that it lacked jurisdiction over the claim. On this issue alone, the Methanex case should help relieve anxiety in the environmental community that NAFTA Chapter 11 will become a widely-used platform for challenges by investors to national or subnational environmental regulation. The tribunal's determination that California's measure to ban MTBE did not "relate to" the business investments of a company that supplied a key raw material to unrelated MTBE producers means that a foreign investor will be required to show a direct relationship between the challenged measure and the investor's business, such as production or handling of the material being regulated or direct effect on facility location or operations.

In reaching its determination on jurisdiction, the tribunal also engaged in detailed review of the actions of California at three stages: enactment of legislation; scientific study and assessment of risks; and executive action based on the study results. On the matter of legislation, environmental interests can again take heart on two grounds. The tribunal's discussion of the California Senate bill shows the reluctance of the tribunal to explore the merits of the legislation absent some specific evidence that the legislation intended to discriminate against the foreign firm and in favour of a domestic competitor. Better yet, Methanex saw that an attack on the legislation was a losing argument and deleted the Senate bill from the list of "measures" on which it based its claim.

The tribunal evaluated the scientific study and risk assessment of MTBE by the University of California to discern whether, as argued by Methanex, the study was so seriously flawed as to raise the inference that it was a "sham" to cover a discriminatory intent. In the process, the tribunal not only found that the UC study was not a sham, but concluded that Methanex's technical criticisms of the study were largely without merit. Like the Metalclad and S.D. Myers tribunals, the Methanex tribunal showed a capacity for reasoned and informed analysis of technical and scientific issues in dispute.

Finally, on the issue of the actions by the governor and the state agencies to ban MTBE, the tribunal made the important point that the governor's discretion was limited by the legislation and by the UC study. The legislation required to governor to make one of two findings---that MTBE did not present a significant risk to California, or that it did present such a risk. Moreover, if he did find a significant risk, the legislation required that he initiate action to reduce or eliminate that risk. Given that legislative framework, and given that the legislation itself was not in question, the NAFTA consistency of the governor's action depended only on whether it had some reasonable basis in the UC study or whether it appeared to be motivated instead by an impermissible intent to harm the business interests of the foreign investor. The tribunal's award clearly shows its displeasure with the implausibility of Methanex's claim of discriminatory intent and the willingness of Methanex to pursue that claim with little or no evidence to support its speculative inferences.

V. Overall Conclusions Based on the Four Case Studies

Government measures related to environmental protection, natural resources management, ecosystem conservation, land use planning, or the host of other issues under a

broad definition of environmental law and policy often have consequential effects on business enterprises and other private property interests. It is thus predictable, indeed inevitable, that private persons or entities will have investments that are affected by public environmental measures. In an economically and ecologically interdependent North America, it is also predictable, indeed inevitable, that some of those private investors whose interests are affected by the measures of one country will be foreign investors from one of the other NAFTA countries. The drafters of NAFTA Chapter 11 on investments anticipated some of these interactions between environmental measures and foreign investors in the provisions of Article 1114. Only a few individuals correctly foresaw that the investor-State arbitration provisions might also be invoked where environmental measures affected investments. In hindsight, though, this should not have come as a surprise.

What was surprising, even in retrospect, is that such a high proportion of the early Chapter 11 arbitrations concerned environmental measures. This high proportion led to reasonable concerns among environmental policy makers and advocates that Chapter 11 could have a broad constraining effect on governments considering new environmental restrictions on economic activity. This reasonable concern, however, has become exaggerated through claims of casual or partly-informed commentators, sometimes based on erroneous information about the nature of the compensation claims being made, the factual background, or the legal grounds on which compensation was paid or awarded (Public Citizen 2005; Sierra Club (US) undated). This study has attempted a complete review of the factual details of each of the key cases and subsequent developments to try to discern what objective basis there may be to indicate that Chapter 11 has impeded bona fide environmental regulation. As noted in the introduction, whether Chapter 11 has "chilled" new environmental regulation cannot be determined through a retrospective analysis, but the objective record nevertheless sheds some light on that point as well.

The first three cases, chronologically, resulted in compensation payments to the aggrieved foreign investor (coincidentally, in each case, a US investor). Legally, each ended in compensation on different grounds. Ethyl Corporation was paid through a settlement offered by Canada, with no final arbitration finding on the merits of Ethyl's claim. Metalclad was compensated, ultimately, on a finding that one of the government measures was tantamount to expropriation of the constructed waste-handling facility in violation of Article 1110. S.D. Myers, Inc. was awarded compensation for lost business resulting from discriminatory actions of the government of Canada in violation of Article 1102 that also constituted, in the view of the majority, unfair and inequitable treatment under Article 1105.

From a careful review of the full history of each case, only the S.D. Myers finding of a violation of fair and equitable treatment under Article 1105 is questionable, but that finding was not necessary to the determination that Canada owed SDMI compensation. Indeed, in the two cases in which the government of Canada was the responding party, the challenged "environmental" measure had no demonstrable environmental merit under Canadian law or policy, but was determined to be an inappropriate exercise of controls over trade at the behest of and for the benefit of domestic business interests. Each decision was quickly reversed by the government itself, and there has been no subsequent proposal to reinstate the trade restrictions. In

the meantime, the underlying environmental anxieties over use of MMT in gasoline and the more substantial problem of environmentally sound management of PCB wastes have been effectively resolved through other public and private actions. Ironically, on PCB issues, it is the rigid statutory ban on imports into the United States that was the key obstacle for SDMI, and remains the main impediment to the full implementation of the CEC-sponsored regional action plan on sound management of PCBs. This import restriction is, as a matter of sound environmental policy, as questionable as Canada's export ban, and is inconsistent with a CEC statement on environmentally sound management of PCBs to which the United States subscribed.

Similarly, the full story of Metalclad, particularly when put into the context of similar waste facility siting disputes in other parts of Mexico, reveals a strategy of deploying tenuous environmental protection goals and hasty application of unilateral executive powers to vindicate local community opposition to the siting of the facility. There are valid arguments to be made for the government to be responsive to such local opposition, including democratic values, opportunities for public participation in decisions affecting local communities, and the subsidiarity principle, which teaches that environmental and other decisions should be made at the lowest appropriate governmental level. But those values need to be balanced against the national implications of Mexico's continuing lack of capacity for managing industrial hazardous waste at sites reasonably close to the main sources of such waste. In any event, it seems evident on the record that Metalclad reasonably relied on assurances of permission to operate from federal environmental officials in making investments in the construction of its facility, and that the action of the governor of San Luis Potosí precluding commercial use of that site effectively expropriated that investment and rendered it valueless.

It should also not go unremarked that, in the two cases of compensation based on arbitral tribunal awards, the responding governments made appeals for review of those awards in the courts of the locus of the arbitration (two Canadian courts as it turned out). While appellate review under Chapter 11 is more limited in scope than review in domestic litigation, in each case the court gave careful consideration to the arguments advanced by the responding governments, and in each case the court affirmed the tribunal's award of compensation. The appeals process provides at least a modest check on Chapter 11 tribunals that might overstep their authority or make serious legal errors in their analysis.

The 2005 decision in the Methanex case confirms that Chapter 11 tribunals can and will reject compensation claims that are without merit. The circumstances also throw some light on the regulatory "chill" question. The California legislature acted before any Chapter 11 dispute had been resolved, but the governor's decision to phase out MMT came after Canada's well-publicized settlement of the Ethyl dispute. Moreover, some U.S. states moved to ban MTBE in gasoline after Methanex had made its extraordinary claim for compensation (Methanex initially sought US$ 970 million). These circumstances indicate that some governments are not intimidated by potential claims under Chapter 11 when they face a significant environmental problem, objectively evaluate that problem, and take regulatory action based on the reasonably good scientific evidence. The Methanex outcome should help to dispel lingering anxieties among public officials or environmental advocates that the mere threat of a Chapter 11 challenge offers

reason to forego or remove environmental protection measures appropriately grounded in local environmental law and scientific findings.

Finally, after 10 years of experience, we can see a trajectory in Chapter 11 that is somewhat reassuring to environmental interests. The early wave of Chapter 11 claims challenging environmental measures has receded, and no second wave has followed. Only one case filed since 2000, Glamis Gold, addresses an environmental regulation. Perhaps the lack of such cases in recent years means that governments have learned to be careful about invoking vague or questionable claims of environmental protection when making decisions that are directly discriminatory against foreign investors. If so, that is a result that environmentalists as well as investing capitalists should welcome. If the lack of such cases stems from a recognition by investors that even plausible Chapter 11 claims are expensive to bring, take years to reach final resolution, often result in only modest levels of compensation, and are ineffective at bringing about immediate relief from the government measure at issue, that, too, is a result that should please environmentalists by assuring them that Chapter 11 will not be a constant source of business challenge to environmental rules. It also offers some reason to expect that Chapter 11 will stay in proportion to its intended goals, that claims will be made only when major investments are at stake and the claim has substantial merit.

BIBLIOGRAPHY

Adelman, D. 2005. The false promise of the genomics revolution for environmental law, *Harvard Environmental Law Review* 29:117, 168-69.

AIT. 1998. Agreement on Internal Trade, Report of the article 1704 panel concerning a dispute between Alberta and Canada regarding the Manganese-based Fuel Additives Act, file no. 97/98-15-MMT-P058. Winnipeg, 12 June 1998.

Alberta Federation of Labour. 2000. Government taking on a health and safety headache at Swan Hills plan. AFL News, 20 October 2000. available at <http://www.afl.org/news/default.cfm?newsId=107>.

Angus, C. 1999. Is Kirkland Land set to become international centre for PCB waste?, *Highgrader Magazine* September/October 1999. Available at <http://www.ban.org/ban_news/PCBs.html>.

Azinian v. Mexico. 1999. Robert Azinian, Kenneth Davitian & Ellen Baca v. The United Mexican States, Award. *International Legal Materials* 39: 537.

British Columbia Supreme Court 2001. United Mexican States v. Metalclad Corp. Reasons for the judgment of the Honourable Mr. Justice Tysoe, 2001 BCSC 664, 5 August 2001.

Canada Federal Court. 2004. Canada (Attorney General) v. S.D. Myers, Inc., 2004 FC 38, 2004 CarswellNat 94.

CARB 2005. California Air Resources Board, California Request for Oxygenates Waiver, posted at <http://www.arb.ca.gov/fuels/gasoline/oxy/oxywav.htm>, last updated 25 July 2005.

del Carmen Carmona Lara, M. 2004a. Gestión de residuos peligrosos en México (manuscript).

del Carmen Carmona Lara, M. 2004b. Ley general para la prevención y gestión integral de residuos (Powerpoint presentation).

CEC 1996. PCB regional action plan, sound management of chemicals project, December 1996. Montreal: North American Commission for Environmental Cooperation.

Cole, M. et al. 2004. Endogenous pollution havens: Does FDI influence environmental regulations, University of Nottingham, research paper 2004/20, at <http://ssrn.com/abstract=764124>.

Cortinas de Nava, C. 2004. Los residuos peligrosos en México (manuscript).

Cronin, P. 2002. Metalclad in Mexico. Phoenix: Thunderbird, The American Graduate School of International Management. (A case study prepared by Prof. Patrick Cronin.)

CVMA. 2002. Canadian Motor Vehicle Manufacturers' Association, New study finds manganese-based gasoline additive causes vehicle emission failures, 30 July 2002. Ottawa: Canadian Motor Vehicle Manufacturers' Association.

DePalma, A. 2001. NAFTA's powerful little secret. *New York Times*, 11 March 2001, sec. 3: 1.

Energy Information Administration 2003. Energy Information Administration (of the U.S. Department of Energy), Status and Impact of State MTBE Ban. <http://www.eia.doe.gov/oiaf/servicerpt/mtbeban/> Washington, DC, last updated 2003.

Engel, K. 1997. State Environmental Standard-Setting: Is there a "race" and is it "to the bottom," *Hastings Law Journal* 48:271.

Environment Canada. 1998a. Press release: Government to act on Agreement on Internal Trade (AIT) panel report on MMT, 20 July 1998. Ottawa: Environment Canada.

Environment Canada 1998b. Progress on the program for destruction of federal polychlorinated biphenyls (PCBs), August 1998. Ottawa: Environment Canada.

Environment Canada. 2001. Office of the Auditor General of Canada, Minister's response: Environment Canada (EC), 5 December 2001. Ottawa: Environment Canada.

Environment Canada. 2003. Environment Canada's proposed framework for an independent third-party review of new information on the effects of MMT on vehicle emissions, 10 December 2003. Ottawa: Environment Canada.

EPA 2004. US Environmental Protection Agency, State actions banning MTBE (statewide), June, 2004, posted at <http://www.epa.gov/mtbe/420b04009.pdf>.

EPA 2005, U.S. Environmental Protection Agency, Methyl Tertiary Butyl Ether (MTBE) Overview, <http://www.epa.gov/mtbe/faq.htm#background>. Washington, DC, last updated August 31, 2005.

Gaillard, E. 2000. NAFTA dispute arbitration under auspices of the International Center. *New York Law Journal*, Aug. 3, 2000.

Ganguly, S. 1999. The investor-State dispute mechanism (ISDM) and sovereign power to protect public health. *Columbia Journal of Transnational Law* 38: 113.

Gantz, D. 1993. Resolution of investment disputes under the North American Free Trade Agreement. *Arizona Journal of International and Comparative Law* 10: 335.

Gantz, D. 2001. Potential conflicts between investor rights and environmental regulation under NAFTA's Chapter 11. *George Washington International Law Review* 33: 651.

González Vázquez, A. 1997. Guadalcázar, zona ecológica en SLP; descartado, reabrir el confinamiento. *La Jornada,* 17 September 1997.

Hart, M. & W. Dymond. 2002. NAFTA Chapter 11: Precedents, principles, and prospects, available at <http://www.carleton.ca/ctpl/ch11papers/hartdymond.htm>. Ottawa: Carleton University.

Hazmat. 1999. PCB update. *Hazmat Magazine* April/May 1999.

Health Canada. 2001. Office of the Auditor General, Response of Health Canada to the petition filed July 2001 received by the minister of health July 23, 2001. Ottawa: Health Canada, November 2001.

Hilborn, J.C. & S. Hart 1998. The Management and Disposal of PCBs in Canada, conference paper for a United Nations Environment Programme Chemical Program workshop on subregional awareness raising on persistent organic pollutants, Puerto Iguazú, Argentina, 1998, available at <http://www.chem.unep.ch/pops/POPS_Inc/proceedings/Iguazu/HART.html>.

ICCT. 2004. Blumberg, K. & M. Walsh, Status report concerning the use of MMT in gasoline. International Council on Clean Transportation, Sept. 2004.

ICSID. 2000. Award of the arbitral tribunal, Between Metalclad Corporation and the United Mexican States. Vancouver: International Centre for the Settlement of Investment Disputes, 30 August 2000. (Available at <http://www.naftaclaims.com>.)

ICSID. 2002. In the matter of an international arbitration under chapter 11 of the North American Free Trade Agreement and the UNCITRAL arbitration rules between Methanex Corporation and United States of America, Preliminary Award of the Tribunal on Jurisdiction and Admissibility. Washington DC: International Center for the Settlement of Investment Disputes, 7 August 2002.

ICSID. 2003. Award: *Tecnicas Medioambientales TECMED S.A. v. Estados Unidos Mexicanos*, Case No. ARB(AF)/00/2. Washington, DC: International Centre for Settlement of Investment Disputes, 29 May 2003.

ICSID. 2005a. Glamis Gold, Ltd. v. The United States of America: an arbitration under Chapter 11 of NAFTA in accordance with UNCITRAL rules on arbitration procedure, and administered within the additional facility of ICSID, Procedural order no. 1. Washington, DC, International Center for the Settlement of Investment Disputes, March 3, 2005.

ICSID. 2005b. In the matter of an international arbitration under chapter 11 of the North American Free Trade Agreement and the UNCITRAL arbitration rules between Methanex Corporation and United States of America, Final Award of the Tribunal on Jurisdiction and Merits. Washington DC: International Center for the Settlement of Investment Disputes, 3 August 2005.

IISD. 2001. Private rights, public problems: a guide to NAFTA's controversial chapter on investor rights. Winnipeg: International Institute for Sustainable Development

Lidderdale, T. 2003. Motor gasoline outlook and state MTBE bans. Washington, DC: Energy Information Administration. 2003. Available at <http://www.eia.doe.gov/emeu/steo/pub/special/mtbeban.html>, last visited 1 Sept. 2005.

Mann, H. 2005. The Final Decision in Methanex v. United States: Some New Wine in Some New Bottles. Winnipeg: International Institute for Sustainable Development. <http://www.iisd.org>.

Mann, H. and K. von Moltke. 1999. NAFTA's Chapter 11 and the environment: addressing the impacts of the investor-State process on the environment. Winnipeg: International Institute for Sustainable Development.<http://iisd.ca>.

Medellín Milán, P. 2002. Metalclad vs Guadalcázar vs México. Paper presented at seminar on analysis of the NAFTA Chapter 11 investment regime and the environment, Mexico D.F., 13 March 2002). Available at <http://ambiental.uaslp.mx/docs/PMM-PN-020312-CIDE-MtlcdGdlc.pdf>.

Methanex Corporation. 2001. Methanex Corporation v. United States of America, Draft Amended Claim, NAFTA-UNCITRAL, February 12, 2001, available at http://www.state.gov/s/l/c5819.htm.

Methanex Corporation. 2002. Methanex Corporation, Global Environmental Excellence Report 2002, available at <http://www.methanex.com/environment/documents/2002_Environmental_Excellence_Report.pdf>.

Mexico Federal Law. 2002. Ley Federal de Transparencia y Acceso a la Información Pública Gubernamental, at <http://www.senado.gob.mx/transparencia/ley_fedtransp_11jun02.htm>.

Morales, I. 1999. "The Governance of Economic Openness." *Annals of the American Academy of Political and Social Science* 565: 35.

Morton, P. 2000. $ 1 B methanol battle fires up this week. *National Post,* September 5, page C-1.

Moyers, B. 2002. “Trading Democracy,” NOW with Bill Moyers, Public Broadcasting System, transcript at <http://www.pbs.org/now/transcript/transcript_tdfull.html>.

NAFTA Free Trade Commission. 2001. Joint statement by the NAFTA Free Trade Commission: Building on a North American partnership, 31 July 2001.

NAFTA Free Trade Commission. 2003. Statement of the Free Trade Commission on non-disputing party participation, 7 October 2003.

NAFTA Free Trade Commission. 2004. Joint statement, “A Decade of Achievement,” 16 July 2004.

Naftaclaims.org. A website at <http://www.naftaclaims.org> maintained by Todd Jeffrey Weiler that collects all the available documents on NAFTA Chapter 11 claims.

National Round Table. 2001. National Round Table on the Environment and the Economy, MMT case study, in Managing potentially toxic substances in Canada: a state of the debate report, Appendix 1.C. Ottawa: National Round Table on the Environment and the Economy.

Ontario. 2004. Ontario ministry of the environment news release: Trans-Cycle Industries, Inc. fined $13,000 for non-compliance with Environmental Protection Act. 7 June 2004. Thunder Bay.

Pembina Institute. 2002. Letter from M.S. Winfield to Frank Coschi, 15 March 2002. Ottawa: Pembina Institute for Appropriate Development.

Perciasepe, R. 2000. R. Perciasepe (EPA asst. administrator for air & radiation), testimony before the subcommittee on health and environment of the committee on commerce, US House of Representatives, March 2, 2000. Available at <http://www.epa.gov/otaq/regs/fuels/congress/mar0200.pdf>.

Pettigrew, P. 2001. Remarks to the House of Commons, 1 May 2001, by the Hon. Pierre Pettigrew, Minister for International Trade, available at < http://www.dfait-maeci.gc.ca/tna-nac/Min_S_Inv-en.asp> (last visited 11 March 2005).

Pfaff, D. 2000. Trade winds. *California Lawyer* September 2000: 25

Price, D. 2001. NAFTA Chapter 11—investor–State dispute settlement: Frankensteinr or safety valve? *Canada–U.S. Law Journal* 26: 107.

Public Citizen. 1998. *School of Real-Life Results: NAFTA Report Card.* Washington, D.C.: Public Citizen.<http://www.tradewatch.org/nafta/cases/Ethylbri.htm>.

Public Citizen. 2001. *NAFTA Chapter 11 investor-to-State cases: bankrupting democracy.* Washington, DC: Public Citizen. September 2001 (available at <http://www.citizen.org/documents/ACF186.PDF>.

Public Citizen. 2005. NAFTA's threat to democracy and sovereignty: the record of NAFTA Chapter 11 investor-state cases 1994-2005. Washington, DC: Public Citizen. Available at: <http://www.citiznen.org/trade/nafta>.

Quiñones, S. 1997. Disposal dilemma, *World Trade* 10(5): 20.

Quiñones, S. 2000. Down in the dumps. *Latin Trade* 8(3): 68.

Restatement of the Law of Foreign Relations of the United States, Third (Sec. 712, Reporter's Note 6). 1987. Philadelphia: American Law Institute.

Revesz, R. 1992. Rehabilitating interstate competition: Rethinking the "race to the bottom" rationale for federal environmental regulation, *New York University Law Review* 68:237.

S.D. Myers, Inc. and Government of Canada. 2000. In a NAFTA arbitration under the UNCITRAL arbitration rules: S.D. Myers, Inc. and Government of Canada, partial award. Toronto: Arbitral Tribunal,13 November 2000.

S.D. Myers, Inc. and Government of Canada. 2002. In a NAFTA arbitration under the UNCITRAL arbitration rules, S.D. Myers, Inc. and Government of Canada, second partial award. Toronto: Arbitral Tribunal, 21 October 2002.

Saleska, S. and K. Engel. 1998. "Facts are stubborn things": An empirical reality check in the theoretical debate over the race-to-the-bottom in state environmental standard-setting, *Cornell Journal of Law and Public Policy* 8:55.

San Luis Potosí. 1997. State Executive Order: General Coordination of Ecology and Environmental Management. Summary of the official register of San Luis Potosí (*Sumario del periódico official del gobierno del estado libre y soberano deSan Luis Potosí*), 27 September 1997.

San Luis Potosí. 2003. Ley de Transparencia Administratíva y Acceso a la Información Publica del Estado de San Luis Potosí, at <http://www.slp.gob.mx/transparencia/Ley.pdf>.

San Luis Potosí. 2004. Government of the State of San Luis Potosí, Press Release, 12 May 2004. Available at <http://www.slp.gob.mx/ver_noticia.cfm?id=260>.

Sandrino, G. 1994. The NAFTA investment chapter and foreign direct investment in Mexico: a third world perspective, *Vanderbilt Journal of Transnational Law* 27: 259, 285-86.

Senate of Mexico. 2002. Gaceta Parlamentaria del Senado de la Republica (2002), available at <http://www.senado.gob.mx/gaceta.php?&lk=124/dictamen_apri_rep_checa_2002_5.html>.

Senate of Mexico. 2003. Senado de la Republica, Presentación: Transparencia y Acceso a la Información, at <http://www.senado.gob.mx/transparencia/transparencia.htm>.

Senate of Mexico. 2004ª. Iniciatíva con Proyecto de Ley que Crea el Instituto Nacional de Fomento y Desarrollo Industrial, Gaceta Parlamentaria del Senado de la Republica, at <http://www.senado.gob.mx/sgsp/gaceta/?sesion=2004/04/01/1&documento=19>.

Senate of Mexico. 2004b. Iniciatíva con Proyecto de Decreto Para Constituir el Centro de Estudios Internacionales del Senado de la Republica, Gaceta Parlamentaria del Senado de la Republica, at <http://www.senado.gob.mx/sgsp/gaceta/?sesion=2004/04/29/1&documento=25>.

Sierra Club. 2004. Sierra Club of Canada news release: MMT on its way out in Canada, 16 December 2004. Ottawa.

Sierra Club (US). Undated. Trade and sprawl: how global trade rules could increase sprawl, at <http://www.sierraclub.org/trade>; NAFTA's investor rights: a threat to the environment and our democracy, at <http://www.sierraclub.org/trade/nafta/backgrounder.asp>.

Soloway, J.A. 1999. Environmental trade barriers under NAFTA: the MMT fuel additives controversy. *Minnesota Journal of Global Trade* 8: 55.

Starr, R. 2003. The ugly duckling. *Canadian Business*, 14 April 2003.

Sulkowski, A. 2000. NAFTA's Indirect Expropriation Protections: Will Compensation Be Required When Ecological Protections Are Applied?" *Mealey's International Arbitration Reports,* February 2000: 23.

United Nations. 2003. Commission on Human Rights, Report of special rapporteur, Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, addendum: Mission to Canada 17-30 October 2002, Doc. No. E/CN.4/2003/56/Add.2, 14 January 2003.

United States 2000. United States, Methanex Corporation v. United States of America, Statement of Defense of Respondent United States, NAFTA-UNCITRAL, August 10, 2000, available at http://www.state.gov/documents/organization/7379.doc

VanDuzer, J. Anthony. 1998. Investor-State dispute settlement under NAFTA Chapter 11: the shape of things to come? *Canadian Yearbook of International Law* 35: 263

Wagner, J. Martin. 1999. International investment, expropriation and environmental protection. *Golden Gate University Law Review* 29: 465.