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IN A NAFTA ARBITRATION UNDER THE UNCITRAL ARBITRATION RULES

**S.D. Myers, Inc.
("SDMI")**

(Claimant)

- and -

**Government of Canada
("CANADA")**

(Respondent)

SECOND PARTIAL AWARD

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CHAPTER I

PREFACE

The Tribunal

1. An account of the events that gave rise to the dispute, the commencement of the arbitration and the initial constitution of the Tribunal were set out in the Preface to the Tribunal's Partial Award dated 13 November 2000 (the *First Partial Award* or *FPA*).¹ For present purposes, it is sufficient to record that the Tribunal was duly constituted and became seized of the arbitration on 4 March 1999. The constitution of the Tribunal changed following the resignation of Mr Bob Rae on 3 June 1999 and the appointment of Mr Edward C Chiasson QC as his replacement on 24 June 1999.
2. In the second phase of the arbitration, the Disputing Parties delivered two rounds of substantial memorials and some supplementary memorials, as well as thousands of pages of evidentiary exhibits and experts' reports.² Under the hammer of the adversarial process the arguments advanced by the Disputing Parties were inevitably refocused and refined; some arguments assumed greater importance, others faded into relative insignificance and a few were dropped altogether.
3. This is not unusual. The evidence-gathering process, which in this case for practical reasons proceeded in parallel with the delivery of the Disputing Parties' memorials, sometimes gives rise to the production of material that casts new light on issues. While the Tribunal has considered all of the arguments and evidence submitted by the Disputing Parties, in the interest of (relative) brevity in the text of this award the Tribunal reviews only the arguments that are necessary to explain its reasoning.

¹ The FPA was published, *inter alia*, in *International Business Lawyer; International Law Review; Asper Review of International Business and Trade Law*; and on a number of websites, including a Canadian Government website, www.dfait-maeci.gc.ca/tna-nac/gov-e.asp, and www.appletonlaw.com.

² Fortunately for the members of the Tribunal, who had to travel long distances for the case management meetings and witness hearings in Toronto, virtually all of the written material was submitted in electronic form on CD-ROM as well as in hard copy. The Tribunal was profoundly grateful to the Disputing Parties for this facility.

4. In this context, it is relevant to recall that this case is essentially fact-driven. CANADA's principal defence on the merits³ was that its measure was justified by environmental considerations. The Tribunal reviewed this aspect of the case in some detail in its First Partial Award⁴. In summary, the evidence demonstrated that CANADA's measure was introduced for the primary purpose of protecting the interests of the Canadian waste disposal industry.
5. It followed that the measure was in breach of CANADA'S obligations under Articles 1102 and 1105 of the NAFTA. The Tribunal also determined that this was neither an expropriation case under NAFTA Article 1110 nor a case of imposing performance requirements under Article 1106 of the NAFTA.
6. The Tribunal proceeds to the quantum stage of the arbitration against the background of the findings contained in its First Partial Award summarised above. It is not open to the Tribunal to award any kind of punitive relief. The Tribunal is concerned only with assessing the compensation that should be awarded to SDMI for the losses it suffered as a proximate⁵ result of CANADA's measure.
7. The methodology adopted by the Tribunal is described later in this award.

Abbreviations

8. The following abbreviations are adopted in this award:

CANADA	The Government of CANADA
CAN\$, and \$	Canadian dollars
Disputing Parties	SDMI and CANADA
FPA	First Partial Award
MEXICO	The United States of Mexico
MYERS Canada	Myers Canada Limited
NAFTA	The North American Free Trade Agreement
Parties	CANADA, MEXICO and the USA
PCB	Polychlorinated biphenyl

³ The threshold *investor* question was later categorised by CANADA as a *jurisdiction* issue

⁴ Paragraphs 297, 298.

⁵ The Tribunal does not consider the terms *consequential* or *foreseeable*, used in common law damages assessment in the law of contract or tort, to be particularly relevant to the assessment of compensation in a case governed by international law. This topic is discussed later in the award.

PO	Procedural Order
SDMI	S. D. Myers, Inc
Transcript	Verbatim record of the hearing held in Toronto from 21 to 26 September 2001
UNCITRAL	United Nations Commission on International Trade Law
UNCITRAL Rules	UNCITRAL Arbitration Rules, 1976
US EPA	United States Environmental Protection Agency
U.S. or USA	The United States of America

CHAPTER II

HISTORY OF THE PROCEEDINGS

9. The procedural history of the arbitration up to 13 November 2000 was set out in Chapter II of the Tribunal's First Partial Award and is not repeated in this award.
10. By a letter dated 13 November 2000 the Tribunal invited the Disputing Parties to produce a progress report to the Tribunal by 15 December 2000 in which they were to provide their views on the procedural aspects of the second stage of the arbitration, as contemplated in paragraph 1 of Procedural Order No. 1. The Tribunal also indicated that, if necessary, a further case management meeting would be held as early as practicable in 2001.
11. By letters dated 15 December 2000, the Disputing Parties replied to the Tribunal's request. CANADA expressed its reluctance to attend a procedural hearing before the end of January 2001. SDMI stated that *the Investor would be ready to provide a Memorial on damages to the Tribunal and CANADA by mid-January 2001, complete with expert reports and accompanying evidence.*
12. By a letter dated 23 December 2000, the Tribunal sent to the Disputing Parties a draft Procedural Order No. 17 in which it proposed a schedule for the initial phase of the second stage of the arbitration.
13. By a letter dated 3 January 2001, the Tribunal, after taking account of the parties' letters dated 27 December 2000 and 2 January 2001, requested SDMI to present a summary of its case and to make a proposal concerning the second stage procedure as soon as it was ready to do so.
14. On 7 January 2001, after taking account of CANADA's letter 4 January 2001 concerning the proposed procedural schedule, the Tribunal abandoned the draft of Procedural Order No. 17 and directed as follows:

- *Unless the parties agree upon the second stage procedure the Tribunal will hold a further case management meeting with the parties in Toronto on 21 February 2001.*
- *In order that the arbitrators' individual schedules may be accommodated in a way that will minimise the expense to the parties, the parties shall notify the Tribunal by 9 February 2001 as to whether or not they have reached an agreement on the second stage procedure.*
- *The Tribunal proposes that MYERS should deliver to CANADA whatever it can be ready to deliver by mid-January in relation to the quantification of its claims (presumably excluding experts' reports), together with its proposals as to the second stage procedure.*
- *The Tribunal proposes that CANADA should provide its views on the procedure to be followed in the second stage within 10 days of receipt of 'MYERS' mid-January materials'. (Clearly it is not necessary for CANADA to have MYERS' full Memorial before it indicates its views on the second stage procedure, but equally clearly it should have at least a summary of the case it faces).*
- *The parties should then consult with each other on the 'second stage procedure' and report to the Tribunal by 9 February 2001, preferably jointly but otherwise separately, as to whether or not they have reached agreement.*
- *If they have reached an agreement the Tribunal will issue a Procedural Order No. 17 'By Consent'. If they have not reached agreement, the Tribunal will meet the parties in Toronto on 21 February 2001.*

15. On 16 January 2001, SDMI delivered the *Investor's Summary on Damages* as well as a proposed procedural schedule for the second stage of the arbitration.
16. By a letter dated 19 January 2001, CANADA delivered two confidentiality agreements signed by its experts, Mr Rostant and Mr White, in accordance with paragraphs 9(c) and 12 of Procedural Order No. 11.
17. By a letter dated 21 January 2001, the Tribunal asked CANADA to reply to SDMI's proposals for the second stage procedure as soon as possible and to supply a provisional reply to SDMI's *Summary on Damages* by the end of January.
18. By a letter dated 23 January 2001, CANADA commented on SDMI's proposal and outlined its own views as to the procedural steps to be taken during the second stage of

the arbitration. By a letter dated 24 January 2001, SDMI replied to CANADA's suggestions.

19. By a letter dated 31 January 2001, CANADA replied to SDMI's letter dated 24 January 2001 and submitted its response to the *Investor's Summary on Damages*.
20. By a letter dated 4 February 2001, the Tribunal invited the Disputing Parties to agree on the procedure for the second stage of the arbitration. Failing such agreement, the Tribunal would hold a case management meeting with the Disputing Parties before the end of February 2001.
21. By a letter dated 8 February 2001, CANADA notified the Tribunal that it had that day filed an application to the Federal Court of Canada seeking to set aside the First Partial Award. In the same letter CANADA stated that it intended:

... to ask the Tribunal to delay the assessment of damages until the courts complete judicial review of the Tribunal's partial award on liability

CANADA also expressed its concern at the use of documents in court proceedings that had been delivered as evidence in the first stage of the proceedings, but had been marked *confidential*.

22. By letters dated 9 February 2001, the Disputing Parties informed the Tribunal that agreement had not been reached on a procedural framework for the second stage of the arbitration.
23. By a letter dated 13 February 2001, the Tribunal directed that a case management meeting take place in Toronto on 21 February 2001 to consider:
 - CANADA's application to suspend the arbitration pending the outcome of the judicial review process; (for this purpose the Tribunal directed CANADA to deliver a reasoned written application by 15 February 2001 and SDMI to reply by 19 February 2001).
 - the procedural schedule for the second stage of the arbitration.

- whether or not the Tribunal should appoint its own forensic accountancy expert pursuant to Article 27 of the UNCITRAL Rules.
 - whether or not the Tribunal's previous confidentiality orders should be varied in order that additional material may be put before the national court in Canada for the purposes of the judicial review process. (The Tribunal asked the parties to address the practical aspects of this question in brief written statements ahead of the 21 February 2001 meeting).
24. On 15 February 2001, CANADA delivered to the Tribunal and SDMI a document entitled *Application for a Stay of the Arbitral Proceedings pending the Outcome of the Federal Court of Canada Application to set aside*.
 25. By a letter dated 19 February 2001, SDMI delivered to the Tribunal and CANADA a document entitled *Investor's Response to CANADA's Submission on Stay of Arbitration*.
 26. By a letter dated 20 February 2001, CANADA delivered to the Tribunal and SDMI a statement of its position on amendments to the Tribunal's Confidentiality Order in the context of the national court review process.
 27. On 21 February 2001, a case management meeting was held in Toronto at which the Tribunal heard oral submissions by counsel for the Disputing Parties on the matters identified in its 13 February 2001 letter.
 28. By a letter dated 23 February 2001, SDMI delivered to CANADA its request for the production of documents.
 29. On 26 February 2001, after deliberations, the Tribunal issued Procedural Order No. 17 establishing the second stage procedural schedule; Procedural Order No. 18 concerning CANADA's application to suspend the arbitration; and a letter to the Disputing Parties dealing with the confidentiality of parts of the record.
 30. On 1 March 2001, SDMI delivered to CANADA and the Tribunal the *Investor's Memorial (Damages Phase)* pursuant to paragraphs 6 and 8 of Procedural Order No. 17. By a letter of the same date, SDMI stated that CANADA's response in late March to its

request dated 23 February 2001 made it necessary to seek from the Tribunal an amendment of Procedural Order No. 17 in order to permit the Disputing Parties to deliver supplementary memorials.

31. By a letter dated 9 March 2001, after taking account of the parties' submissions on the issue expressed in CANADA's letter of 2 March 2001 and SDMI's letter of 3 March 2001, the Tribunal determined that it would not make an order for the delivery of supplementary memorials at that stage of the arbitration.
32. On 12 March 2001, CANADA delivered to SDMI its *Request for Interrogatories and Production of Further Documents* pursuant to paragraph 9 of Procedural Order No. 17.
33. On 26 March 2001, CANADA supplied to SDMI certain documents pursuant to paragraph 10 of Procedural Order No. 17, as requested by SDMI in its letter dated 23 February 2001.
34. On 27 March 2001, SDMI delivered its response to CANADA's *Request for Interrogatories and Production of Documents* dated 12 March 2001. The parties subsequently requested and exchanged further documentary material.
35. By a letter dated 19 April 2001, CANADA, still seeking production of further documents, sent to the Tribunal a *Motion for Production of Documents and Responses to Interrogatories*.
36. By a letter dated 25 April 2001, the Tribunal directed SDMI to reply to CANADA's motion within 14 days.
37. By a letter dated 3 May 2001, SDMI delivered the *Investor's Response to Canada's Motion on Production of Documents and Interrogatories*.
38. By a letter dated 4 May 2001, CANADA requested an extension of time for filing its counter-memorial on damages until 30 days after receiving a full response to its interrogatories and document request by SDMI pursuant to paragraph 17 of Procedural Order No. 17 and Article 15 (1) of the UNCITRAL Rules.

39. On 14 May 2001, CANADA delivered a *Reply to Investor's Response to Motion for Production of Documents and Interrogatories*.
40. By a letter dated 25 May 2001, following CANADA's requests for an extension of time for the delivery of its Counter-Memorial in its letters dated 17 and 24 May 2001, the Tribunal directed CANADA to deliver a provisional Counter-Memorial by the end of the first week of June and at the same time granted to CANADA the opportunity to deliver a *Supplementary Counter-Memorial* after the document production and interrogatories issues had been resolved. By the same letter the Tribunal also directed both Disputing Parties to supply a report on outstanding document and interrogatories issues within seven days.
41. By a letter dated 1 June 2001, SDMI advised the Tribunal that no further progress had been made between the Disputing Parties and that the same issues remained outstanding. By a letter of the same date, CANADA produced a list of outstanding production issues.
42. By a letter dated 5 June 2001, the Tribunal suggested that a further case management meeting should be held.
43. In a letter dated 7 June 2001, SDMI suggested that the Tribunal could make a ruling on the issues in question solely upon the record before it or, alternatively, resolve them in a conference call. SDMI also made certain submissions in relation to the involvement of the parties' experts as provided for in Procedural Order No. 18. By a letter of the same date CANADA replied to the matters raised in SDMI's proposal.
44. On 7 June 2001, CANADA delivered to SDMI and the Tribunal its *Counter-Memorial on Damages* pursuant to paragraphs 6 and 8 of Procedural Order No. 17.
45. By a letter dated 12 June 2001, the Tribunal determined that a case management meeting would take place in Toronto on 21 June 2001.
46. By letter dated 14 June 2001, the Tribunal invited the parties' experts to attend the case management meeting and asked the parties to produce a list of the then outstanding issues

- on 20 June 2001. SDMI delivered to the Tribunal a list of the outstanding production issues on that date.
47. On 21 June 2001, a further case management meeting was held in Toronto with the Tribunal, the Disputing Parties and their experts.
 48. By a letter dated 24 June 2001, the Tribunal invited MEXICO and the USA to exercise their rights under Article 1128 of the NAFTA and to deliver submissions by 17 August 2001.
 49. By a letter dated 25 June 2001, the Tribunal issued Procedural Order No. 19 setting out the remaining procedural steps of the arbitration as agreed between the Disputing Parties.
 50. By a letter dated 11 July 2001, the Tribunal informed the Disputing Parties that it had appointed an administrative secretary in accordance with the Disputing Parties' consent.
 51. On 20 July 2001, CANADA delivered to SDMI and the Tribunal its *Supplementary Counter-Memorial* pursuant to paragraph 7 of Procedural Order No. 19.
 52. In three letters dated 23 and 24 July 2001, SDMI and CANADA notified the Tribunal that further document production issues had arisen.
 53. By a letter dated 25 July 2001, the Tribunal issued to the Disputing Parties certain provisional guidelines on how to proceed. By a letter dated 26 July 2001, CANADA notified the Tribunal of its compliance with the Tribunal's provisional suggestions. On 31 July 2001, the Tribunal confirmed its provisional guidelines.
 54. On 10 August 2001, SDMI delivered to CANADA and the Tribunal *The Investor's Reply Memorial* in accordance with paragraph 8 of Procedural Order No. 19.
 55. By a letter dated 10 August 2001, CANADA delivered to the Tribunal certain material concerning the interpretation of the NAFTA, for the Tribunal's information.
 56. By a letter dated 14 August 2001, CANADA requested the Tribunal to revise the procedural schedule, as a result of the introduction of new evidence by SDMI.

57. By a letter dated 15 August 2001, SDMI delivered to the Tribunal its response to CANADA's letter of 14 August 2001.
58. By a letter dated 15 August 2001, the USA requested the Tribunal to extend the date by which it and MEXICO were invited to exercise their rights under Article 1128 of the NAFTA. By a letter dated 16 August 2001, the Tribunal consented to the delivery of any Article 1128 submissions after CANADA delivered its Reply Memorial.
59. By a letter dated 16 August 2001, the Tribunal issued a provisional response to the Disputing Parties' questions and proposed that a conference call should take place on 24 August 2001.
60. By a letter dated 16 August 2001, CANADA notified the Tribunal that further document requests remained outstanding.
61. By letters dated 18 and 21 August 2001, CANADA and SDMI stated their positions to the Tribunal concerning documents recently introduced by SDMI.
62. By a letter dated 22 August 2001 MEXICO requested confirmation that the extension of time for submissions granted to the UDSA applied equally to MEXICO.
63. By a letter dated 24 August 2001, the Tribunal gave the confirmation requested by MEXICO.
64. By a letter dated 24 August 2001, the Tribunal provided the Disputing Parties with an agenda of the matters it wished them to address during the telephone conference later that day.
65. On 24 August 2001 two telephone conferences took place between the Tribunal and the Disputing Parties' representatives.
66. By a letter dated 25 August 2001, the Tribunal issued Procedural Order No. 20 amending the schedule set out in Procedural Order No. 19, as agreed between the Disputing Parties during the second telephone conference on the previous day.

67. By a letter dated 25 August 2001, the Tribunal notified MEXICO and the USA of the revised procedural schedule and invited their submissions by 12 September 2001.
68. On 31 August 2001, CANADA delivered to SDMI and the Tribunal its *Rejoinder Memorial* pursuant to paragraph 4 of Procedural Order No. 20.
69. By a letter dated 12 September 2001, MEXICO delivered to the Tribunal and the Disputing Parties its submissions pursuant to Article 1128 of the NAFTA.
70. On 14 September 2001, SDMI and CANADA delivered to the Tribunal their *Pre-hearing Memoranda* pursuant to paragraph 5 of Procedural Order No. 20 and paragraph 11 of Procedural Order No. 19. SDMI also delivered to CANADA and the Tribunal a *Summary of Key Areas of Agreement and Disagreement between KPMG and LRTS*.
71. By two letters dated 14 and 17 September 2001, MEXICO informed the Tribunal that it wished to send two representatives to the hearing.
72. By a letter dated 17 September 2001, CANADA informed the Tribunal that its expert Mr Stillman was unable to attend the hearing in person.
73. By a letter dated 18 September 2001, the USA delivered to the Tribunal and the Disputing Parties its written submissions under Article 1128 of the NAFTA.
74. By a letter dated 18 September 2001, CANADA objected to SDMI's submission of its expert's Summary delivered on 14 September 2001 on the ground that this was contrary to the joint experts' report contemplated by Procedural Order No. 20, paragraph 6.
75. By a letter dated 18 September 2001, the Tribunal notified the Disputing Parties that questions concerning Mr Stillman's examination and the absence of a joint experts' report would be dealt with at the beginning of the hearing.
76. The Second Stage hearing took place in Toronto from 21 to 26 September 2001. The Tribunal heard oral and closing statements from the representatives of the Disputing Parties and oral submissions from the representative of MEXICO. In addition, the following witnesses were heard:

Mr Bob Rasor
Mr Dana Myers
Mr Peter Wallace
Prof Roger Ware
Mr Jeffrey Harder
Mr Howard Rosen
Dr Joan Berkowitz
Mr Douglas White
Mr Robert Stillman (by videoconference)
Mr Derek Rostant

(listed in order of appearance)

77. On 25 September 2001, the penultimate day of the hearing, the Tribunal asked the Disputing Parties' principal accountancy experts, Messrs Rosen and Rostant, whether they could assist the Tribunal in calculating a figure of *what Myers might reasonably have been expected to get out of Canada as a result of its investment in the relevant time period*⁶ by producing a joint *matrix* or *model* in *spreadsheet* form containing the different variables and values involved in such calculation.⁷ The experts agreed to endeavour to produce such a joint document.⁸
78. Towards the end of the hearing the Tribunal also discussed with the Disputing Parties the question of its award in respect of costs pursuant to Articles 38 and 40 of the UNCITRAL Rules and, in particular, whether the Disputing Parties wished to have the opportunity to make further submissions on costs after they had seen the Tribunal's Second Partial Award. The Disputing Parties informed the Tribunal that they would like to have such an opportunity.⁹ Accordingly, it was agreed that the present award would be in the form of a

⁶ Transcript, 25 September 2001, page 877, lines 14-16.

⁷ Transcript, 25 September 2001, pages 877/878 and 881/882.

⁸ Transcript, 25 September 2001, page 883, lines 12-16; page 884, lines 16-19 per Mr Rostant; page 882, lines 19-20 per Mr Rosen.

⁹ Transcript, 26 September 2001, pages 1056 – 1060.

Second Partial Award and the Tribunal gave directions for the subsequent delivery of further submissions on the question of costs.¹⁰

79. By a letter dated 23 December 2001, the Tribunal reminded the experts that delivery of their joint *matrix* or *model* had not yet been received and invited them to deliver a joint report on the matter by the end of the year.
80. By a letter dated 27 December 2001 Messrs Rostant and Rosen transmitted to the Tribunal a joint *matrix* or *model* in Excel format for the purpose of assisting the Tribunal in determining the quantification of the compensation to be awarded if the Tribunal would adopt CANADA's *third alternative* and SDMI's *loss of profits* approach.
81. Thereafter the Tribunal deliberated on several occasions (either in person or by telephone conference) before making this Second Partial Award.

¹⁰ Transcript, 26 September, page 1057, line 19-24:*within 14 [days] of receiving the partial, the second partial award, the parties will simultaneously present to the Tribunal and exchange submissions on their costs claims and any supporting information they want to put in*]

CHAPTER III

CHRONOLOGY OF EVENTS

82. The overall factual background to the dispute was set out in some detail in Chapter III of the Tribunal's First Partial Award and it is not necessary to repeat all of it in this award. Some of those facts, and certain additional facts, are relevant to the Tribunal's consideration of the compensation to be awarded to SDMI.
83. SDMI is a privately held corporation, located in Tallmadge, Ohio. From the early 1980s SDMI's principal business was the remediation of hazardous wastes, partly by a recycling process and partly by sending the highly toxic residues to other specialist entities for disposal by incineration. By the early 1990s, at the latest, SDMI had become an industry leader in the remediation of PCB-contaminated waste material in the USA.
84. In common with many other countries, the USA had previously banned the manufacture of PCB's and the importation of PCB-contaminated material. It follows that the U.S. PCB waste disposal industry would work itself into redundancy within a finite period. For this reason, SDMI decided to take steps to enter the fledgling Canadian market, in which little progress had been made towards disposal of the inventory of PCB-contaminated material. Among other things this had the potential benefit of extending the useful life of its Tallmadge facility.
85. MYERS Canada was incorporated as an SDMI affiliate¹¹ in 1993. SDMI initially considered constructing a recycling and processing facility in Canada. This would have had the advantage that the transportation costs of the low volume, highly toxic PCB-contaminated residue for destruction would have been lower than the transportation costs of the high volume waste products obtained from the customers, but the potential benefit of extending the useful life of SDMI's Tallmadge facility would have been reduced. SDMI's strategy soon became to acquire PCB-contaminated materials from owners in Canada; to transport the material to Tallmadge for processing and recycling; and to dispose of the residue for incineration by specialist contractors.

86. In pursuit of this strategy, in 1993 SDMI developed a plan involving two parallel initiatives. The first was to build a leading market position in Canada, so that SDMI would be in a position to gain a significant share of the market if and when the border opened. To this end SDMI and MYERS Canada embarked on a comprehensive marketing campaign to establish the MYERS brand as the leading name for the disposal of PCB's. SDMI spent in excess of \$1 million (MYERS Canada had no resources of its own to commit to the project) for this purpose. Environment Canada¹² maintained a record of the total inventory of PCB's in use and of PCB-contaminated waste materials in storage in Canada. By the end of 1995 nearly 3,000 storage sites in Canada had been identified and either SDMI or MYERS Canada had contacted almost all of them, with routine follow-up calls after one or two months.
87. The second initiative, under the leadership of Rev. Michael Valentine, was an intensive lobbying campaign to persuade the US EPA and politicians in Washington, DC, that opening the border to this traffic was in the USA's national interest - both as to the trading opportunities it offered to the U.S. waste-disposal industry and as to the benefit of reducing the volume of this highly toxic material in storage within North America as a whole.
88. The success of SDMI's second initiative is not in doubt. In October 1995, the US EPA informed SDMI that it would be granted an *enforcement discretion*. This would enable SDMI to import PCB-contaminated material into the USA as of 20 November 1995. The US EPA indicated that enforcement discretions also would be granted to other U.S. waste disposal operators.
89. On 16 November 1995, CANADA issued a temporary emergency measure that had the effect of closing the U.S./Canadian border to the export of PCB's and PCB-contaminated waste material.¹³ This prevented SDMI and MYERS Canada from fulfilling the orders they had obtained and, effectively, from obtaining firm commitments from other potential

¹¹ Its precise status within the MYERS group of companies is described in the First Partial Award, paragraph 227.

¹² The relevant Canadian governmental agency.

¹³ The measure itself, and its transition from temporary status to a permanent order are described in detail in the First Partial Award, paragraphs 123-126.

customers – although SDMI and MYERS Canada did maintain their marketing efforts while the ban was in place.¹⁴

90. On 18 March 1996, the system of *enforcement discretions* was replaced by a general *Import for Disposal Rule*, under which licences would be granted where the US EPA was satisfied that all imported PCB-contaminated residues would be destroyed either by incineration or by chemical treatment.
91. After a further policy review within government departments, and much consultation, CANADA revoked the export ban on 7 February 1997, approximately 15 months after the it had been introduced, enabling SDMI to resume the implementation of its business plan.
92. On 7 July 1997, the United States Federal District Court of Appeals for the 9th Circuit quashed the US EPA's *Import for Disposal Rule*.¹⁵
93. On 20 July 1997, approximately five months after the border was opened from the Canadian side, the border was closed to the trans-border shipment of PCB's and PCB-contaminated waste once again; this time by the USA. At the date of this Second Partial Award the border has remained closed to the importation into the USA of PCB-contaminated materials.

¹⁴ Customer contacts were sometimes developed by SDMI, sometimes by MYERS Canada; but the Tribunal accepts SDMI's proposition that it was understood by all concerned that the material would be shipped to the USA for processing in SDMI's Tallmadge facility.

¹⁵ *Sierra Club v E.P.A.* (U.S. Ct App., 9th Circ), No. 96-70223, 7 July 1997.

CHAPTER IV

THE SCOPE OF RECOVERY

94. In its First Partial Award, the Tribunal made a number of observations concerning the principles that should be adopted in making the assessment of compensation that would take place in the second stage of the arbitration if SDMI were to succeed on liability. Among them were:

By not identifying any particular methodology for the assessment of compensation in cases not involving expropriation, the Tribunal considers that the drafters of the NAFTA intended to leave it open to tribunals to determine a measure of compensation appropriate to the specific circumstances of the case.....¹⁶

and

The Tribunal agrees with CANADA that it would be premature at this stage to attempt to set out detailed, exclusive, principles for calculating the compensation payable. The disputing parties should have the opportunity to make further factual and legal submissions on the question of the precise methodology to be used.¹⁷

and

The Tribunal has already suggested that whatever precise approach is taken it should reflect the general principle of international law that compensation should undo the material harm inflicted by a breach of an international obligation.¹⁸

The Tribunal also noted that punitive damages may not be awarded under the NAFTA.¹⁹

and

CANADA has submitted, and the Tribunal accepts, that the following principles also apply:

- *The burden is on SDMI to prove the quantum of the losses in respect of which it puts forward its claims.*

¹⁶ FPA, paragraph 309.

¹⁷ FPA, paragraph 314.

¹⁸ FPA, paragraph 315.

¹⁹ FPA, paragraph 308, footnote 53.

- *Compensation is payable only in respect of harm that is proved to have a sufficient causal link with the specific NAFTA provision that has been breached. The economic losses claimed by SDMI must be proved to be those that have arisen from a breach of the NAFTA, and not from other causes;*
- *Damages for breach of any one NAFTA provision can take into account any damages already awarded under a breach of another NAFTA provision. There must be no 'double recovery'.²⁰*

95. SDMI summarises its proposals for the assessment of compensation as follows:

The international law principle of compensation that is applicable in this NAFTA claim is that Canada must put the Investor into the position that it would have been but for Canada's wrongful act. According to NAFTA Article 1116, the Investor is entitled to claim for all damage and loss arising from Canada's breach.²¹

and

The investor's analysis is based on an income loss approach, which looks at losses to the Myers companies, i.e. in the US and Canada, and how they are interconnected ...²²

and

To put the Investor and the Investment back in the place they would have been but for the breach, we have to figure out what they lost. What they lost, among other things, was an opportunity to capitalize on the tremendous goodwill that was going to translate into market share. And this goodwill, which soon would become market share, is a form of intangible property, and this is recognised within Article 1139's definition, part (g) as an investment.²³

and

The Investor's approach can be summarized as follows:

- a) *take the known business activity of the Myers Companies in Canada.....*

²⁰ *FPA, paragraph 317.*

²¹ *SDMI Pre-hearing Memorandum, paragraphs 7 et seq.*

²² *SDMI opening statement, transcript, page 45:20.*

²³ *SDMI closing statement, transcript, 26 September 2001, page 957, lines 9-19.*

- b) *discount this activity by a specific factor to take into account the percentage of contracts that would have reasonably been completed based on evidence regarding the Myers Companies activities in the U.S. and on the state of the market in Canada.....*
- c) *calculate this value over the relevant period of liability to obtain the expected gross lost revenue; and*
- d) *discount this expected revenue loss by the gross margin of the respective product being remediated to produce a loss of Incremental Cash Flow*

.....

This loss must also be augmented by appropriate out of pocket losses and by an applicable rate of interest applied to the total of these figures to produce the total necessary to put the Investor and the Investment into the position they would have enjoyed but for the wrongful acts of Canada.²⁴

96. CANADA summarises its alternative proposals for the assessment of compensation as follows:

In the light of the nature of the breach and of the damages, the Tribunal will have to decide which of the 3 methods put forward by the disputing parties most appropriately measures the loss suffered as a result of the breach:

- a) *Canada's first alternative: reimburse S.D. Myers for its expenditures in Myers Canada.*
- b) *Canada's second alternative: compensate S.D. Myers for the delay in realizing the benefits of its expenditures in Myers Canada in the form of an interest rate applied to the period of the breach.*
- c) *Canada's third alternative approach: compensate S.D. Myers for the profits that would have been earned but for the ban.²⁵*

CANADA's position was expanded in its closing statement at the second stage hearing as follows:

Canada's initial position, of course, is the Tribunal ought to award my friend's client the investment, the value of monies placed in this investment during the period prior to the ban²⁶

²⁴ SDMI's Reply Memorial, paragraph 24.

²⁵ CANADA's pre-hearing brief, page 3.

The second position which has been developed by Mr Rostant in his material before you deals with an equity rate of return of 18% [on the invested money].²⁷

and

...the more interesting analysis is the analysis where he adopts the contribution margin approach to damages and in Canada's alternative 3, assesses damages or recommends an assessment of damages at \$297,600.

... each of the three options placed before you are in part dependent upon two sub-options, and the sub-option which deals with alternative 3 is predicated on two calculations: one, a calculation what do you do if you look at the so-called seamless web that my friend has described, I think in his opening statement of both Myers (Canada) and SDMI; or, if you should decide that it is the investment, to paraphrase Bill Clinton's famous campaign mottos, 'It's the investment that matters', in which case we say that the margin should be no more than 10 percent, and even that number may be a trifle high ...²⁸

97. Of the three alternatives suggested by CANADA, the Tribunal considers that neither of the first two would be an appropriate measure of compensation. Giving SDMI a return on its investment in Canada for the fifteen-month period while the border was closed from the Canadian side, would not appropriately reflect the actual loss to SDMI as an investor in Canada in the particular circumstances of this case. Equally, returning to SDMI the cash it invested, plus interest, would not be an appropriate measure of the loss that SDMI suffered as a proximate result of CANADA's breach of its obligations under the NAFTA.
98. SDMI did not invest in Canada to achieve a rate of return solely related to the quantum of its monetary investment. Insofar as it was delayed, it was delayed in making profits and further developing the opportunity to make profits. Some of the Canadian PCB inventory was processed by others while the border was closed. When the border re-opened, some of the remaining inventory that SDMI would have processed was, or would have been, processed by others. SDMI lost the income that it might have obtained from these inventories. Furthermore, SDMI lost income from that part of the inventory that was not lost to others during the closure, but which it might have processed during the nineteen

²⁶ Transcript, 26 September 2001, pages 977/978, lines 24-25, 1-3.

²⁷ Transcript, 26 September 2001, page 978, lines 15-18.

month “window of opportunity” it would have had but for CANADA’s export ban. Return of the money that SDMI invested in Canada, or merely paying SDMI a “return” on that investment, would not see it whole. It would not take adequate account of SDMI’s potential to earn an income stream.

99. In reaching this conclusion the Tribunal is not attempting to enunciate any general principles that might serve as precedents in other cases. It is recording its view that the first two of CANADA’s alternative approaches would not provide an appropriate measure of compensation on the facts of this particular case.
100. Subject to consideration of issues concerning direct, indirect or consequential damages, remoteness and foreseeability, the Tribunal considers that the appropriate loss to be addressed in this particular case is the loss of net income stream. This approach formed both the basis of SDMI’s principal claim and the third alternative suggested by CANADA. The Tribunal’s view is reinforced by the fact that the expert accountants retained by both sides agreed that SDMI’s lost income stream is capable of rational assessment,²⁹ even though they disagreed substantially as to the result that should follow.³⁰

²⁸ Transcript, 26 September, pages 978/9, lines 19-25, 1-10.

²⁹ Subject to an assertion by CANADA that the loss was too speculative because of the risk of action by the Sierra Club, a matter that is addressed below.

³⁰ A table in Mr Rostant's 31 August 2001 report shows that he arrives at a figure of CDN\$2,430,000 and Mr Rosen at CDN\$23,112,000 for the combined SDMI and MYERS Canada lost revenues. Although the gap narrowed by the time of the September 2001 hearing, it remained substantial.

CHAPTER V

**REVIEW OF SOME PRINCIPLES CONCERNING THE ASSESSMENT OF
COMPENSATION**

Introduction

101. Before turning to quantify the lost net income stream suffered by SDMI it is necessary to review a number of matters of principle raised either by the Tribunal in its First Partial Award, or by the Tribunal or the Disputing Parties during the second stage of the arbitration.

The significance of an *investment*

102. In its First Partial Award the Tribunal found that compensation must be based on breaches of specific NAFTA provisions. The two Articles that were breached in this case, Articles 1102 and 1105, both refer to the actions of a host state that relate to an *investor*, or to its *investment*, in relation to various aspects of its investment. The fact that an entity was treated in a manner contrary to Chapter 11 does not of itself trigger a right to compensation. The existence of an investment is a threshold to maintaining a Chapter 11 claim.

103. Chapter 11 deals with measures adopted relating, *inter alia*, to investors. For there to be an investor, there must be an investment. In this arbitration the investment must be in Canada.

104. In its First Partial Award the Tribunal concluded that SDMI was an investor and that MYERS Canada was an investment. It was recognised that a number of other activities might also qualify as investments.³¹

³¹ In its Reply Memorial (Damages Phase) in paragraph 12, at page 8, SDMI asserted that: *S.D. Myers, Inc operated in Canada as an investment as defined by Article 1139. Because of this fact, ...it could not qualify as a cross-border service under...Article 1213. This proposition is rejected. Apart from being logically insupportable, it is not consistent with the definition of investor in Article 1139, which in this situation is an entity that ...has made an investment.*

105. The Tribunal also determined that MYERS Canada was an enterprise as defined in paragraph (a) of Article 1139 which was owned and controlled directly or indirectly by SDMI. This was sufficient for SDMI to fulfil the threshold test concerning whether or not SDMI was an investor for the purposes of Chapter 11 of the NAFTA, which CANADA had resisted in the first stage of the arbitration.
106. SDMI also raised a number of other grounds on which it might have qualified as an investor for the purpose of Chapter 11, but it was not necessary for the Tribunal to consider them. The Tribunal noted that they might have relevance for the purpose of assessing the compensation to be awarded.
107. In the result, the Tribunal considers that it is not necessary to make any further determinations on the scope of the investment for the purpose of quantifying the compensation to be awarded to SDMI, but recognises that if it were necessary for it to do so, there were a number of other propositions put forward by SDMI that would have to be considered.³²
108. Having reviewed the threshold question of the existence of an investment in the context of its determination in the First Partial Award, the Tribunal now turns to recapitulate some of the basic facts.
109. SDMI was a family-owned business with Mr Dana Myers in command. MYERS Canada was established to be the Canadian face of SDMI, to assist with Canadian operations and thereby to generate business and revenue for SDMI. MYERS Canada was provided with

³² For example, the concept of goodwill was discussed at the hearings. It could be argued that SDMI created goodwill as an asset through its activities in the Canadian market. Chapter 11 acknowledges that *intangible property* can be an investment. The Supreme Court of Canada held, in *Manitoba Fisheries v Canada*, [179] 1 S.C.R. 101, that goodwill is intangible property. It might be argued that if goodwill were a kind of intangible property recognised by the law of the host state, it would constitute intangible property for the purposes of Chapter 11. The status of goodwill as an investment was contested by the parties, but neither side discussed the *Manitoba Fishers* case and its implications for a Chapter 11 arbitration. If it were to have been necessary to decide the status of goodwill under Chapter 11, the Tribunal would have written to the parties after the hearing to invite them to explore the implications of *Manitoba Fisheries*. In the event this has not been necessary.

capital, know-how and managerial direction by SDMI. MYERS Canada carried on business as if it were a branch of SDMI.³³

110. Mr Myers decided how relations between SDMI and MYERS Canada were to be conducted. He decided how the income from remediation contracts with Canadian-based PCB owners would be allocated.

111. In discussing the loans between SDMI and MYERS Canada, Mr Myers testified that:

*It was sort of like taking money out of one pocket and putting it in the other pocket.*³⁴

112. In summary, there was a family-owned business with SDMI at its centre and one family member, Mr Dana Myers, in overall charge of the combined USA and Canadian operations.

113. MYERS Canada was an integral part of SDMI's business plan for its Canadian PCB remediation operations and the manner in which it actually attempted to implement that plan. Letters soliciting business often were sent on MYERS Canada letterhead, even if the author were a SDMI employee writing from Tallmadge.³⁵ In all of the contracts that actually were carried out, customers were billed in the name of MYERS Canada.

114. The remediation of PCB wastes that the Myers companies undertook was not simply a matter of carrying out factory operations in the USA. Assistance with pre-shipment activities could be a substantial part of the overall operation for a Canadian PCB owner. Some PCB contaminated materials might have to be drained from the equipment that contained it for several days before shipment could take place. Because processing was to take place in the USA, cross-border transportation had to be arranged and the paperwork and any permits associated with transborder shipment had to be executed. For

³³ Transcript, liability phase, volume 1, 14 February 2000, page 209, testimony of Reverend Michael Valentine in response to a query from the Tribunal.

³⁴ Transcript, liability phase, volume 1, 14 February 2000, page 337.

³⁵ Joint Book of Documents, Volume II, tab 72, testimony of Rev Valentine, liability phase, 14 February 2000, question 299 *et seq.*

the first few shipments, SDMI sent a senior employee, Lynn Fritz, to supervise pre-shipment activities. MYERS Canada employees also were involved.³⁶

115. Mr Myers testified at the damages hearing that the plan was to Canadianise the on-site operations prior to shipment. Local residents were to be trained to serve as crews.³⁷ Articles 1102 of NAFTA addresses not only the way in which an enterprise has operated or currently operates, but also its expansion.³⁸
116. The measures that CANADA introduced, contrary to Articles 1102 and 1105, interfered with the ability of MYERS Canada to carry on and expand its contribution to the overall operation. MYERS Canada was an investment of SDMI and a fundamental and integral part of the efforts of SDMI to generate revenues. SDMI has established on the facts of this case that it sustained damages that have a sufficient causal link to the interference with an investment in Canada, contrary to the provisions of Chapter 11.
117. Where there is a breach of Chapter 11, and interference with the economic activity of an investment, the overall damage to the economic success of the investor arising from the measure adopted by the host state must be examined.
118. An investor may submit to arbitration a claim that a provision of Chapter 11 has been breached and that *.... the investor has incurred loss or damage by reason of, or arising out of, that breach*. To be recoverable, a loss must be linked causally to interference with an investment located in a host state. There is no provision that requires that all of the investor's losses must be sustained within the host state in order to be recoverable. The

³⁶ Transcript, liability phase, Volume 1, 14 February 2002, testimony of Dana Myers: *Q: And what were the services that Myers Canada did in respect of those seven shipments? A. They helped sell the jobs, they helped coordinate getting people at the sites to do the transportation, do the training.*

³⁷ Dana Myers, Myers Reply Memorial, schedule 1, tab 1, paragraph 9: *Once we had access of the market for a steady supply of PCB waste remediation orders, I always expected that we would train a Canadian crew that would work under our supervision to perform this service.*

³⁸ In Dana Myers' testimony at the second stage, the following exchange took place: *Q.: (by a member of the Tribunal): Mr Myers, in your affidavit you talk about 'I always expect [sic] we would train a Canadian crew that would work under our supervision to perform the service.' ... I'm just trying to understand what this 'training under our supervision', does that mean that there is a Canadian Lynn Fritz eventually, or is Lynn Fritz still going up there to supervise? A. I think it would be a Canadian Lynn Fritz. It's sort of difficult to take Americans up to Canada because they want work papers and all that kind of stuff and it's hard to get. So it's easier to hire people, if you're going to work in Canada, to hire people in Canada eventually.*

test is that the loss to the (foreign) investor must be suffered as a result of the interference with its investment in the host state.

119. Article 102(c) of the NAFTA states that one of the objectives of the agreement is to:

...increase substantially investment opportunities in the territories of the Parties

120. Article 102(2) provides that the Parties:

...shall interpret and apply the provisions of this Agreement in light of the objectives set out in paragraph 1 and in accordance with applicable rules of international law

121. The purpose of virtually any investment in a host state is to produce revenues for the investor in its own state. The investor may recover losses it sustains when, as a proximate cause of a Chapter 11 breach, there is interference with the investment and the financial benefit to the investor is diminished.

122. The Tribunal concludes that compensation should be awarded for the overall economic losses sustained by SDMI that are a proximate result of CANADA's measure, not only those that appear on the balance sheet of its investment.

The relationship between Chapters 11 and 12

123. Chapter 11 concerns measures that relate to investors and investments. In this case, SDMI claimed, and NAFTA Article 1116 mandates, recovery of *...loss or damage by reason of, or arising out of...* CANADA's breach of certain articles of Chapter 11. To sustain the claim, the SDMI had to establish a breach of Chapter 11. It did so under Articles 1102 and 1105.

124. Article 1102 requires equal treatment *...with respect to the establishment, acquisition, expansion, management, conduct, operation, and sale or other disposition of investments.* Article 1105 requires the Parties *...to accord to investments...* fair and equitable treatment.

125. Chapter 12 deals both with items of trade - services - and with the provider and provision of services. It ...*applies to measures adopted or maintained by a Party relating to cross-border trade in services by service providers of another Part...* A service provider is simply one that provides a service. Service is not defined. Measures include, *inter alia*, the marketing and delivery of a service.³⁹
126. SDMI claims that it suffered loss because CANADA interfered with MYERS Canada. MYERS Canada did perform certain work in Canada and was remunerated for it, but it did not destroy PCB's. This was done in the USA by SDMI. It constituted a service performed by SDMI in the USA for its customers in Canada. The evidence showed that, to further its objective of providing this service in the USA, SDMI also used its personnel from and in the USA to perform tasks in Canada. This also was the provision of a cross-border service. The business of MYERS Canada was the marketing and logistical support for the provision by SDMI of a cross-border service. The damages claimed include lost revenue to SDMI for its provision of cross-border services.
127. CANADA contends that because SDMI was a cross-border service provider, it cannot recover its losses related to that activity in a claim under Chapter 11; that is, it cannot recover damages sustained *qua* cross-border service provider, only those incurred as an investor. It says that the provision of a cross-border service is not an investment.
128. Article 1213 defines ...*the cross-border provision of a service or cross-border trade in service...* as follows:
- ...the provision of a service: (a) from the territory of a Party [the United States] into the territory of another Party[Canada] ... (c) by a national of a Party[SDMI] in the territory of another Party [Canada] ... it ... does not include the provision of a service in [CANADA] by [Myers Canada] ...*
129. Standing alone, the provision of a cross-border service from the USA into Canada or in Canada by a U.S. national is not an investment in Canada, but is protected by Chapter 12. Conversely, insofar as the service is provided by the investor's investment, the provisions

³⁹ NAFTA Article 1201.

of Chapter 12 are not available to the investor, but Chapter 11 is engaged.⁴⁰ The question is: once Chapter 11 is engaged, is its application limited to the activities of the investment?

130. SDMI was in some respects a service provider. It provided cross-border services to Canadian entities both in terms of destroying PCB's and in undertaking activities in Canada in pursuance of that objective. It was engaged in the cross-border trade in services. As such, it was entitled to benefit from the provisions of Chapter 12.
131. In its First Partial Award, the Tribunal adopted the application of the *cumulative principle* to this case.⁴¹ That principle holds that in a given situation, a government or private entity might have different rights under different trade provisions that generally complement, rather than diminish, each other.
132. The concept is neither novel nor startling. The grant of a right generally does not take away other rights unless they are mutually exclusive, or the grant is stated expressly to abrogate another right.
133. The cumulative principle does not apply where there is actual conflict between different provisions. CANADA does not contend that there is any conflict between the provisions of Chapters 11 and 12 as they apply to the facts of this case. No conflict exists to limit the application of the cumulative principle.
134. General principles such as the cumulative principle must yield to specific treaty provisions to the contrary. An example in the context of Chapter 11 is in Article 1102, which expressly excludes from the scope of the chapter measures that are *covered by Chapter 14 (financial services)*. An investor in financial services generally could not bring a Chapter 11 claim. Chapter 11 does not contain a similar exclusion of activities that engage Chapter 12.

⁴⁰ ...but does not include the provision of a service in the territory of a Party by an investment, as defined in Article 1139 (Investment - Definitions), in that territory.

⁴¹ FPA paragraphs 291-294; 318.

135. SDMI has acquired no extra rights in this case because of the existence of Chapter 12, but neither has it lost any. The Chapter 11 rights of SDMI are no stronger or weaker merely because there is another section of the NAFTA that provides some additional constraints on the way a state treats nationals of another NAFTA state.
136. As noted, the exception in the definition of a cross-border service is cast in the terms of Chapter 11. It reveals the intention of the Parties to avoid mischaracterising as cross-border services the provision of services by an investor using its investment to provide the service in the territory of the investment.⁴² The investment makes the provider of the service an investor and Chapter 11 is engaged.
137. Article 1112(2) states:

The requirement by a Party that a service provider of another party post a bond or other form of financial security as a condition of providing a service into its territory does not of itself make this Chapter applicable to the provision of that crossborder service. This Chapter applies to the Party's treatment of the posted bond or financial security.

This provision underscores the intention to limit the application of Chapter 11 to the protection of investments and their activities and not to extend it to the provision of cross-border services in the absence of an investment. Chapter 11 is not engaged merely because of a requirement to post security.

138. In summary, the fact that SDMI as a cross-border service provider may have recourse to the dispute provisions of Chapter 12, does not deprive it of the right to claim as an investor under Chapter 11. Extending to it rights as a cross-border service provider under Chapter 12 does not take away from SDMI rights conferred on it by Chapter 11.
139. Chapter 11 is engaged because SDMI was an investor. It has a right to recover the economic losses to its investment initiative caused proximately by an interference with its

⁴² In its Reply Memorial (Damages Phase) in paragraph 11, at page 8, after quoting the exception, SDMI states: *...a cross-border service provided by an investment...in the territory of another NAFTA Party is not covered by the cross-border service provisions of the NAFTA. This is the clear and unambiguous expression of the NAFTA.* The exception does not use the term *cross-border service*. The word *service* is used alone. That is, the performance by an investor of what would have been a cross-border service of an investor is dealt with under Chapter 11. The cross-border provision of a service is not.

investment contrary to the provisions of Chapter 11. The fact that some of the totality of SDMI's losses due to interference with its investment involved cross-border services does not prevent SDMI from recovering them.

Causation

140. In its First Partial Award the Tribunal determined that damages may only be awarded to the extent that there is a sufficient causal link between the breach of a specific NAFTA provision and the loss sustained by the investor. Other ways of expressing the same concept might be that the harm must not be too remote, or that the breach of the specific NAFTA provision must be the *proximate* cause of the harm.
141. The assessment of damages is not always a precise science. This case illustrates the point. Although the expert accountants for both sides stated that SDMI's loss of profit or contribution margin⁴³ was capable of assessment, their respective quantifications were subjective and based on the exercise of their judgement.
142. The Tribunal reviews the legal framework for assessing damages and the many factors that the Parties, not always in agreement, stated should be taken into account. This leads to an award of damages, which is the Tribunal's judgement of what is appropriate in this case. In some circumstances, in the calculations, a fixed percentage or dollar amount is expressed. In others it is not. In all circumstances, the result is based on the Tribunal's appreciation of the evidence and its interpretation of the applicable law.
143. Article 1116 is relevant to the scope of recovery. It states that an investor can claim for: *...loss or damage by reason of, or arising out of...* a breach of Section A of Chapter 11. Article 1117, which is not in issue in this arbitration, provides the same remedy when an investor claims on behalf of its investment.
144. SDMI relies on authorities that include decisions of the Iran-United States Claims Tribunal, but they concern the measure of damages in an expropriation.⁴⁴ While some assistance can be obtained from a consideration of these authorities, the NAFTA deals

⁴³ The terms were used interchangeably.

⁴⁴ *Eg, Amco Asia Corporation v. Indonesia* 1 ICSID Reports 413.

explicitly with the measure of damages for an expropriation and those provisions are not controlling in this case.

145. SDMI says that it is entitled to *...lost profits and consequential damages (such as the loss of competitive advantage and market share)....* It states that this Tribunal has established that there is a *...need for a direct causal link between Canada's unlawful international conduct and the occurrence of damages.* Several authorities are referred to in support of this proposition.
146. CANADA characterises any loss of profits by SDMI as consequential and not recoverable.
147. The concept of foreseeability of damages is referred to by both parties. SDMI says that the damages *...must have been reasonably anticipated by the disputing parties at the time of the breach.*⁴⁵ Reliance is placed on the decision in *Shufeldt (U.S.) vs. Guatemala.*⁴⁶ SDMI also asserts that a special intention to harm an investor *...permits the Tribunal to award damages even in they would otherwise be considered to be too remote.*
148. In summary, SDMI seeks to recover the present value of the net income stream it says was lost by reason of the interim orders closing the Canadian border, plus a loss of opportunity it says it would have had to invest or use the money derived from that income stream and actual out-of-pocket losses suffered by it. Loss of opportunity⁴⁷ is also characterised as *consequential.*
149. Relying on the *Dix Claim*⁴⁸, SDMI contends that in response to egregious conduct the Tribunal can and should award damages that otherwise would not be recoverable as too remote. Even if it were possible legally to award damages that were otherwise too remote on the basis of the misconduct of a respondent, and the Tribunal has made no such finding in this case, such damages would be clearly punitive, and thus prohibited by Article 1135(4).

⁴⁵ Investor's Memorial (Damages Phase), paragraph 50.

⁴⁶ (1930), 11 RIAA 1081.

⁴⁷ "Loss of opportunity" is addressed below.

⁴⁸ (1903), IX RIAA 119

150. Characterising SDMI's loss of profit claim as a claim for consequential damages is neither helpful nor consonant with the authorities. Insofar as it arises out of the provision of a cross-border service, there is an argument that the claim is not recoverable in proceedings under Chapter 11 of the NAFTA⁴⁹, but that does not make it a claim for consequential damages other than in a non-legal, descriptive, sense.

151. Professor Whiteman states appropriately:

*Damages are disallowed when they are 'not a natural consequence' of the wrongful act for which the respondent government is liable under international law. At times such losses are referred to as 'consequential' and are disallowed on that account.*⁵⁰

152. The authorities are clear that claims for loss of profits are recoverable. The issue is remoteness. The tribunal in *Shufeldt* said that a respondent's obligation is:

*...to recoup or compensate...for damages...which result directly or indirectly...and...such compensation includes both damages suffered and profits lost....*⁵¹

The *Shufeldt* tribunal continued to note that the profits *...lost ...must be the direct fruit of the contract and not too remote or speculative.*⁵²

153. SDMI calls in aid the concept of foreseeability to support its claim for damages. CANADA responds stating that while it knew that SDMI was contemplating entering the market, at the time the interim measure was enacted, it did not know the extent to which SDMI had made preparation and did not know that MYERS Canada existed.

154. Foreseeability is a concept found in the law of contract. The authorities referred to by the Disputing Parties confirm that this is so. Using contractual measures of damage in the context of this case is not helpful. It led SDMI to contend that the question is whether the damages claimed were foreseeable by both parties *at the time of the breach*, which is

⁴⁹ The Tribunal has rejected this argument.

⁵⁰ Whiteman, M.M., "*Damages in International Law*", vol. 3, 1830.

⁵¹ *Shufeldt* at page 1099 quoting from *May v. Guatemala* as quoted in Foreign Relations of the United States, 1900 at page 673.

⁵² *Shufeldt* Loc. Cit.

misconceived in a contractual context. This in turn provoked CANADA's rejoinder concerning its lack of knowledge at the time of the breach.

155. In its Memorial, SDMI quotes the Tribunal in *Shufeldt*, which held that damages should be direct and ...*reasonably supposed to have been in the contemplation of both parties as the probable result of the breach*. SDMI then states that ...*[t]o be foreseeable, the damages claimed must have been reasonably anticipated by the disputing parties at the time of the breach*.⁵³ This statement neither follows from the quoted passage in *Shufeldt*, nor accurately reflects the legal authorities to which that Tribunal was referring.
156. The phrase *reasonably anticipated* does not refer to the concept of foreseeability as it is used in the law of contract. It is used in the context of speculation. Claimed profits must not be merely speculative. They must have been anticipated reasonably; in that sense, reasonably foreseeable at the time of the breach.
157. After referring to submissions concerning directness and foreseeability, the *Amoco Asia* Tribunal quoted French law stating: *[t]he debtor can only be liable for the damages which were foreseen or foreseeable at the time the contract was entered into...*⁵⁴ and referred to the English case *Hadley v. Baxendale*,⁵⁵ which is a seminal authority in the English law of contract damages which places foreseeability at the time of making the contract.
158. Insofar as the word *foreseeability* is used in the context of what was anticipated, what was realistic, it is appropriate. In this context it is a descriptive word, not a legal term of art.
159. The inquiry in this case is more akin to ascertaining damages for a tort or delict. The damages recoverable are those that will put the innocent party into the position it would have been in had the interim measure not been passed. The focus is on causation, not foreseeability in the sense used in the law of contract. In contract law, foreseeability may

⁵³ Investor's Memorial (Damages Phases), page 21, paragraph 50.

⁵⁴ *Amoco Asia*, paragraph 269.

⁵⁵ (1854), 9 Exch. 341.

limit the range of recoverability. That is not the case in the law of tort or delict. Remoteness is the key.

160. Similarly, a debate as to whether damages are direct or indirect is not appropriate. If they were caused by the event, engage Chapter 11 and are not too remote, there is nothing in the language of Article 1139 that limits their recoverability.⁵⁶

Loss of Opportunity

161. SDMI's lost opportunity claim fails for a number of reasons. To be compensated for the value of the lost use of money by a payment of interest that reflects what the market considered to be the value of money at the time is appropriate. To allow SDMI a return based on *what it might have done* with the money would be to recognise claims that are speculative and too remote.
162. On the evidence it is not clear what SDMI would have done with the money if it were to have been earned. It had a number of options. If SDMI could have achieved a return significantly greater than the value of money at the time, it could have borrowed and used the money to make that return. If it were unable to do so, payment by CANADA would be redressing SDMI's impecuniosity - which is not the function of an award of compensation in the particular circumstances of this case.

Out-Of-Pocket Expenses

163. SDMI asserts that it lost certain out-of-pocket expenses. These were expended to develop or sustain its Canadian initiative and are subsumed in an award that compensates SDMI for its lost and deferred net income streams.

⁵⁶ Although not pressed with vigour, at various points in the proceeding CANADA argued that recoverability was limited territorially. The proposition is not found in the language of Chapter 11.

Mitigation

164. Several witnesses referred to the activities of SDMI subsequent to the re-opening of the border as *mitigation*. The term is not appropriate in that context and tends to obscure accurate analysis of the position.
165. If CANADA's measure were to have destroyed SDMI's opportunity to develop its business of remediating the Canadian PCB inventory (and this is a position that is advanced by SDMI) it could not *mitigate* that damage by doing what it allegedly had lost the opportunity to do. Logically, the two do not fit. Mr Rosen said in response to a question from a member of the Tribunal:

Q. ...you basically treated the volumes that Myers was not able to process during the closure period as lost forever—

A. That's correct.

Q. Subject to the contracts they in fact did in the spring?

*A. That's correct.*⁵⁷

If this is right, there would have been no inventory for SDMI to process in order to mitigate its losses.

166. If what SDMI lost was the inventory processed by others during the closure, its first-mover advantage, the loss of a percentage of post-closure inventory to others, and the inability to process some inventory due to the shortening of the time available, then SDMI would not have been mitigating that loss by bidding for and processing the remaining inventory that was available once the closure ended.
167. During the period November 1995 to February 1997 CANADA developed a regulatory regime under which the border would be re-opened, and it did so. SDMI was back in business, albeit in a somewhat changed market. It then was put out of business five months later by its own government. The issue is not mitigation. It is the measure of compensation. What did SDMI lose by reason of the Canadian closure?

⁵⁷ Transcript, 23 September 2001, q. 426.

Goodwill

168. This topic was addressed in the Disputing Parties' Memorials and at the hearing. It is discussed by the Tribunal in this Partial Award in the context of SDMI's losses.
169. In its Reply Memorial (Damages Phase) in paragraph 25 at page 12, SDMI stated that
..... *The most valuable asset that the Myers Companies had was the goodwill which generated a book of quotes and orders.* This appeared to address the likely results of SDMI's marketing efforts.
170. SDMI's intensive marketing campaign undoubtedly built up substantial goodwill, whatever that term may mean in non-technical accountancy terminology. In practical terms it meant that (a) a large number of Canadian PCB holders became aware of the Myers brand name and reputation for quality service and (b) such holders became aware that, in general, SDMI and MYERS Canada were in a position to offer materially lower prices than those being quoted by Chem-Security of Alberta, which in 1994 and 1995 was the only serious Canadian competitor in the field.
171. In the context of the measure of compensation, the Tribunal considers that these practical factors can be equated to the first-mover advantage,⁵⁸ which was also the subject of much discussion during the second stage of the arbitration.⁵⁹ In assessing the compensation to be awarded to SDMI this element undoubtedly must be put into the equation. The value of the first-mover advantage and the extent to which it was eroded by the 15 months that followed CANADA's measure must be assessed in the overall context of the harm suffered by SDMI as a result of the export ban. This is addressed when the loss of income stream is considered later in this award.
172. The Tribunal has concluded that it is not necessary to, and does not, embark on an analysis of the factual and conceptual issues that would need to be addressed to determine

⁵⁸ When using the expression *first mover advantage*, the Tribunal is adopting the terminology employed by the Disputing Parties. Technically, SDMI was a *second mover* by reference to Chem-Security, its main competitor in the early stages.

⁵⁹ As noted previously, the concept of goodwill would be considered in the context of SDMI's investment if that were required.

whether goodwill could constitute an investment in its own right within the terms of Chapter 11.

CHAPTER VI
QUANTIFYING THE COMPENSATION TO BE AWARDED

Introduction

173. The quantification of loss of future profits claims can present special challenges. On the one hand, a claimant who has succeeded on liability must establish the quantum of his claims to the relevant standard of proof; and, to be awarded, the sums in question must be neither speculative nor too remote. On the other hand, fairness to the claimant requires that the court or tribunal should approach the task both realistically and rationally. The challenges become more acute in start-up situations where there is little or no relevant track record. The Tribunal has taken due notice of SDMI's successful experience of seizing marketing opportunities in the USA, but at the same time acknowledges that the Canadian market had certain distinctive features.
174. As stated above, the Tribunal has determined that the appropriate primary measure of compensation is the value of SDMI's lost net income stream.
175. The Tribunal is faced with the widely differing proposals of two distinguished accountants, supported by the equally distinguished firms of which they are partners, together with the opinions of a number of other experts retained by the Parties. Although somewhat belatedly⁶⁰, the accounting experts provided to the Tribunal spreadsheets which stated amounts claimed by categories. The Tribunal found the spreadsheets to be a useful tool, which assisted its analysis. However, taking into account the significant disparities in the positions of the Parties, the Tribunal considered it necessary to perform its own analysis of the facts and figures disclosed during the second stage of the arbitration, guided by the party-appointed experts and the evidence overall. The Tribunal exercises its own judgement where judgemental decisions are required to be made.

⁶⁰ The Tribunal does not criticise the accountancy experts because the matter was undoubtedly fraught with difficulties, but the matrix was requested at the end of the September 2001 hearing and it was agreed that it would be produced within 10 days. The Tribunal's task was not made any easier by the fact that the matrix was not delivered to the Tribunal for several months after the hearing was closed, and well after its initial deliberations had started.

The Effect of CANADA's Measure

176. SDMI claims that it would have been able to process a significant proportion of the Canadian inventory of PCB's between December 1995, when it could have started, and July 1997 when the border was closed from the U.S. side. SDMI asserts that its first-mover advantage was lost as a result of the Canadian closure. SDMI also asserts that the closure of the border ended its unique opportunity. It contends that, by the time the border re-opened, other competitors were poised to enter the Canadian market and that SDMI's competitive advantage was eliminated. As noted, its accountancy expert proceeded on the basis that the closure resulted in the irretrievable loss of the inventory that SDMI had expected to process.
177. At the other end of the scale, CANADA claims that the effect of the measure was merely to delay by approximately 15 months SDMI's entry into what CANADA says was essentially the same market.
178. As is often the case in such matters, there is some validity and some error in the positions of each of the Disputing Parties.
179. SDMI had a demonstrated ability to seize opportunities to develop its PCB remediation business in the USA, acquiring a large market share and making substantial profits. During the second phase hearing Dana Myers recalled that, with a \$1 million investment in plant, SDMI had achieved great success with its U.S. resource recovery unit. When the unit was sold, he estimated it had made \$40 million for the company.⁶¹ He testified:

*...I got an Entrepreneur of the Year in Northwest Ohio for positive cash flow, positive profits and growth in the company from 16 million in the year I took over to over 42 million about two years after I took over, all because of this resource recovery.*⁶²

⁶¹ The transcript of the damages hearing, Volume II, page 261, actually quotes Dana Myers as saying that he turned the \$1 million investment in the resources company into *four million* by the time he sold the resources recovery unit. The Tribunal recalls that Mr Myers actually referred to *forty million*, and the accompanying explanation by Mr Myers in the transcript is consistent with this figure.

⁶² Transcript, 22 September 2001, q. 466.

180. In his supplemental affidavit in the second phase of the arbitration, Dana Myers noted that in 1991-92 the Resources Recovery Unit alone had generated US\$19 million in profits.⁶³ The Resources Recovery Unit focused on transformers. It was only one component (about 24-40%) of SDMI's PCB remediation business in the USA.⁶⁴ Similarly, transformer work was only one component of the work that SDMI had planned for its Canadian venture.
181. SDMI had an excellent record of profitability, and an outstanding record of passing safety audits by regulators and customers. There is no reason to doubt that many potential customers based in Canada would have been impressed by SDMI's record, and that SDMI would have worked hard to maintain that reputation while engaged in its Canadian operations.⁶⁵
182. Other facts also demonstrated the SDMI's prospects for success in Canada. SDMI had spent a considerable amount of time and effort making the company known to the holders of Canadian PCB's; during the closure over 50% of the Canadian inventory on which SDMI had quoted was processed by others; immediately prior to the closure SDMI was positioned to take advantage of the open border; it clearly had a price advantage over any Canadian competition; and there were significant geographical advantages that favoured SDMI.
183. There is no clear measure of the effect of the closure on SDMI. Understandably, those close to SDMI's Canadian venture feel strongly that it was devastating. Equally, those close to CANADA feel strongly that SDMI has exaggerated its effect. The accountancy and other experts had to rely on assumed facts provided to them by the Disputing Parties.

⁶³ Supplemental Witness Statement of Dana Myers, Schedules to Investor's Reply Memorial (Damages Phase), tab 1, paragraph 19.

⁶⁴ Transcript, Volume II, page 271.

⁶⁵ SDMI's main competitor in Canada, Chem-Security, suffered a number of serious mishaps during the period of the border opening. From August 1996 through July 1997 there were four accidents at the Swan Hills plant, including several explosions that resulted in the release of toxic chemicals into the air. Edmonton Journal Article, 29 July 1997, appended to Mr Wallace's Affidavit in Volume 1 of the Schedules to the Investor's Reply Memorial (Damages Phase).

184. It is clear that SDMI did lose a portion of the Canadian PCB inventory that it would have processed during the closure, and that it lost some measure of first-mover advantage. Nevertheless, the evidence does not fully support SDMI's position. SDMI's pre-closure, first-mover, advantage was described as being relative to its U.S. competitors, but ten of them had obtained enforcement discretions by early 1996. As U.S. competitors were apparently intending to enter the Canadian market, it is likely that SDMI's first-mover advantage would have been short-lived.
185. Whether SDMI had any or a significant first-mover advantage at all was a matter of some controversy. The Tribunal accepts that the Canadian PCB remediation market was extremely price sensitive and CANADA asserted that this left little room for other factors that could be the foundation for a first-mover advantage. The Tribunal is satisfied that SDMI did have a first-mover advantage but, considering the totality of the evidence, the Tribunal concludes that, although not inconsequential, it has not been shown to be as substantial as claimed by SDMI. Further, insofar as SDMI did have a first-mover advantage, the Tribunal concludes that, while it was eroded by the closure, the extent of that erosion is incapable of precise assessment on the evidence before the Tribunal.
186. U.S. competitors could have entered the Canadian market promptly after November 1995 and it is likely that they would have quoted highly competitive prices to gain entry to the market. Although a number of them were active in the late Autumn of 1995 in pursuing enforcement discretions, the evidence concerning their activities when the border reopened is not specific.
187. The extent to which SDMI's U.S. competitors would have lagged behind is not at all clear. In October 1995, when the US EPA granted the enforcement discretion to SDMI, it also sent letters to 42 other waste processing operators in the USA to advise them of the opportunity in Canada afforded to SDMI. In a letter dated 4 December 1995, Dana Myers complained to the US EPA that SDMI would be harmed by:

*...letting our competitors compete with an EPA-granted regulatory cost advantage.*⁶⁶

⁶⁶ Transcript, 21 September 2001, q. 127.

188. Dana Myers' fears were soon realised, because a number of U.S. companies submitted applications⁶⁷ and ten were granted enforcement discretions by February 1996. Within not much more than three months of the border being opened, SDMI might have faced up to ten of its U.S. competitors active in the Canadian market.

189. The evidence of SDMI's expert, Mr Rosen, tends to confirm the position, but it lacks foundation. He stated in his report that:

While [SDMI] was rendered inactive in Canada, its U.S. competitors applied to the USEPA for permission to import PCB's from Canada (i.e. in the event that the border closing would one day be lifted).⁶⁸

190. The applications were submitted soon after October 1995, as a result of the US EPA's letter to SDMI's competitors. There is no evidence that the interim measure triggered the applications. On the contrary, it appears that SDMI's success in obtaining the enforcement discretion provoked them. The U.S. competitors, like SDMI, were stopped in their tracks by CANADA's measure. The only difference during the period of the closure was that, while SDMI and MYERS Canada continued to maintain contacts with potential customers, there is no evidence that the potential U.S. competitors made any significant effort to establish a position in the Canadian market.

191. In his affidavit, Dana Myers stated that:

US companies that had no real thought that the Canadian market would even have been available...now had lots of time to plan to compete with us...and eventually they did.⁶⁹

He gave no particulars of who these competitors were or the extent to which they eventually competed with SDMI.

192. By the Summer and Autumn of 1995, SDMI's Canadian competitors were preparing to target the Canadian inventory of PCB's. In the Spring of 1997, when the border reopened, the marketing records produced by SDMI in the arbitration showed that SDMI

⁶⁷ The first was received by 27 October 1995, the day after SDMI received its enforcement discretion, and by 15 November 1995 nine companies had applied. (KPMG Revised Report, 19 July 2001, page 7.)

⁶⁸ Rosen Report, 28 February 2001, page 4.

⁶⁹ Dana Myers, statement, 3 August 2001, paragraph 30.

was losing ground to some of its local competitors in Canada and was having to reduce its prices to outbid the Canadian competition to obtain contracts. The evidence also shows that on some occasions SDMI met and defeated Canadian competition.

193. The evidence also was clear that, in the highly price sensitive Canadian PCB remediation market, SDMI's main advantage was its ability to undercut the prices offered by its Canadian competitors. If U.S. competitors were to have entered the market, price would have been a strong factor potentially offsetting the goodwill that SDMI had built. Dana Myers' testimony was consistent with this conclusion. When questioned about quotations by U.S. competitors, he testified:

*We started off in Canada quoting prices that were 10, 15, 20 percent higher than our U.S. prices because we knew the prices would come down so we started higher so that we could come down a bit and still make the margins we wanted to make.*⁷⁰

194. Some of the evidence focused on an alleged first-mover advantage over SDMI's U.S. competitors, but Mr Rosen said that SDMI completely lost its Canadian business ... *because the market had changed dramatically as a result of Canadian and U.S. competitors...[p]rimarily Canadian.*⁷¹

195. Professor Warre was another expert called by SDMI. He stated in his report:

*The issue is whether S.D. Myers had a first-mover advantage over its US competitors, not over Chem-Security; with respect to the latter S.D. Myers was already in a highly advantageous position in terms [sic] of price at least.*⁷²

196. Chem-Security was identified by Dana Myers as *our main competitor in Canada.*⁷³

197. Mr Wallace was a witness called by SDMI. The Tribunal found his testimony to be of value. It was based on Mr Wallace's extensive first-hand observations as a participant in the industry while the contested events were unfolding. His company, Greenport, was a

⁷⁰ Transcript, 22 September 2001, q. 359.

⁷¹ Transcript, 23 September 2001, q. 428.

⁷² Warre affidavit, 3 August 2001, paragraph 31.

⁷³ Dana Myers statement, 3 August 2001, paragraph 24.

sometime competitor and sometime collaborator with SDMI. In his appearance before the Tribunal, he was fair and factual.

198. In his affidavit, Mr Wallace recalled a market prior to the border closure by CANADA that was eager to dispose of PCB's and in which SDMI had a highly favourable market position. In assessing that market he stated:

In my experience, PBC waste holders by and large wanted to get rid of their inventories to escape the bureaucratic red tape surrounding mandatory MOE inspections of their storage sites. Some were concerned, like Canada Brick, that the Alberta borders might actually close again and they might miss their window of opportunity. They were motivated and willing to take advantage when the opportunity presented itself.⁷⁴

Mr Wallace's view was supported by the fact that over half of the inventory targeted by SDMI was destroyed during the closure despite relatively high prices.

199. Mr Wallace also stated:

If there had been no ban, the PCB wastes in Ontario would have flowed south, pure and simple, and in great volumes.⁷⁵

200. The main beneficiary of that flow, in Mr Wallace's opinion, would have been SDMI:

The Myers Companies were, in my view, the initiator of the opening of the border to the US. They pushed the hardest to get the border open and were the most visible US company in the Canadian market that had a compelling disposal option to the sky-high prices of Chem-security.

Shortly before the Alberta border opening, I was aware that the Myers Companies had spent considerable efforts establishing themselves with Canadian PCB Waste holders as a viable option to Swan Hills. This marketing work translated into a significant amount of goodwill which amounted to a strong head start for the Myers Companies over other U.S. competitors who eventually entered the Canadian market. No other US competitors to SDMI took the steps or the effort to develop a strong market presence in Canada the way that the Myers Companies did.

When the Alberta border opened there was not a flurry of activity from US Companies, other than the Myers Companies. No one else appeared ready to go. The others did not have enforcement discretions. As a person in business, I

⁷⁴ Wallace affidavit, paragraph 35.

⁷⁵ Ibid, paragraph 40.

*recognize the advantages of being the first into a market. When you develop a marketplace like The Myers Companies did, you get a significant advantage – we are developing another recycling business right now. We were told by the Customs and Revenue Canada officials that when you develop a business your competition tries to clone you within about six months. You can clean house in that first six months, but you've got to be first off the mark. The Myers Companies had a distinct competitive advantage because they had the vision no one else had.*⁷⁶

201. Mr Wallace testified that by the time the border re-opened, the marketplace was very different:

The lengthening period of the Canadian border closure also resulted in an increasing credibility gap for SDMI and PBC service providers like Green-Port who offered the lower priced US options to their customers. We had a number of joint projects with SDMI during this period and it became increasingly difficult to hold onto these proposals when no one could accurately predict if the border was in fact going to be open, or if it would open at all.

*It was only in February 1997, when the border actually opened, that our customers were again able to take seriously again [sic] the idea of sending PBCs to the US for disposal. For many of the quotes related to SDMI, it was clearly too late. It was necessary for those affected to rebuild their credibility, then build up moment all over again. Much of the goodwill that was created in 1995, and the momentum that existed then, was in a holding pattern by 1997. The SDMI lost credibility and so did we.*⁷⁷

202. In his oral testimony, Mr Wallace gave an example of the credibility problem. When Greenport bid on a job in which it would use SDMI's facilities in the USA to dispose of wastes held by school boards:

*...it was actually close to when the border was actually going to open up the second time...and even though we showed a better price, a better US price than the Swan hills version, they couldn't wait because what happens if the border doesn't open. This is part of the credibility problem we had.*⁷⁸

203. More generally, Mr Wallace explained that:

So what happened initially when we were giving out the Myers pricing through Green-Port we were telling people in '95 okay, the borders are going to open, the

⁷⁶ Ibid, paragraphs 43, 44 and 45.

⁷⁷ Ibid, paragraphs 38 and 39.

⁷⁸ Transcript, 22 September 2001, pages 366-367.

*borders are going to open. Then the borders did open, but then they shut down right away, so we lost a head of steam there. And the longer it went on, there were customers that...we lost credibility because you can only say the borders are going to open so long and the longer you go on in that continuum, you just continue to lose credibility. And not only Green-Port lost credibility, but Myers lost credibility. So that when the borders open up, unless people saw it in print in the Canadian Gazette or however it came out, they wouldn't believe it. They said no, no, you guys have been telling us the borders are open, we don't believe. And it was tough then building that momentum up again to get people to consider shipping to the U.S.*⁷⁹

204. Even before the border was re-opened, the evidence shows that SDMI was outbid by U.S. competitors in some instances.⁸⁰ According to Mr Wallace, SDMI also faced competition from Canadian companies who had time to establish themselves in the marketplace after the border closure:

*The Canadian competitors in 1995 that were just setting up to go, they were very well entrenched. They had market penetration, they had a brand name. It was a much different market and it was way more competitive and the margins were much smaller.*⁸¹

205. Mr Wallace's view that the rise of Canadian competitors had seriously changed the market between the closure and the re-opening is consistent with Dana Myers' testimony at the hearing on liability⁸² and Mr Rosen's evidence.⁸³

⁷⁹ Ibid, pages 345-346.

⁸⁰ Page 122, Myers Customer Comments [logs kept by Myers company sales representatives of conversations with potential customers]. *Polytechnique de Montreal says that they would go with the low bid and that they received 2 quotes from U.S. firms and we are higher priced....* TCI (a U.S. based firm) is later mentioned as one of the lower bidders.

⁸¹ Transcript, 22 September 2001, q. 321.

⁸² Transcript, liability phase, pages 437-438.

Q. So you must have been pretty pleased when the border reopened in February of 1997?

A. Let's put it this way: When the border opened the first time, I remember going home and all's I could think of was I played Handel's Messiah like seven times and I just thought, 'This is, I can't believe it.' And when it opened the second time, it was like pfft (phoen.) because all the fun had been taken out, the big part of the business had been taken out, and you guys just screwed it up, so...

Q. I see. So with all of the advantages that you acquired under the PCB waste export regulations vis-à-vis your competition in the United States, you didn't think that was a positive thing?

A. Well, during that 14 months, look at the number of Canadian competitors that sprung up in Canada that we didn't have before; people who came and said __ you know, Eric Smith, he's a big one.

He came to me on November 1st and he says, 'Look. Your prices are too low. You've got to raise them some.'

206. Mr Wallace also agreed in some respects that SDMI retained a price advantage over its Canadian competitors even after the border re-opened. In an exchange with a member of the Tribunal, Mr Wallace testified:

Q. Did S.D. Myers have a price advantage vis-a-vis American competitors by February 1997? There's evidence that they had some depending on which job -- such that the Canadian competitors would stick to the 20 percent rule. What about vis-a-vis American competitors in February 1997, when the border reopened?

A. The American competitors weren't prevalent, I can tell you that They weren't very aggressive in the marketplace. We didn't encounter American pricing from other competitors. The only exception to that, I would say, would be on a real big job like, for instance, we bid on Toronto Hydro cable recycling job back in...I think it was 1997, and TCL actually submitted a quote and we said 'These guys actually quote'...

We had the low bid with the Myers price because we were showing both options, the Canadian option and the U.S. option, and our quote for the Myers -- with Myers doing it at their facility was lower than TCI, but it ended up going to a Canadian company who -- you know, because the U.S. border wasn't open.⁸⁴

207. His evidence during a discussion with another member of the Tribunal was as follows:

Q. But I'm thinking relative to Myers because that was the comparison that you were -- made earlier. You saw the Myers facility, you were very impressed with it, and then you said that when the border was closed by Sheila Copps that secretly you had a sigh of relieve. When the border reopened, and I'm thinking relative to Myers, what was your feeling or your sense at that point?

A. Well, Myers, in terms of ballast recycling, we couldn't touch their prices so we decided to retire our trailers, and same with Comtech.

And, you know, you had Contact (phoen.), you had Cintec which didn't have a permit in November of 1995. They kept going, going. They finally got their permits. I think Synexin (phoen.) got a permit.

So more Canadian companies got into the business by 1997 because Canada basically protected that industry. And in my mind, I don't think any of those people, other than perhaps Cintec, would have ever gotten the business had the borders been open because they couldn't have done it and competed.

⁸³ The Event [the export ban by Canada] fostered new Canadian competitors.

⁸⁴ Transcript, 22 September 2001, q. 317.

I want to tell this anecdote. We were bidding on a deal with S.D. Myers as Hamilton-Wentworth. They had something like 11 shipping containers full of transformers and ballasts, it's all recyclable stuff, and Green-Port was going to do the crane work and the site services, and we were going to load the trucks to Myers. And to give you an idea even back then how competitive Myers prices were compared to the rest of the recyclers, the Canadian recyclers, and the reason for that was Myers was carrying the U.S. incineration prices and the Canadian recyclers were carrying Swan Hills incineration prices, a huge difference. The -- Swan Hills incineration prices were double the U.S. incineration price, and we walked out of the meeting and one of the Canadian competitors, and I won't say which one it is, he said, 'There's only two groups that have a chance at this tender', and he said, 'S.D. Myers and God.' And that gave you an idea -- and we talked with another competitor and I said, 'How come you're not going to bid this one?' And he says, 'I'm not going to bid something I'm not going to get. So that gives you an idea of how competitive Myers prices were on transformers and valves and we knew we were going to be reduced to the role of the broker....'⁸⁵

208. The overall picture that emerges from Mr Wallace's testimony, when placed in the context of other credible evidence, is as follows: SDMI had enjoyed a highly favourable position with respect to its standing with customers and prices at the time the border closed; when the border re-opened, its profile with many customers had been eroded and SDMI needed time and effort to try to re-establish itself; new Canadian competitors had emerged and some U.S. competitors were starting to participate in the market; while average market prices were lower than they had been when the market closed, SDMI was still competitive or superior in price in many situations, but not all.
209. SDMI's potential for generating profits depended, among other things, on its contacts and profile with customers, the inventory of PCB's owned by customers, the presence of competitors, average market prices and its ability to undercut competitors in terms of price. An examination of these factors shows that SDMI was in a substantially different (and worse) position when CANADA re-opened the border in 1997.
210. Although the evidence suggests that SDMI's position was eroded, it does not support the proposition that it was destroyed completely. The Canadian competition, such as it was, had been present and was growing, but SDMI was able in many contexts to meet it effectively. The U.S. competitors who were interested in the market acted very soon

⁸⁵ Op. Cit., q. 322.

after the enforcement discretion was issued in November 1995, but in relation to a variety of contracts or market niches they do not appear to have been a significant threat to SDMI when it returned to the market in 1997.

211. Although Dana Myers wrote in his statement that his company lost its momentum within days of the interim measure ...*and never did get it back*,⁸⁶ he testified that he always believed that the border would be re-opened.⁸⁷ This is not surprising because SDMI was aware that Canadian officials were working on establishing a regulatory regime for an open border. The largest number of quotations, excluding those after the border re-opened - 411 out of 597 - was during the period of the closure. On a monthly average - 59.7 - the majority of quotations were issued in the ten-month period before it was known officially that the border would re-open. Between then and the re-opening, the monthly average was approximately 38 quotations. After the border re-opened, SDMI continued to issue quotations and did so even after it was closed by the USA. These data do not suggest the collapse of SDMI's initiative either within days or, indeed, at any time prior to the closure of the border from the U.S. side.
212. SDMI also presented testimony from Mr D Jeffrey Harder, of BDO Dunwoody. His evidence was that the reason for the low number of orders processed after the border re-opened was as follows:

*Apparently, the volume of PCB wastes shipped from Canada to the United States from February to July 1997 was not great for two major reasons. Because there was not much notice that the Canadian border would be reopened it took time for Myers Companies to become operational...PCB waste disposal customers in Canada did not contract with Myers Companies...because they thought that the Canadian border might be closed again soon after it reopened.*⁸⁸

213. He was the only witness to make this assertion. There is no evidence to support either supposition. SDMI lobbied actively throughout 1996 to obtain the re-opening of the Canadian border. Reverend Valentine's principal mission for SDMI was to get the border re-opened. The re-opening was published in the Canada Gazette in October 1996.

⁸⁶ Dana Myers statement, 3 August 2001, paragraph 30.

⁸⁷ Transcript, 21 September 1998.

⁸⁸ BDO Dunwoody LLP Report, 3 August 2001, paragraph 30.

It came as no surprise to SDMI. Neither proposition supports the contention that CANADA's measure completely destroyed the position of SDMI in the Canadian market. In fact, they support the conclusion that the closure of the border by the USA was the factor that finally put an end to SDMI's prospects for generating income in Canada. CANADA is not responsible for compensating SDMI for any losses that are due solely to the fact that the "window of opportunity" was closed by the USA in July 1997.

214. The Tribunal concludes that SDMI was disadvantaged in the Canadian market by CANADA's measure. It lost the advantage of a head-start which would have seen it in a better position than its competition for several months.
215. SDMI lost the opportunity to process part of the inventory on which it quoted, and which was processed by others during the closure. SDMI also lost to others part of the inventory that remained available after CANADA re-opened the border and it lost part of the pre-closure inventory for which it could have obtained orders and exported before the USA closed the border in July 1997. In addition, SDMI's opportunity to process part of the pre-closure inventory was delayed by approximately 15 months.

Capacity of SDMI's Tallmadge processing facility

216. CANADA claimed that SDMI did not have the processing capacity to deal with the volume of PCB's that are the subject of its claim.
217. In paragraphs 14 and 15 of his 2 August 2001 statement, Mr Razor (SDMI's plant manager in Tallmadge) stated that at the relevant time the facility was running at 50% of capacity, that it could have processed the anticipated volumes from Canada and that if additional capacity were required it would have been developed as it had been on other occasions. When cross-examined he testified:

Q. Now, in 1995, '96, or '97 did you identify any need to expand the capacity of the plant?

*A. No. No, sir. We were trying to find additional work.*⁸⁹

⁸⁹ Transcript, 21 September 2001, q. 54.

218. Dana Myers' testimony was consistent with this assertion. He said:

Q. Now, in terms of the volumes that were dealt with in the quotes that you did issue in Canada, assuming that the borders were open, would those volumes stretch the capacity of S.D. Myers, Inc.?

A. I believe that we could have done all the work that we were quoting with the facility that we had, perhaps some additional expansion.⁹⁰

219. Having considered the evidence of Mr Rasor, the Tribunal is satisfied that SDMI's facility in Tallmadge could have processed all of the PCB-contaminated materials it could have acquired in the Canadian market and that it could have done so without investing significant sums in new plant or equipment.

The Tribunal's assessment

220. A number of facts are relevant to consideration of the quantification analysis. Over 50% of the Canadian PCB inventory upon which SDMI had bid was destroyed by Canadian operators during the period of the closure.⁹¹ The Tribunal takes the view that, in the absence of SDMI and the other U.S. operators, the prices for remediation of that part of the inventory were higher than the prices that would have prevailed if SDMI and the other U.S. operators had been in the market.

221. Despite environmental problems at Chem-Security's Swan Hills facility, the quotations that form the basis of the Claimant's calculation do not embrace the total Canadian PCB inventory; that is, the calculation relates only to that portion of the inventory on which the SDMI bid. They are conservative. When the border re-opened over 40% of the Canadian PCB inventory upon which SDMI bid was available to it, albeit in a changed market.

The Income Stream

222. As stated above, the Tribunal has concluded that the appropriate measure of damages is the value of the lost and delayed net income streams. The Canadian closure had three

⁹⁰ Transcript, 22 September 2001, q. 274.

adverse effects on SDMI's investment. Part of the total available inventory was irretrievably lost to others; part of the inventory that remained unprocessed after the border re-opened was lost to others; and another part was delayed, or lost because SDMI could not obtain the orders and export the material before the USA closed the border.

223. During the Canadian closure a quantity of PCB's were processed. It is necessary to ascertain the percentage of that inventory that could reasonably have been expected to be processed by SDMI. Its value was lost.
224. Some of the inventory that remained available when the border re-opened would have been processed by SDMI, but was or would have been processed by others because of the effect of the Canadian closure. Its value was lost.
225. Some of the pre-closure inventory that remained available when the border re-opened would have been processed by SDMI before July 1997 when the USA closed the border, but by reason of the Canadian closure, was not. Its value was lost.
226. SDMI would have processed earlier some of the pre-closure inventory that was available in February 1997. It is entitled to compensation for the cost of delay caused by CANADA's ban.
227. The Tribunal has rejected the application of the concept of mitigation in the context of this case. SDMI was not mitigating. It was back in business. This was evident from the level of activity undertaken by SDMI both during and after the closure. In fact, SDMI continued with some of its activities even after the U.S. closure.
228. CANADA should compensate SDMI for the net income streams that it lost, for the abridgement of the time available to SDMI and the value of income delayed by the Canadian closure. It is not responsible for more. Apart from the ongoing affect on SDMI's competitive position, which is taken into account, CANADA's liability ended when it re-opened the border. CANADA is not responsible for SDMI's inability to

⁹¹ Op. Cit., q. 322.

remediate Canadian PCB's after the U.S. closure or any other consequences of the closure by the USA.

Methodology

229. In order to assess the compensation due to SDMI as result of CANADA introduction of the export ban in November 1997, the Tribunal works through the following steps:

Income stream lost to others during the closure period

- Step 1. An assessment is made of the realistic value of the quotations relied upon by SDMI in support of its case on quantum.
- Step 2. An assessment is made of the price degradation that would have occurred if the border had remained open, and the value obtained in Step 1 is adjusted accordingly.
- Step 3. An assessment is made of the likely success rate for turning quotations into completed orders.
- Step 4. The success rate is applied to the value obtained in Step 2.
- Step 5. An assessment is made of the proportion of this value that would have been converted into a gross income stream for SDMI during the period of the closure.
- Step 6. The value of the remaining gross income stream is derived.

Income stream lost to others during the post-closure period

- Step 7. The value of post-closure quotations is calculated and added to the value obtained in Step 6, to produce the gross income stream available to SDMI when the border re-opened.

- Step 8. An assessment is made of the amount of the total post-closure gross income stream that was, or would have been, lost to others due to the closure.

Income stream not lost to others, but which would have been processed by SDMI during the 19 month “window of opportunity”

- Step 9. An assessment is made of the portion of the pre-closure inventory that was not lost to others.

Net income stream

- Step 10. An assessment is made of the net income streams that would have been derived from the total gross income streams, by deducting the cost of sales.
- Step 11. An assessment is made of the financial effect of the shortened time available to SDMI to process (or at least export) the remaining pre-closure inventory, and of the financial effect of the delay.

Total recovery for SDMI

- Step 12. The compensation to be awarded to SDMI is the total of the two lost net income streams, plus the estimated income that would have been derived from part of the remaining pre-closure inventory that could have been processed (or exported) by SDMI before July 1997 when the border was closed by the USA, and the time-value of the delayed net income stream.

Each step now is discussed in turn.

Quotations Value

230. The total number and value of bids and quotations proposed by SDMI was 833 bids and quotations with a claimed value of CAN\$101,774,735,⁹² plus 107 orders worth CAN\$2,329,319. This gives a total of CAN\$104,104,054.
231. These figures did not remain constant during the arbitration. SDMI's counsel provided an explanation for their development. He divided the bids into three groups: "A" – orders; "B" - bids and quotations for which a bid or quotation document exists; and "C" - bids and quotations for which a bid or quotation document was not found, but which were considered appropriate to include based on the commercial records of the company. The CAN\$101,774,735 is comprised of groups "B" and "C".⁹³
232. Group B included quotations issued after the border re-opened in February 1997. These amounted to approximately CAN\$9,200,000 in total, of which approximately CAN\$800,000 were quotations delivered after the border was closed from the U.S. side in July 1997. CANADA contends that all of the quotations after the border re-opened should be excluded because the inventory to which the quotations relate was available to SDMI and should not be used to calculate lost income.
233. The Tribunal takes the view that the post-July 1997 quotations should be excluded from the calculations, but not those sent during the period from February to July 1997. The post-July 1997 inventory was available to SDMI, but the quotations could not be converted into orders because of the closure from the U.S. side for which, as the Tribunal has held, CANADA is not responsible. The remaining CAN\$8.4 million of the post-February 1997 is considered as relevant.
234. Included in the totals were approximately \$19.8 million each for a number of large soil quotations and a Canadian Federal Government proposal. CANADA's position is that these should both be excluded.

⁹² Opening statement, Transcript, 21 September 2001, page 20 and following.

⁹³ Loc. Cit.

235. Although SDMI occasionally undertook remediation of contaminated soil, it did so usually as a means of encouraging customers to give SDMI contracts to remediate other PCB-contaminated materials. It generally was not a significant part of SDMI's business.
236. CANADA does not contend that all soil quotations should be excluded, but maintains that the large soil inventories should be excluded along with the large soil inventory component of quotations that included other categories of PCB-contaminated materials. CANADA points out that, in effect, SDMI could contract for the remediation of large soil inventories only as a broker, because it did not have the ability to process them at its own facility in Tallmadge.
237. The Tribunal determines that it is appropriate to discount the CAN\$19.8 million relating to large soils contracts, but not to exclude them completely. SDMI did bid for them and it did process, or arrange for processing, of some soil. The Tribunal determines that the value of the potential soil contracts should be reduced by 60% to CAN\$7.92 million, which results in a deduction of CAN\$11,880,000 from the CAN\$101,774,735 total.
238. The proposition that the Canadian government would not have awarded a contract to SDMI for policy reasons has a certain credibility; but in fact CANADA did not act consistently in this respect, because it *does* include an SDMI \$2 million government bid in the totals. However, CANADA's main position is that there is no material that supports inclusion of the bid in question. In particular, no bid document was produced by SDMI.
239. SDMI relied on a letter dated 13 December 1995 to the U.S. government, in which Dana Myers referred to a bid for processing PCB's for the Federal Public Works Department in the Province of Quebec. The letter is somewhat ambiguous. It is not clear whether SDMI was claiming that it actually had submitted a bid or was complaining that, as a result of CANADA's measure, it no longer could do so.
240. SDMI's counsel referred the Tribunal to testimony given by Dana Myers, but this did not establish whether SDMI actually bid for the contract concerned. Dana Myers stated that SDMI increased its efforts to have the Canadian border opened in the early Autumn of

1995, because it wanted to put in a bid for the Public Works contract. Neither in his statement nor in his oral testimony did Dana Myers state that SDMI actually did so. The issue was live prior to the hearing. If a bid were to have been made, it should have been possible to produce documentary evidence in the arbitration or, at the very least, Dana Myers could have testified to the point explicitly at the hearing.⁹⁴

241. Having considered the relevant evidence, the Tribunal determines that SDMI's claimed amount of CAN\$19,800,000 in respect of the bid for the Public Works Department's contract should be deducted from the CAN\$101,774,735 total.
242. Also included in the quotations' total were Canadian Federal Government PCB's valued at approximately \$7.6 million.⁹⁵ Mr Rostant considered that this should not be included because the value was included in the Public Works item mentioned above.⁹⁶ This contention was not rebutted by SDMI. The amount is deducted from the quotation population.
243. Mr Rosen listed a number of quotations categorised as "no files". Mr Rostant considered that these should not be included in the quotation population because they lacked documentary support.⁹⁷ The value at issue is approximately CAN\$2.4 million. The Tribunal is not satisfied that all of these quotations should be excluded, but that the lack of documentation and the subjectivity of their inclusions are matters to be taken into account.
244. The experts do not agree on a number of other items. These include so-called "cut off" items (CAN\$986,745), alleged duplications (CAN\$1.1 million) and "other items" (CAN\$233,572).⁹⁸ These total approximately CAN\$2.3 million. In his report, Mr Rosen stated that he was satisfied that the quotations included in the quotation population were accurate,⁹⁹ although he did agree with some of the concerns expressed by Mr Rostant.

⁹⁴ Op. Cit., q. 322.

⁹⁵ Op. Cit., q. 322.

⁹⁶ Op. Cit., q. 322.

⁹⁷ Op. Cit., q. 322.

⁹⁸ Op. Cit., q. 322.

⁹⁹ Rosen Report, 9 August 2001, pages 4, 17.

245. Late in the proceedings, an electronic record of contacts made by SDMI personnel to Canadian PCB holders was produced by SDMI. It corroborated the marketing effort of the company, but also shed light on the extent to which it is appropriate to rely on the quotation population as a foundation for assessing the potential income stream that was lost.
246. Many of the calls to Canadian PCB holders were cold, in that that was no clear indication of an interest in having SDMI process PCB's. Some revealed a refusal to deal with SDMI for a number of reasons, including price and concern with shipping PCB's to the USA. While this information does not undermine the overall credibility of SDMI's quotations data, it does put its use into perspective.
247. The Tribunal has taken these matters into consideration in evaluating the different opinions expressed by the experts on both sides. Some items are dealt with by using fixed amounts, for example, the starting point of CAN\$101,774,735 and the value of the Public Works and Government of Canada inventories. The latter are identified specifically by the Disputing Parties and are rejected in whole, on the grounds explained above. The Tribunal's judgement of the appropriate value of the large soils bids is stated above. Other matters are dealt with on the basis of the Tribunal's review and appreciation of the whole of the evidence.
248. In summary, the Tribunal's conclusion on Step 1 (that is, the quotations that should be taken into account as the point of departure in the assessment of the income stream lost in the period of the closure) is as follows:

SDMI's total quotations and bids		\$101,774,735
<i>Less:</i>		
bids delivered after July 1997:	\$800,000	
percentage of large soils bids:	\$11,880,000	
public works bid:	\$19,800,000	
Federal Government PCB's:	..\$7,600,000	
miscellaneous items (including "no files", "cut off" items, duplications, and "others")		

- \$2,400,000, \$986,745, \$1,100,000 and \$233,572):	\$3,000,000	
post-closure bids: ¹⁰⁰	\$8,400,000	
Total		\$50,294,735

Price degradation

249. SDMI's damages calculations do not contain any adjustment for potential price degradation. Mr Rosen's position was that, being based on actual quotations, the data reflect actual price movements. Relying on the evidence of Dr Stillman, CANADA proposes that the value of the quotations should be discounted by 42%.¹⁰¹
250. CANADA excludes from its analysis the quotations issued by SDMI after the border was re-opened. SDMI does not, and where quotations for the same inventory were issued both before and after the border re-opened, it uses the earlier quotation value.¹⁰²
251. It is clear that competition would have affected prices. Dana Myers stated:
- We started off in Canada quoting prices that were 10, 15, 20 percent higher than our U.S. prices because we knew the prices would come down so we started higher so that we could come down a bit and still make the margins we wanted to make.*¹⁰³
252. Mr Rosen agreed that prices would have come down had the border remained open.¹⁰⁴ He expressed the view that this fact was addressed in the quotation population he used for his analysis and by the margin that he applied to the gross revenue.¹⁰⁵
253. Dr Stillman derived his percentage from an analysis of a sample of quotations, to which he applied notional and actual prices to derive an average.

¹⁰⁰ These are discussed below.

¹⁰¹ Op. Cit., q. 322.

¹⁰² Op. Cit., q. 322.

¹⁰³ Op. Cit., q. 322.

¹⁰⁴ Op. Cit., q. 322.

¹⁰⁵ Op. Cit., q. 322.

254. The Tribunal has concluded that it is not appropriate to exclude all of the quotations delivered after the border re-opened. Some of the inventory of Canadian PCB's that remained after the Canadian closure was lost to SDMI as a result of CANADA's measure. Insofar as that inventory is included, the relevant price is that which was quoted after the border re-opened. Although it may not do so completely, it more accurately reflects the price that actual competition would have caused.
255. Prices quoted during the closure do not reflect the full effect of the competitive situation that would have existed if the border had remained open. Some discount to the quotation value is appropriate. That value reflects some measure of competition, as is apparent from the telephone logs; but, in a limited market, the effect is limited.
256. Based on the evidence overall, the Tribunal determines that the value of the quotations should be discounted by 15% to take account of price degradation that would have occurred through the operation of competitive pricing by others if the border had remained open from November 1995 to February 1997.
257. This conclusion results in a value of SDMI's quotations for the purpose of the calculation of the gross income stream lost during the closure at $\text{CAN\$}50,294,735 \times 0.85 = \text{CAN\$}42,700,000$, approximately.

Success Rate

258. SDMI calculated its market share as a derivative of the volume of the Canadian PCB inventory on which it bid throughout the period of its involvement in the Canadian market, to which it has applied a success rate based on SDMI's experience in the USA. CANADA used as a measure the volume of the inventory that was processed during the closure and derived the success rate from export permits issued. The Tribunal does not wholly embrace either approach.
259. A calculation based on SDMI's bids has a more firm foundation than one based on the volume of inventory processed. The latter is likely to have been affected by the ban. Activity in the market was less than it would have been, but for the closure. The

competitive landscape was different than it would have been, and there was little or no sense of urgency in the marketplace.

260. SDMI provided calculations based on several percentage success factors, but its primary case was based at 66%; that is, SDMI claimed that it would have been awarded contracts to process 66% of the Canadian PCB inventory in respect of which it submitted quotations. The source of this percentage was the success rate that SDMI claimed to have achieved in the USA.
261. SDMI's actual success rate in the U.S. market varied depending on the pool of data used and the type of material being processed. Mr Rosen stated that for transformers it was 45%.¹⁰⁶ Dr Berkowitz examined US EPA data published in a trade journal for the years 1992 to 1995 inclusive. These data showed that SDMI had an average of 38.3% of the U.S. market. She stated that the difference was based on the fact that she used 100% of the U.S. transformer market, whereas Mr Rosen focused on the main players in that market. She also noted that SDMI was involved in the remediation of PCB-contaminated materials from other sources although, as described by Mr Myers, its primary engine of profit was the remediation of electrical transformers. SDMI's share of the non-transformer U.S. market was less than one percent.¹⁰⁷
262. In part, the difficulty with a calculation based on SDMI's quotations is the data surrounding them. An examination of the information provided to the Tribunal to reflect the bidding process shows a measure of unreliability. The total dollar value of the bids requires careful scrutiny. Extrapolation of SDMI's experience in the USA into the Canadian market must be treated with caution. The U.S. market was mature. It was highly competitive. SDMI was well known. U.S. holders of PCB's were required by law to eliminate them. There were special liability issues in the USA. None of these elements were precisely equivalent to the situation in Canada.
263. In addition to disputing the size of the relevant inventory, CANADA takes the position that SDMI's success rate would have been 25%.

¹⁰⁶ Op. Cit., q. 322.

¹⁰⁷ Op. Cit., q. 322.

264. CANADA relies on the evidence of Dr Stillman. He based his opinion on an examination of export permits and concluded that SDMI's success rate would have been 44.8% before excluding permits related to an Alberta company, Custom Environmental. He concluded that these should be excluded based on a conversation with Mr John Myslicki, the head of the Transboundary Movement Division of Environment Canada.
265. The regulators were concerned that export permit applications did not reflect the actual volumes of PCB's that Custom Environmental had in its possession and that the company was acting merely as a broker to obtain permits in advance of signing contracts with PCB owners. Their investigations were ongoing when the border was closed from the U.S. side.¹⁰⁸
266. Dr Stillman made no independent investigation of the Custom Environmental situation and Mr Myslicki, who was called by CANADA as a witness at the liability stage of the arbitration, did not give evidence on the point.
267. It is not clear whether the export permits related to Custom Environmental were for inventory that it possessed or controlled, but even if they (or some of them) were, it could not be said that the volumes and value represented by them would not have been available had the market been allowed to continue beyond July 1997. The Tribunal is not satisfied that all of the export permits that related to Custom Environmental should be excluded, but it is not in the position to select those that should not be included.
268. Having reviewed the evidence, the Tribunal considers that a projected success rate of 25% is too low. SDMI was well established in the USA, and its marketing efforts in Canada had developed an awareness of its presence among the holders of the Canadian inventory of PCB-contaminated materials. It had experience, geographic appeal and – importantly – offered lower prices than its Canadian competitors. It was accustomed to dealing with its U.S. competitors, and they were not particularly active in the Canadian market.

¹⁰⁸ Op. Cit., q. 322.

269. Considering the evidence as a whole, a projected success rate of 66% is too optimistic. It is significantly higher than SDMI's best percentage achieved in the USA and a great deal more than the average success rate in the USA of SDMI in the years immediately prior to its Canadian initiative.
270. CANADA claims that, but for the Canadian closure, among the risks faced by SDMI was the potential response of the Sierra Club. Mr Rostant placed significant weight on this particular risk. Although there was certainly some risk from the Sierra Club's activities, as well as the possibility of litigation or political intervention by other environmental lobby groups, the Tribunal takes the view that it is not practicable to put a specific percentage on it.
271. The Tribunal also accepts that there are risks inherent in undertaking any new business venture, particularly in uncharted territory, but these risks were diminished somewhat by SDMI's marketing efforts, its reputation and its past experience.
272. A significant proportion of the time and effort invested by the parties in the second stage of the arbitration was devoted to determining SDMI's likely success rate measured as a percentage of the quotations it issued. There is no scientific method of ascertaining a value to be put on this factor. The only method by which the Tribunal can reach a determination is to apply its judgement based on the relevant evidence as a whole. The figure chosen by the Tribunal through the process of its deliberation is 44%.

Income stream lost to others during the closure period

273. The success rate of 44% is applied to the previously calculated value of CAN\$42,700,000 to yield a potential gross revenue stream of CAN\$18,800,000 during the period of the closure. A little over 50% of this apparently was processed by others, and thus irretrievably lost to SDMI. Based only on the value of SDMI's pre-closure quotations, the Tribunal assess that SDMI lost a potential gross revenue stream of CAN\$9,700,000 during the period of the closure. When the border re-opened, a potential gross income stream of approximately \$9,100,000 remained.

Income stream lost to others during the post-closure period

274. It is not easy to assess how much of the inventory that remained available after the border re-opened was, or would have been, processed by others as a result of the closure. The Tribunal assesses that a fair assessment is 18% of the quotations issued between February and July 1997, and of the value of the quotations that remained from the period of the closure were or would have been lost to others by reason of the closure.
275. Calculation of the value of the total post-closure inventory that was lost to SDMI by reason of the closure is also difficult. The Tribunal estimates that 18% was processed by others. The question is 18% of what?
276. Of SDMI's quotations prior to the closure, approximately CAN\$9,100,000 remained. An additional CAN\$8,400,000 of quotations were issued between February and July 1997, but many of these were for the same inventories on which earlier quotations had been issued. Taking this, and the factors that affect the reliability of the quotation data into account, the Tribunal discounts this figure to CAN\$6,500,000.
277. Using the same approach as applied to quotations issued prior to the closure, SDMI's success rate of 44% suggests that it would have obtained contracts for a value of CAN\$2,800,000 ($\text{CAN\$6,500,000} \times 0.44$) from the post-closure quotations.
278. Added together, the value of the inventory that remained after the closure plus the value of post-closure quotations result in a value of approximately CAN\$11,900,000 that potentially would have been processed by SDMI.
279. The Tribunal estimates that approximately CAN\$2,100,000 of this value was or would have been processed by others by reason of the closure.
280. After the closure, an inventory value of CAN\$9,100,000 remained, of which 18% was lost to others. This has been discussed in the preceding paragraph; that is, it is included in the CAN\$2,100,000. The remaining CAN\$7,500,000 of the pre-closure inventory ($\text{CAN\$9,100,000} - (\text{CAN\$9,100,000} \times .18)$) is considered below.

281. In summary, the Tribunal's concludes that SDMI lost gross income streams of \$9,700,000 and \$2,100,000 and is entitled to compensation for the interruption of the 19 month "window of opportunity", and for delay.

Net Income Stream

282. The next element of the exercise is to determine the net value of the income streams that SDMI lost, and that were delayed as a result of CANADA's measure. Although the Disputing Parties' experts arrive at substantially different results, their approaches to assessing the loss were essentially the same.

283. Mr Rosen stated in his initial report that:

The loss of potential discretionary cash flow is determined as the difference between the projected incremental revenues that would have been earned ... and the expenses that would have been incurred to realize the incremental revenue.¹⁰⁹

284. Mr Rostant described CANADA's alternative three for the compensation of damages:

Simply put, contribution margin is an accounting term that is defined as sales less variable costs, plus any additional fixed costs that may be necessary to achieve the lost sales.

285. The different amounts arrived at by the experts are due mainly to the variables and values employed in the calculation of the potential gross income stream figure - e.g. validity of quotations, success rate, price degradation etc. - and, fundamentally, by CANADA's proposal to restrict the compensation to losses suffered directly by MYERS Canada. The Tribunal has considered these matters, and stated its conclusions above.

286. The Disputing Parties' experts also take divergent views on which costs need be deducted from the gross income stream in order to determine the lost profit.

287. Mr Rostant describes the character of the different costs involved in his Revised Report as follows:

Accountants typically refer to cost as being variable, semi-variable or fixed when dealing with the costs of making and processing a sale. A variable cost is a cost

¹⁰⁹ Rosen Report, page 28.

that varies directly with the volume of activity, such as trucking costs to bring the Canadian PCB's to the SDMI facility. A semi-variable cost is a cost that varies with production or activity, but not in direct proportion to volume typically, because it contains both fixed and variable elements. Maintenance is an example of a semi-variable cost. Finally, a fixed cost is a cost that remains relatively constant regardless of the volume of production within a fairly broad range of activities (eventually if sufficient production is added, additional fixed cost will be incurred to meet demand). The equipment necessary to process the PCB at SDMI's Ohio facility is an example of fixed costs.¹¹⁰

288. Mr Rosen does not distinguish between costs that would have been incurred by SDMI for the processing of Canadian PCB's during the closure period. He simply refers to *Incremental Expenses to be Incurred by the Investment* and *Incremental Expenses of the Investor*, explaining:

In order to earn the additional revenues as outlined in this report (i.e. had the Event not occurred), the Investor/the Investment would have incurred incremental operating expenses.

289. The accountants accept that, if the loss of net income stream approach were adopted by the Tribunal, the gross income stream figures from lost sales should be adjusted to reflect the cost of sales. They differ as to the measurement of the costs to be attributable to those sales.¹¹¹ Mr Rosen concluded that the costs were 47% of the value of sales based on SDMI's Resource Recovery department.¹¹² Mr Rostant used an aggregate cost of sales based on an analysis of a number of departments. He contended that using data only from the Resource Recovery department ignores the many components of SDMI's facility that would be involved in the processing of PCB's. He stated in his report and later in his testimony, that his approach was consistent with the actual practice of SDMI. This was based on a discussion with Ms Horell, the former controller of SDMI.¹¹³ The Tribunal is inclined more to Mr Rostant's approach than to that of Mr Rosen on this particular point.¹¹⁴

¹¹⁰ Rostant, Revised Report, page 17.

¹¹¹ Rostant Report, 31 August 2001, page 12.

¹¹² Rosen Report, 28 February 2001, page 45.

¹¹³ Rostant Report, 31 August 2001, page 38; transcript, 25 September 2001, qq. 75, 246.

¹¹⁴ Rosen Report, Appendix III, page 44.

290. The data suggest that both sides agree that the incremental variable costs are approximately 5.6%. The net margin appears to be in a range between approximately 47% and 39%.¹¹⁵
291. Both experts include a deduction to take account of scrap metal sales. They also discuss different margins for soils and Canadian government PCB's. Their calculations include amounts for capital improvements to increase the capacity of the plant. The experts agree that the quantification of the lost net income stream is a matter of judgement. It was acknowledged as such by Mr Rostant who wrote in his August report:
- The Tribunal is faced with experts who, after applying their professional judgements, have arrived at significantly different conclusions.*¹¹⁶
292. The Tribunal has reviewed the specific areas of difference between the experts and concludes that a number of factors must be taken into consideration.
293. The first is that from the gross income stream must be deducted an amount to reflect the cost of the Canadian operation. Mr Myers arbitrarily allocated 10% of the total remediation contract income stream to MYERS Canada.¹¹⁷ The records pertaining to contracts that were performed are consistent with this allocation. The percentage was to cover costs and to earn a net income of approximately 5–6%.¹¹⁸ CANADA questioned the appropriateness of the 10% allocation, because it was not based on any assessment of the actual participation of MYERS Canada in specific contracts, that is, revenue was allocated to MYERS Canada regardless of whether it was actually involved in securing or processing a particular order. The Tribunal is not prepared to second-guess the decision of SDMI's management. The allocation was reflected in the contracts actually performed by SDMI. The Tribunal allocates 5% of the gross income stream to cover the costs of the Canadian operation.
294. The second concerns the treatment of a discretionary employee profit sharing plan. The experts disagreed about the way in which this should be taken into account in

¹¹⁵ Op. Cit., schedule 6.

¹¹⁶ Op. Cit., page 3.

¹¹⁷ Op. Cit., q. 322.

determining the cost base. Payment was based on the level of profitability of SDMI and ranged from a low of 0.9% of net sales in 1992 to a high of 5.6% of net sales in 1993. Mr Rostant's opinion was that the plan should be reflected in the calculation of the lost income stream.¹¹⁹ SDMI's position is that, being discretionary, the plan should not be included.

295. Details of the legal entitlement, if any, of employees were not provided to the Tribunal, but the available information suggests that the discretionary aspect of the plan was the percentage of net sales, not the fact of participation. In any event, the available information shows a consistent payment over the years to employees and the Tribunal takes the plan generally into account in its calculations, albeit not based on a specific percentage allocation.
296. Having taken into account all the factors it considers relevant, the Tribunal concludes that SDMI's net income stream would have been approximately 45% of the gross income stream.
297. The Tribunal has concluded that the lost gross income stream during the closure and post-closure were respectively CAN\$9,700,000 and CAN\$2,100,000 and that the delayed income stream was CAN\$7,500,000. The Tribunal assesses the values of the net income streams lost during the closure at CAN\$4,400,000 and after the closure at CAN\$900,000.
298. The Tribunal has experienced difficulty in assessing the effect of CANADA's measure on the remaining pre-closure income stream. But for the closure of the border some part of that stream would have been processed by SDMI during the nineteen month "window of opportunity". The Tribunal assesses the value of the income stream that SDMI could reasonably have derived from the remaining pre-closure inventory at CAN\$3,400,000 (CAN\$7,500,000 x 0.45).
299. Processing the balance of the remaining pre-closure inventory was delayed. The income stream from that balance would have been achieved over time. Having reviewed all the

¹¹⁸ Op. Cit., q. 322.

¹¹⁹ Rostant Report, 19 July 2001, page 25.

available information provided by the Disputing Parties, the Tribunal concluded that it was not possible to make a precise assessment of this element of the compensation that should be awarded to SDMI. After deliberation, and applying its collegiate judgement, the Tribunal assesses that CAN\$750,000 should be awarded to SDMI to cover (a) the shortened period available to SDMI to process the remaining pre-closure inventory, and (b) the time value of the delayed opportunity to process part of the remaining pre-closure inventory.

Conclusions

300. The Tribunal's conclusions, reached by working through the twelve steps, are as follows:

- Step 1. The realistic value of SDMI's relevant orders and quotations is assessed at CAN\$50,294,735.
- Step 2. The price degradation that would have occurred if the border had remained open is assessed at 15%: this percentage applied to the value assessed in Step 1 = CAN\$42,700,000.
- Step 3. The success rate is assessed at 44%.
- Step 4. The 44% success rate applied to the value obtained in Step 2 = CAN\$18,800,000
- Step 5. The gross income stream lost by SDMI to others during the closure is calculated (applying 50+%) at CAN\$9,700,000.
- Step 6. The remaining gross income stream from the pre-closure inventory available after CANADA re-opened the border was CAN\$9,100,000.
- Step 7. To this figure is added the realistic value of SDMI's post-closure quotations, giving a total gross income stream available to SDMI when the border re-opened assessed at CAN\$11.9 million.
- Step 8. The post-closure gross income stream that was, or would have been, lost to others by reasons of the closure is assessed at CAN\$2.1 million.
- Step 9. The remaining pre-closure income stream is assessed at CAN\$7.5 million.

- Step 10. The lost net income streams (45% of gross) are calculated at CAN\$4,400,000 (during closure), CAN\$900,000 (post-closure) and CAN\$3,400,000 (remaining pre-closure).
- Step 11. The compensation to be awarded in respect of the shortened time period available to SDMI to process the remaining pre-closure inventory, and for the time value of delay, is assessed at CAN\$750,000.
- Step 12. The total lost net income plus compensation for the abridged opportunity and delay is assessed at CAN\$6,050,000.

301. The Tribunal therefore concludes that the total compensation payable to SDMI shall be CAN\$6,050,000 excluding interest, which is considered below.

CHAPTER VII

INTEREST

302. It was common ground between the Parties that interest should be payable on any sums awarded in favour of SDMI and that the period over which it would be payable and the rate to be applied is a matter for the discretion of the Tribunal.
303. So far as the period is concerned, the Tribunal determines that interest shall be payable from the date of the Notice of Arbitration (30 October 1998) until the date of payment of the sums awarded in this Second Partial Award.
304. The rate of interest to be applied is closely connected with the question of the currency of account in which the award of compensation is made.
305. On the one hand, the currency in which SDMI operated was US\$ and no doubt all income received into SDMI's bank account in Ohio would have been converted into that currency. On the other hand, based on the bids made to potential Canadian customers (and the revenue from the seven completed contracts), the currency of account of the transactions between SDMI/MYERS Canada and their Canadian customers was (or was to be) CAN\$. On balance, the Tribunal considers that the currency of account of the lost income stream is more closely connected with the loss and damage suffered by SDMI than the working currency of SDMI in Ohio. Accordingly, the Tribunal determines that the currency of the compensation awarded in this Second Partial Award should be CAN\$.
306. It follows that the interest rate to be applied should be related to the standard Canadian prime rates applicable from time to time during the relevant period. The relevant period shall be the date of the Notice of Arbitration to the date of payment of the Award. Such interest shall be compounded annually.
307. The Tribunal determines that CANADA shall pay to SDMI compound interest on the sum awarded in Chapter VI above at the Canadian prime rate plus 1% over the period referred to above.

308. If the Disputing Parties are unable to agree on the relevant calculations they may place the issue before the Tribunal as a matter to be determined, together with the question of the allocation of costs, in its Final Award. In that event the Tribunal will consider appointing an accountancy expert, in accordance with Article 27 of the UNCITRAL Arbitration Rules, to review the Disputing Parties' respective positions and to report to the Tribunal.

CHAPTER VIII

COSTS

309. It was agreed at the second stage hearing that the Tribunal would make a Second Partial Award on the quantification of the compensation to be awarded and that the Disputing Parties would be given an opportunity to submit their claims in respect of costs, together with any submissions they wish to make, after they have seen the Second Partial Award.
310. Accordingly, all questions concerning costs under Articles 38 and 40 of the UNCITRAL Arbitration Rules are postponed to the Tribunal's Final Award.

CHAPTER IX

DISPOSITIVE PROVISIONS OF THE AWARD

- 311. CANADA shall pay to SDMI compensation for the loss or damage suffered as a result of CANADA's breaches of its obligations under Chapter 11 of the NAFTA in the amount of CAN\$6,050,000.
- 312. CANADA shall pay to SDMI interest (compounded annually) for the period starting at the date of the notice of arbitration until the date of payment of the award calculated at the Canadian prime rate plus 1%.
- 313. All questions concerning costs and, if necessary, the calculation of interest shall be postponed to the Tribunal's Final Award.

MADE in the City of Toronto, Ontario, Canada.

Signed:

(BPS)

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Bryan P Schwartz

(ECC)

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Edward C Chiasson

(JMH)

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J Martin Hunter

Dated 21 October 2002