See paras. 43, 45

Case Name:

Monarch Construction Ltd. v. Axidata Inc.

Between
Monarch Construction Limited, Plaintiff, and
Axidata Inc. and HOOPP Realty Inc./Les Immeubles HOOPP Inc., Defendants, and
Computing Devices Canada Ltd./Computing Devices Canada Ltee., Tricont Projects Limited, 745789 Ontario Limited, and Plymouth Tool & Stamping Limited, Third Parties
And between
Premium Properties Limited, Plaintiff, and
Computing Devices Canada Ltd./Computing Devices Canada Ltee. Tricont Projects Limited and 745789 Ontario Limited, Defendants, and
Abitibi-Consolidated Canadian Office Products Holdings Inc., HOOPP Realty Inc./Les Immeubles HOOPP Inc., Plymouth Tool & Stamping Limited and Monarch Construction Limited, Third Parties
And between
Abitibi-Consolidated Canadian Office Products Holdings Inc., Plaintiff, and
Tricont Projects Limited, 745789 Ontario Limited and Computing Devices Canada Ltd./Computing Devices Canada Ltee., Defendants

[2007] O.J. No. 816

27 C.E.L.R. (3d) 258

155 A.C.W.S. (3d) 833

2007 CanLII 6579

2007 CarswellOnt 1271

Court File Nos. 98-CV-160553 and 03-CV-246525CM

Ontario Superior Court of Justice

E. Frank J.

Heard: October 10-13, 16-20, 23-27, 30-31 and
November 1, 27, 30, 2006.
Judgment: March 5, 2007.

(318 paras.)

[Editor's note: An addendum was released by the Court April 1, 2008. See [2008] O.J. No. 1206.]

Contracts -- Breach of contract -- Conditions and warranties -- Remedies -- Damages -- Third party claim for damages resulting from land contamination by toluene waste -- Defendant Control Data sold its business to defendant Axidata in 1986 and assigned all leases -- Property contaminated by toluene waste that had leaked to adjacent properties -- Action allowed in part -- Control Data responsible for 90 per cent of contamination and resulting damages -- Axidata Inc. 10 per cent liable -- Control Data breached representation and warranty that it was not in default on any of lease terms -- Control Data's defaults under leases at time of closing were material breach of Asset Purchase Agreement and of Assignment Agreement.

Damages -- Contracts -- Breach of contract -- Award -- $1 million plus -- Third party claim for damages resulting from land contamination by toluene waste -- Defendant Control Data sold its business to defendant Axidata in 1986 and assigned all leases -- Property contaminated by toluene waste that had leaked to adjacent properties -- Action allowed in part -- Control Data responsible for 90 per cent of contamination and resulting damages -- Axidata entitled to costs of remedial work undertaken and costs not yet incurred -- Damages of $3,378,169 awarded.

Action for damages resulting from land contamination by toluene waste -- Plaintiff was adjacent land owner whose land had been contaminated by toluene leakage from property leased by defendant Control Data -- Plaintiff's action had settled -- Defendant Control Data was tenant of property in 1976 when underground storage tank for toluene was installed -- Control Data sold its business to defendant Axidata in 1986 -- Toluene contamination discovered in 1993 -- Underground storage tank and surrounding soil removed and remediation was undertaken -- Subsequently discovered that contamination had migrated onto adjacent land -- Axidata sought remediation costs from Control Data in third party action -- HELD: Action allowed in part -- Damages of $3,378,169 less 10 per cent awarded -- Control Data responsible for 90 per cent of the contamination and resulting damages -- Axidata Inc. 10 per cent liable -- Control Data disposed of 90 per cent of toluene that contaminated soil -- Purpose of tank was not storage of waste liquids but collection of spilled flammable liquids -- Use of the tank by Control Data did not accord with its purpose -- Control Data failed to instruct its employees on proper use of tank -- Procedures in place to monitor

pumping of tank were inadequate -- Tank not fit for use to which it was put, first by Control Data and then Axidata -- Remediation plan undertaking by adjacent property owners was reasonable based on expert advice -- Although there was considerable delay in getting remediation under way, no unreasonable delay caused by Axidata that resulted in notable increase of ultimate remediation costs -- Control Data had not demonstrated that costs of remediation sought by Axidata should be reduced because of failure to mitigate or because amounts claimed were unreasonable -- Control Data remained responsible for any liabilities and obligations under its leases until closing of sale to Axidata -- Control Data breached representation and warranty that it was not in default on any of lease terms -- Control Data's defaults under leases at time of closing were material breach of Asset Purchase Agreement and of Assignment Agreement -- Control Data liable to Axidata for damages resulting from those breaches -- Control Data required to indemnify Axidata for the claims arising out of toluene contamination to extent that Control Data was responsible for contamination -- Axidata entitled to costs of remedial work undertaken and costs not yet incurred.

Statutes, Regulations and Rules Cited:

Environmental Protection Plan, s. 93(1), s. 99(1)

Counsel:

Christopher J. Cosgriffe and *James J. Van Wiechen* for the Plaintiffs.

Barbara Nicholls and *Jean-Marc Eddie* for the Defendants/Third Parties Computing Devices Canada Ltd./Computing Devices Canada Ltee.

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E. FRANK J.:--

INTRODUCTION

1 Computer punch cards are, for most, just a distant memory. However, in the mid to late 1970's, before computers became based on silicon chips and DOS operating systems, the production of punch cards was a significant business and the primary business of the Toronto branch of Control Data Corporation. It is the toluene waste resulting from the manufacture of these cards that has lead to this action. As a result of that waste being disposed of in an underground storage tank, the solvent toluene contaminated the land surrounding the tank and, over time, the neighbouring properties. The issue in this action is who is responsible for that contamination and the extent of that responsibility.

2 For the reasons set out below, I find Control Data responsible for 90% of the contamination and resulting damages.

BACKGROUND

3 As the mid 1970's approached, the bulk of the revenue of the Toronto Business Products Division of Control Data was based on the production and sale of computer punch cards. The production of those punch cards involved cutting large rolls of paper into card width, printing them on a rotary press, cutting the strips into card lengths, and packing and shipping them. The printing consisted of one or two lines of numbers and a coloured stripe along the top edge of the card. Toluene was an ingredient in the dye used for this stripe. Toluene was also used to clean the printing plates and the machinery used in the production of the punch cards.

4 In 1975, Control Data decided to expand its Business Products Division. This required moving to larger premises. A building at 45 Commander Boulevard was leased and adapted to Control Data's requirements. This included the construction of a dye room' for the storage of flammable liquids, primarily toluene, in drums. It also involved the installation of an underground storage tank just outside the dye room and connected to it by a drain. It is the use of this tank that resulted in the toluene contamination. The move was completed in 1976. At its new location, Control Data operated as many as 14 punch card machines, each running for three shifts daily.

5 Over time, the demand for computer punch cards declined. Control Data gradually replaced that portion of its business with the manufacture of stock tab forms.

6 In 1986, Control Data sold its Business Products Division, in a management buy-out to what is referred to in these reasons as Axidata. The former management of the Business Products Division became the owners of 50% of Axidata. Later, their interest was reduced to 37%.

7 The operations continued at 45 Commander with no change in the onsite management.

8 The ownership of 45 Commander changed in 1993. In the process of its purchase by HOOPP, the property underwent an environmental due diligence assessment conducted by Trow Consulting Engineers Ltd. It was as a result of this that the toluene contamination was discovered. In response, the underground storage tank and surrounding soil were removed and remediation was undertaken. However, this was far from the end of the concerns associated with the toluene contamination.

9 In 1996, the shares of Axidata were sold to Abitibi-Consolidated Inc. In the course of the environmental due diligence assessment conducted on behalf of Abitibi-Consolidated prior to the share purchase, it was confirmed that the soil and ground water at 45 Commander were still contaminated with toluene, the latter at a level significantly above acceptable levels. It was believed that the contamination probably had migrated onto the adjacent property at 67 Commander. This circumstance resulted in terms being included in the Share Purchase Agreement which placed continuing obligations for the remediation of the property on Axidata. In 1998, the business was sold again and Axidata ceased to be a tenant.

10 The remediation has yet to be concluded. It is now in its final stages with an anticipated

completion date in the summer of 2007. It was eventually determined that the contamination had migrated well beyond 45 Commander, extending onto 67 Commander, under the roadway, and across to 70 Commander. Many consultants have been involved both to assess the situation and provide opinions as to how best to remediate it. Representatives of the affected adjacent property owners, including the City of Toronto, have been involved, as has the Ministry of Environment.

11 We are now more than 30 years from when toluene was first poured into the underground storage tank at 45 Commander. As would be expected, those who were involved at the time and gave evidence in the proceedings do not have perfect recall of the relevant facts. The contemporaneous documents which would have assisted in determining those facts are no longer available. The parties have turned to experts to assist in enabling the court to make findings as to what happened and what should have been done about it.

PARTIES TO THE ACTION

12 The toluene contamination at 45 Commander has given rise to a number of proceedings, beginning with the action commenced in 1998 by Monarch Construction Limited, the owner of 70 Commander and adjacent property. The majority of the proceedings have been settled. What is before me is three actions, two third party actions, and four counterclaims. Because of the settlements, the issues in the actions have been narrowed, for the most part, to those between the tenant of 45 Commander from 1976, when the underground storage tank was installed, to 1986, when it sold its business at that location, and the subsequent owner of the business and tenant who continued to use the tank and who has been cleaning up and remediating the contamination resulting from its use.

13 Control Data Corporation was the tenant in 1976 when the tank was installed. It underwent a number of name changes since it ceased to be a tenant at 45 Commander as a result of the sale of its division operating at that location in 1986. In the pleadings it is referred to as Computing Devices Canada Ltd/Computing Devices Canada Ltee. and General Dynamics Limited. Throughout the trial Control Data' alone was used to refer to the company and this is how I refer to it in these reasons.

14 Control Data sold to 149453 Canada Inc. As a result of a name change, that company became known as Tenex Data Corporation. In 1995, as a result of a further name change it became known as Axidata Inc. In 1998, the business became known as Abitibi-Consolidated Canadian Office Products. The latter two companies are remaining parties to this action. All four companies were referred to throughout the trial as Axidata' and this is how I refer to them in these reasons.

15 Tricont Projects Limited and HOOPP Realty Inc./Les Immeubles HOOPP Inc. remain parties to this action. Tricont was the owner of 45 Commander when Control Data became a tenant there. HOOPP became the owner in December 1993. The landlords were not independently represented at trial. HOOPP's claim is limited to costs as its obligations pursuant to the settlements have been met by Axidata. Tricont's claim is for the recovery of monies paid to Axidata in settlement of its claim against Tricont.

16 The other parties named in the pleadings are no longer parties to the action. Axidata and HOOPP have settled the claims by the adjacent landowners and tenants, Monarch, Plymouth and Premium on the basis that their properties will be cleaned up and remediated to the applicable Ministry of Environment Standards. To date, payments totalling approximately $3.7 million have been made by Axidata in settlement of these actions.

THE WITNESSES

(a) Witnesses who gave evidence

17 Much of the evidence at trial with respect to Control Data's, and later Axidata's, use of toluene in the manufacture of computer punch cards and the disposal of that toluene was provided by David Patterson, Art Harper, Richard Bryer and Fred Avery. I found each of them to be straightforward and conscientious in their answering of questions. It is not realistic to assess their evidence with an expectation of complete accuracy and precision. They were being asked to recall what were unremarkable facts, at the time, relating to events beginning more than thirty years ago. I find all of them to be, overall, reliable witnesses.

18 David Patterson was Control Data's plant manager from before the move to 45 Commander up to the time of the management buyout in 1986. He participated in this buyout with a shareholding of 3.9%. He continued as plant manager until 1990 and as such oversaw the manufacture of punch cards. He has been retired since 1997.

19 Arthur Harper was a maintenance supervisor for Control Data both before and after its move and continued in that position after the management buyout until his retirement in 1991, when he gave up his shares in the new company. He was familiar with the operation of the punch card printing machines, including their cleaning. His responsibilities included their maintenance as well as the maintenance of the overall operations of the plant. He reported to Mr. Patterson.

20 Both Mr. Harper and Mr. Patterson gave evidence with respect to the quantities of toluene used and disposed of at the plant. That evidence clearly underestimates the amount of toluene that found its way into the tank. This underestimation can be explained, in part, by the fact that their evidence did not address the toluene that was disposed of when they were not at the plant. In part, the underestimation may be a reflection of memories weakened by the passage of time. In my opinion, it does not cast doubt on the reliability of the balance of their evidence.

21 Mr. Bryer, as Control Data's Ontario regional manager, was responsible for the planning and execution of the move to 45 Commander. He was the individual most closely connected with the planning of the new facility, including ensuring that it met the company's, as well as regulatory, needs. He negotiated the lease with the landlord, Tricont. Mr. Bryer's employment with Control Data ended shortly after the move. He impressed me as a thoughtful and straightforward witness with a reliable recollection of the relevant details, particularly with respect to the intended use of the underground tank.

22 Fred Avery became Axidata's Logistics Manager in 1990. He was responsible for the emptying of the underground storage tank from 1991 or possibly early 1992, to when he had it sealed in December of that year. Mr. Avery's evidence is of particular significance with respect to the size of the tank. Control Data submits that his evidence is not reliable because it fails to take into account facts regarding how far below ground the tank was installed. However, I find that to be an overly narrow interpretation of the evidence. I found Mr. Avery to be careful in responding to questions and that his answers reflected a thorough and conscientious approach to his responsibilities.

23 Control Data submits that the evidence of these and other witnesses called on behalf of Axidata, who will be discussed later, must be discounted because of their personal financial interest in the outcome of the litigation. This interest is a result of the price paid by Abitibi-Consolidated Ltd. for the purchase of the Axidata shares being dependent, in part, on the costs of the remediation in issue. Financial interest in the outcome of litigation can be a factor to weigh in assessing the credibility of a witness. Of the above witnesses, it has potential relevance only to Mr. Patterson who is the only one who was a shareholder of Axidata at the time of the sale of its shares. He impressed me as giving his evidence in an entirely unbiased fashion. He was not cross-examined on his interest in the litigation, which to the extent that it exists, is small. I do not consider his financial interest in the outcome of this action to diminish the reliability of his evidence.

24 The other lay witnesses called by Axidata, with the exception of Louise Pearce, were also employees of one or both of Control Data and Axidata. Their involvement extended to the remediation of the toluene contamination. Both were shareholders in Axidata as a result of the 1986 management buy out of Control Data.

25 Gary Heffernan joined Control Data in 1977 and became the Operations Manager of the Business Products Division at 45 Commander, eventually becoming the General Manager in 1981 at which time he relocated to Control Data's head office in Mississauga. As a result of the management buy out in 1986, Mr. Heffernan became the president of the new company and returned to 45 Commander. He has continued as president of each successive company carrying on the business at 45 Commander up to the present. His shareholding in Axidata was just under 9.6%.

26 Mr. Heffernan gave evidence with respect to the volume of punch card production at Control Data and Axidata. His evidence was based on figures contained in documents which he had prepared in the course of his work for the purpose of financial planning and on available records compiled in the normal course of business. That evidence was unaffected by cross-examination and I accept it.

27 Mr. Heffernan's evidence with respect to the remediation was limited by the role he played. He was not involved in remediation on day-to-day basis, though he did participate in some meetings and was involved in decision making between 1993 and 1998.

28 In assessing the reliability of Mr. Heffernan's evidence, I am mindful of his interest, indirect

though it may be, in the outcome of this action. I did not have the impression that his evidence was influenced by this interest. I find him to be a reliable witness who gave his evidence to the best of his recollection.

29 Like Mr. Heffernan, John Arnott started with Control Data and has continued as an employee of each successive owner of what had been Control Data's Business Products Division. In 1984, he became the manager of operations for that division, continuing in that position on its sale to Axidata in 1986 until 1996, when the company's shares were sold and he became vice-president of operations. In 1997, he took over as the on-site person responsible for dealing with the remediation and continued in that role until the fall of 1999.

30 I did not find Mr. Arnott's evidence easy to follow as he appeared to have difficulty answering questions directly. At times his evidence, particularly on the issue of who bore responsibility for the decisions regarding the remediation, was imprecise at best and evasive at worst. His evidence was of limited assistance.

31 Louise Pearce has been involved with the remediation since 1999 when she was with Trow Consulting Engineers Ltd., the environmental consultants who detected the contamination and began its clean up and remediation. In 2000, she became involved on a day-to-day basis. By this time she and the Trow senior project manager for 45 Commander had joined Acres & Associates Environmental Ltd. She has continued to work on the remediation from 2002 to the present as an employee of Environmental Resources Management ("ERM").

32 Ms. Pearce described the development of the Remediation Action Plan ("RAP") and the Extended Remediation Action Plan ("ERAP") for 45 Commander and the neighbouring properties and their implementation.

33 Based on her evidence, I accept that the reports prepared by Trow from the outset of its involvement and which were relied on for the development of the RAP and ERAP were made in the ordinary course of business and I accept them into evidence. These reports were relied on not only by Ms. Pearce, but all three of the experts.

34 John Reid gave evidence as the representative of Control Data. He was called to the bar in 1974 and has been with Control Data since 1982. He became Corporate Secretary and General Counsel in 1992 and has remained in that position since. He had no personal knowledge of the punch card manufacturing operations. I accept his evidence with respect to the very limited matters about which he gave evidence.

(b) The failure to call potential witnesses

35 Both parties seek to have adverse inferences drawn form the failure by each to call certain witnesses.

36 The Supreme Court of Canada has said in *Levesque v. Comeau* that where a "[party] "alone could bring before the Court evidence and she failed to do it ... a Court must presume that such evidence would adversely affect her case."[1] Control Data submits that Jeffery Ing and Carr Hatch are witnesses who Axidata could alone call to give evidence and that I must therefore conclude from Axidata's failure to do so that their evidence would be harmful to Axidata's claim.

37 Carr Hatch had been an employee of Control Data prior the sale of the business at 45 Commander to Axidata in 1986. As of then, Mr. Hatch became the Vice-President and Chief Financial Officer of Axidata remaining in that position until his retirement in 1997. Mr. Hatch led the remediation efforts from the date of the discovery of the contamination until his retirement. As Mr. Hatch ceased to be an employee of Axidata nearly ten years ago, it cannot be said that Axidata has control over him. Control Data could have called him as a witness. As a result, the decision in *Levesque* does not require that a negative inference be drawn against Axidata as a result of Mr. Hatch not having been called by Axidata to give evidence.

38 Though I am not required to draw an unfavourable inference from Axidata not having called Mr. Hatch as a witness, I have the discretion to do so. That discretion exists where, as E. MacDonald J. said in *MacMaster (Litigation guardian of) v. York (Regional Municipality):*

> An adverse inference with varying weight attached to it may occur in circumstances where a party fails to call a material witness, and it is apparent form all of the other evidence in the case that the witness, who was particularly and uniquely available to that party, would have been able to help the court by giving evidence on a material issue.[2]

39 The record of Mr. Hatch's written communications regarding his involvement in the remediation was admitted into evidence along with all of the reports delivered to him and notes and correspondence sent to him. It is not clear to me that calling Mr. Hatch as a witness would have been of material assistance to the court. Nor can I assume that he was particularly and uniquely' available to Axidata. I see no basis for concluding that had Mr. Hatch been called, his evidence would have been in some way harmful to Axidata's case.

40 Jeffery Ing was the project manager for the leasehold improvements made by Control Data's landlord, Tricont, when Control Data moved to 45 Commander. As such, he was involved in the finalization of the plans for the dye room and underground storage tank. In his opening, counsel for Axidata said that he would be calling Mr. Ing to give evidence with respect to the fact that the plans providing that the tank was not to be used for waste disposal and storage and that he had communicated to Control Data that this was the position of the Ministry of Labour.

41 Control Data asks that an adverse inference be drawn from Axidata not having called Mr. Ing. This, however, disregards the fact that Mr. Ing's evidence on this point became unnecessary as a result of the evidence given by another witness, Richard Bryer. The only inference I draw from Mr. Ing not being called is that Axidata was seeking to not unnecessarily prolong this trial.

42 Similarly, I do not agree that any negative inference should be drawn from Axidata's failure to call a witness from Trow, or from Control Data's and Axidata's landlord at 45 Commander, Tricont, or Axidata's landlord as of 1993, HOOPP, or a representative of Abitibi Consolidated Office Products Canada Inc. The latter three are parties to the action, but their involvement is peripheral and their interests come under umbrella of Axidata's prosecution of the action.

43 All of Trow's reports and written communications with those with whom they dealt on behalf of Axidata with respect to the remediation were admitted into evidence. There is no suggestion that they do not correctly or adequately reflect Trow's activities and recommendations. In those circumstances I fail to see the need for a representative of Trow to have been called as a witness.

44 As for Tricont, HOOPP and Abitibi Consolidated Office Products Canada Inc., in the particular circumstances of this case it would not be appropriate to draw an adverse inference based on the fact that they are parties and were not called to give evidence. They are parties only in a technical sense, and have left their interests, to the extent that they exist, to Axidata to advance on their behalves. Further, it is not evident that they would have anything substantive to add to the evidence. They were all examined for discovery by Control Data. Indeed, answers given by HOOPPS' representative on discovery were read into evidence at trial by Control Data. Additionally, the involvement of these parties in the remediation was addressed through the correspondence filed at trial and through the reports referred to at trial that were prepared by the environmental consultants retained by these parties.

45 A trial is a balancing act. A party must put forth sufficient evidence to establish its claim, but cannot responsibly indulge in calling all the evidence that is available. My impression of the choices made by Axidata as to the witnesses called is that they reflect a reasonable approach to the compromises that must be made. They do not warrant the drawing of any adverse inference.

46 There is one additional person with respect to whom the question of the inference to be drawn from his failure to be called has been raised. Axidata seeks to have an adverse inference drawn against Control Data for its failure to call Robert Leonard, the production manager who reported to Richard Bryer and was responsible, on a day to day basis, for the monitoring of the construction of the dye room and installation of the underground storage tank. Mr. Leonard may also have ordered the tank.

47 It was open to Mr. Reid to explain why Mr. Leonard was not called to give evidence. He is the only Control Data employee who might have been able to provide details regarding the tank. But, no explanation was given. While this may justify the drawing of an inference that Mr. Leonard's evidence would be damaging to Control Data, given all of the circumstances, the only inference I draw from the fact that Mr. Leonard was not called to give evidence is that he either could not be located or had no reliable recollection and was unable to be of any assistance. In any event, if I were to draw a negative inference, my findings would not be dependent on that inference.

(c) Expert witnesses

48 Three expert witnesses submitted reports and gave evidence. Richard Lewis gave evidence on behalf of Axidata. He has a M.Sc. in geology and is a Certified Professional Geologist through the American Institute of Professional Geologists, specializing in hydrogeologic evaluations of hazardous waste releases. He provides his services throughout the world. He has expertise specific to hazardous waste investigations and remediation practices and has given expert evidence with respect to these. He has extensive experience in transport modeling including modeling of toluene. His experience with underground storage tanks extends over thirty years.

49 Mr. Lewis prepared three reports. The first is with respect to the cause of toluene contamination and the course it took travelling through the subsurface. The underlying assumptions in this report accord with the evidence. The analysis is transparent and the assumptions upon which it is based are clearly articulated. While a number of errors in the report were identified and acknowledged by Mr. Lewis, they do not undermine the reliability of the report generally, subject to the limitations discussed below under the sub-heading The migration of toluene through the subsurface'.

50 The second report is a response to Control Data's critique of Mr. Lewis' first report. As discussed below, I find this report together with Mr. Lewis' evidence to provide a largely satisfactory response to the criticisms made.

51 The third report is an analysis of the remediation required and its costs. Mr. Lewis is a partner of ERM. Control Data submits that the weight to be given his evidence with respect to the reasonableness of the remediation and its costs should be limited by the fact that ERM took over the implementation of the RAP in 2002 and that Mr. Lewis himself was involved in the preparation of the ERAP in 2004, providing editorial and technical reviews of the report which he co-signed with Ms. Pearce and an ERM senior technical advisor. Further, Mr. Lewis continues to be involved in its implementation. Mr. Lewis conceded that he was not independent in giving his evidence with respect to the reasonableness of the remediation from 2002 onward.

52 I agree with Control Data that Mr. Lewis' evidence regarding the implementation and costs of the final stages of the RAP and the ERAP must be examined carefully not as the evidence of an independent expert, but rather as someone defending his own position. I will deal with the significance of this is the Remediation' section of these reasons.

53 On behalf of Control Data, Dennis Lafleur gave evidence with respect to the issues regarding both the contamination and the remediation. Mr. Lafleur has a M.Sc. in civil engineering. He is the president and principal shareholder of Aqua Terre Solutions Inc., which provides a range of environmental services including site assessments and remediations, primarily for petroleum companies. He has written on the matter in issue, that being the remediation of ground water containing hydrocarbons.

54 Mr. Lafleur's report lacks transparency in that it does not disclose all of the underlying assumptions or evidence relied on nor the method by which he arrived at his conclusions. While his

oral evidence was of some assistance in providing the information necessary to test the validity of his conclusions, it was not sufficient. Further, his assumptions did not all accord with the evidence and were arrived at with inadequate background information. Mr. Lafleur had no information with respect to the use of the tank prior to the 1986 sale by Control Data. My impression is that in giving his evidence Mr. Lafleur was more anxious to support the conclusions in his report and establish that he was right than he was to assist the court with truth finding. For these reasons, to the extent that I place reliance on the expert evidence, I generally prefer the evidence of Mr. Lewis to that of Mr. Lafleur.

55 Roger Woeller was retained by Control Data to review Mr. Lewis' reports. He has a M.Sc. in hydrogeology and is registered as a professional geologist in a number of provinces. Like Mr. Lewis, he has provided services worldwide. He is currently the CEO and a director of Water and Earth Science Associates (WESA) Group Inc. with which he has worked as a ground water specialist. While Mr. Woeller is obviously highly qualified, based on the evidence before me, he does not have the same degree of directly relevant experience on the matters in issue as Mr. Lewis.

56 The extent to which I could place reliance on Mr. Woeller's evidence was further undermined by what I find to be his taking on the role of advocate. His oral evidence was far more supportive of Control Data's position than was his report. An example is his evidence with respect to the question of the adequacy of the depth of a recovery trench installed in 1993 at the outset of the clean up at 45 Commander. On examination-in-chief, Mr. Woeller said that he agreed with Mr. Lafleur's opinion that the depth was adequate, an opinion which lends support to Control Data's position that much of the costs of the remediation could have been avoided had Axidata accepted clean up recommendations made by Trow in 1993. However, this is contrary to what Mr. Woeller said in his report. On cross-examination, Mr. Woeller did confirm his adherence to the opinion stated in his report. Overall, where their evidence conflicts, I prefer the evidence of Mr. Lewis.

THE ABSENCE OF DOCUMENTS

57 Since the installation of the underground storage tank at 45 Commander, there have been sales of the business operated there first by Control Data, sales of the property itself and corporate restructurings of the businesses' shareholders. Few of the relevant documents that existed with respect to the period from 1976 to 1986 have been located. Many relevant documents from 1986 to the early 1990's are also missing. Control Data urges me to draw a negative inference against Axidata based on this.

58 Control Data is particularly concerned with the invoices for toluene purchases. There is no suggestion, let alone evidence, that any documents that have not been produced are available or were made unavailable by the party not producing them. The evidence is that the documents simply could not be found. I accept that evidence and decline to draw an adverse inference against either party from the fact that so few documents are available, and particularly from the fact of the missing toluene purchase orders.

THE USE OF TOLUENE AT 45 COMMANDER

(a) How toluene was used

59 Toluene was used both in the printing process and in maintenance of the parts and machinery.

60 The "ink" used to print the coloured stripe on the edge of the punch card was powdered dye mixed with methanol and toluene, the latter because of the speed with which it would evaporate. The dye was mixed in a small room known as the dye room where barrels of toluene were stored. The majority of the toluene used at 45 Commander was used for mixing dye. There was no toluene waste resulting from this use.

61 Toluene was also used as a cleaning solvent. It was poured on rags to wipe down the machines; however, none of this toluene was disposed of in the underground tank as the soiled rags were removed by a service.

62 Toluene was used to clean the punch card presses and the plates used in the printing of the cards. It is this use of toluene that produced the waste that was drained into the underground tank.

63 The plates were cleaned in a sink in the dye room. A pail containing toluene was put into the sink. The plates were brushed clean in that pail. The sink was drained of the used toluene into a pail placed under it. Near by, in the concrete floor of the dye room, was a pipe of about one-and-a-half inches in diameter that was connected directly to the underground tank. When the pail under the sink was full, it was emptied into this drain. It was Mr. Patterson's recollection that it was emptied one or two times a week during peak punch card production in the late 1970's and then increasingly less frequently.

64 The machinery parts were cleaned in the maintenance area in a tray containing toluene. It was only parts from the machinery used for the manufacture of the punch cards that were cleaned using toluene. As the toluene got dirty, it was poured into a pail, (Mr. Harper recalled it to be about a five-gallon pail) that was kept next to the tray. He recalls the contents of that pail, which included oil removed from the parts, being poured down the drain in the dye room into the tank every week and a half to two weeks during the period of peak production.

65 On cross-examination, Mr. Patterson said that it was possible that toluene was also used to wipe down the occasional accumulation of oil on the side of the form presses. He could not recall whether it was toluene or another chemical that was used for this purpose. There was no other evidence of toluene being used for any purpose unconnected with the production of punch cards. As a result, given Mr. Patterson's uncertainty and the minimal amount of toluene that would be involved in any event, I find that the use of toluene was effectively limited to use in connection with the production of punch cards.

66 Toluene was not the only waste created in the process of manufacturing punch cards that was

disposed of in the tank. Methanol, oil from the maintenance department, and possibly water, were poured into the tank and possibly water. However, the majority of what went into the tank was toluene. As of 1988, it was estimated to be about 60%. Testing during the course of the remediation showed the percentage of toluene in the samples taken to be 70%.

(b) The amount of toluene used

(i) punch card production

67 It is only with respect to 1990 and forward that there are records of the actual number of punch cards produced. However, I conclude from the available evidence that the amount of punch card production declined dramatically between 1981 and 1986. By the fiscal year end of 1987, that is November 30, 1987, the card production was reduced by more than 83% from what it had been in 1978, the highest year of production for which there are records. By 1989, card production was just approximately 10% of what it had been in 1978 and by 1990 it was less than 5% of what it had been in the late 1970's.

68 Whereas in 1980, card production was around 1.1 billion annually, ten years later it was at just over 76 million. In the five years from 1976 through 1981 roughly 6 billion cards were produced. In comparison, the total production for the six years from 1987, the year following the sale to Axidata, to 1993, was only around 670 million cards.

69 It is clear that the amount of toluene used at 45 Commander was directly proportionate to the volume of punch card production which was Control Data's primary business when it moved to 45 Commander. As punch card production declined, so too did the amount of toluene used.

70 I reach this conclusion for reasons that include the following:

1. Mr. Harper recalled that the decline in production likely began in 1980 or 1981. His evidence that at this time Control Data reduced the number of the shifts over which it ran the punch card machines is supported by the evidence of Mr. Patterson.
2. In 1977, when Mr. Heffernan joined Control Data, the form business which was being developed as a replacement for the punch card business was still in its very early stages. It was not until 1982 or 1983 that two additional form machines were added to the one existing machine. The fourth machine was purchased some time in the late 1980's.
3. In the context of long range planning, in May 1981, Mr. Heffernan prepared a document which included a list entitled Major Assumptions and Risks/Opportunities'. It refers to the anticipated continuance of the 20% decline in the volume of card production. Together with Mr. Harper's evidence, this is consistent with the decline in production beginning in

1980.

4. As part of his responsibilities for fiscal reporting and planning, Mr. Heffernan prepared charts of actual revenues and his projections for the business, including its punch card production. Those charts that still exist provide evidence as to the revenue from card production for 1978 through 1980 and 1987 through 1989. Using these charts together with the Factory Operations Report for October 1996, Mr. Heffernan was able to calculate the volume of cards produced in those years. While the resulting figures cannot be taken as being precise, they serve to provide a reasonable estimate of the volume of card production during those periods. The actual card production for 1990 onward is known by way of the existing monthly card production record dated March 31, 2001.
5. According to Mr. Bryer, just before the move to 45 Commander, 100 million cards were being produced a month. He was not asked whether that number remained the same following the move, but that it did so is consistent with production tables prepared by Mr. Heffernan following the move to 45 Commander.

71 I am mindful of the evidence of Control Data's expert, Dennis Lafleur who maintains that in spite of the dramatic drop in card production that began in 1980 and resulted in card production being reduced by 1987 to less than 17% of what it had been in 1978, Axidata was disposing of large amounts of waste in the tank. He relies on the record of waste generated by Axidata in 1993; specifically a waste manifest showing that 450 gallons of waste collected in barrels was removed from 45 Commander that year. However, in the face of the evidence connecting toluene use to punch card production, this is insufficient evidence to establish, on a balance, that all of this was waste toluene which would have been deposited in the tank had it not been plugged sometime in 1992. There simply is too much that is unknown about why and when the waste was collected in the barrels.

(ii) the portion of used toluene that was disposed of in the tank

72 Only a small portion of the toluene used at 45 Commander was disposed of in the tank.

73 That amount was less than would otherwise be the case because of the speed with which toluene evaporates. Indeed, according to Mr. Harper all of the toluene used outside of the dye room after Control Data stopped running the punch card machines on three shifts daily, evaporated. It is Mr. Harper's evidence that as of 1980, there was no longer any toluene that had been used in the cleaning of machines to be disposed of in the tank. While Mr. Harper's recollection of when it was that Control Data significantly cut back on punch card production may not be precise, I accept his uncontradicted evidence that when production was significantly cut back, he no longer poured toluene down the dye room floor drain. There is no evidence as to whether others using toluene to

clean the machines used enough to result in some waste product; however, the likelihood is that the waste would have been minimal.

74 In his report, Mr. Lewis states that 85% to 90% of the toluene purchased was used to mix ink, which would mean that something less than 10% to 15% of the purchased toluene was disposed of in the tank. While there is no evidentiary foundation for the specific percentage of toluene used to mix ink referred to by Mr. Lewis, it is consistent with the evidence of Mr. Patterson and the uses to which toluene was put as described by him and Mr. Harper.

75 Mr. Lafleur uses a waste disposal rate of 15.28% to 24% for the calculations on which his conclusions are based. He arrived at this number based on what he concluded would be the rate necessary to generate an overflow approximately equivalent to the low end of his estimate of the amount of contaminant in the subsurface. In doing so, he had no regard for the evidence as to the amount of toluene disposed of. His admissible support for the reasonableness of this disposal rate is a report from the United States Environmental Protection Agency that states that solvent waste for typical printing operations is in the order of 20% to 30%. However, no reliance can be placed on that report which itself states that the information on which those figures were based was not sufficiently representative to produce an accurate portrayal of the industry. But more important is the fact that printing industry' refers to all nature of printing and not specifically the manufacture of punch cards. As previously stated, there is a very minimal amount of printing on these cards, which makes data with respect to, for example, the publication of books, of very limited relevance.

76 I find that no reliance can be placed on the waste disposal rate used by Mr. Lafleur. However, I note that if this rate were to be applied, it would mean that the length of time it would take to fill the tank would be less than it would based on Mr. Lewis' assumption as to the waste disposal rate. As the rate applies equally to Control Data's use of the tank, there would be a resulting increase in the number of times the tank needed to be pumped by Control Data. Given the infrequency with which it pumped the tank, the result would be more extensive overflowing of the tank during peak use based on Mr. Lafleur's calculations.

(iii) the amount of toluene purchased

77 There are no records with respect to toluene purchases prior to 1986 and only partial records for the years after. The experts used the available records to estimate the amount of toluene that was purchased.

78 Control Data submits that these estimates, including those of its own expert, grossly underestimate the amount of toluene purchased. In doing so, it relies on Mr. Patterson's evidence that most of the purchases were from a company from which no invoices were produced. However, having heard Mr. Patterson's evidence on that point, I am not satisfied it can be relied on as meaning that the invoices that have been produced represent only a small portion of the toluene purchases when that is not a conclusion that could otherwise be drawn. Accordingly, there is no basis for Control Data's position that the estimates represent only a fraction of the amount of toluene

purchased.

79 I find that the estimates of toluene purchased used by the experts are appropriate. Therefore, it is clear that Control Data disposed of the vast majority of the toluene that contaminated the soil.

80 If the estimates were as Control Data argues, very low, then it would follow that the amount of toluene purchased and then disposed of in the tank was far greater than assumed. On that basis, the tank would have required far more frequent pumping, which would mean more overflow from the tank during Control Data's use of it than has been assumed by its experts. This would make the estimates of Control Data's experts as to the extent of overflow unreliable and would again place responsibility for the majority of the overflow on Control Data.

(iv) summary

81 In summary, I find that the use of toluene was such that by the time Axidata purchased the business from Control Data the amount of toluene being poured down the drain of the dye room floor had been dramatically reduced from what it had been in the first four or five years of operations at 45 Commander.

THE UNDERGROUND STORAGE

(a) The purpose and use of the tank

82 Prior to the move to 45 Commander, unused toluene was stored in drums on the plant floor. Waste toluene, and the other waste products combined with it, was also stored in drums. Those drums were periodically taken from the plant and disposed of.

83 Mr. Bryer recalls that both the Ministry of Labour (at the time, it was known as the Department of Labour) and the Scarborough Fire Department insisted on different storage arrangements in the new space. A storage room was amongst the improvements which the landlord, Tricont, undertook to provide. The lease provided for the construction of an enclosed "explosion proof" room of approximately 250 square feet, with piping to an outside tank. This space is the dye room referred to above. The Ministry of Labour was involved in providing its specifications.

84 It is apparent that the requirement of a confined space for the storage of toluene and a connected outside tank were a product of safety concerns arising from the flammable nature of the liquids being stored and used in the dye mixing and parts cleaning processes in the plant. Consistent with this, it was the Ministry of Labour that certified the architectural drawings on which the construction of both was based. It was the Fire Department that required the room to have a sill at its door to prevent any spills from escaping beyond the dye room.

85 Mr. Bryer's understanding of the purpose of the underground tank came from a representative of the Fire Department with whom Mr. Bryer met regarding the dye room. Its purpose, according to

Mr. Bryer, was to collect spilled flammable liquids. The tank was not for the storage of waste flammable liquids.

86 This is consistent with the drawings prepared by Tricont's architects for the dye room and tank. Although he has no specific recollection of doing so, Mr. Bryer believes he reviewed these plans since reviewed all of the plans for the leasehold improvements. The tank is described on the drawing as a holding tank'. The specifications for tank are at the bottom of the drawing. The last note is marked with an asterisk and states, "not to be used for waste disposal and storage". There is a signature at the end of this note which appears to be that of Jeff Ing, Tricont's property manager for the project.

87 Despite this note, the tank in fact was used for the storage of the waste chemicals. Indeed, both Mr. Harper and Mr. Patterson said they understood that the purpose of the tank was forthe storage of waste chemicals, oil and sometimes water that had been mixed with them until they were pumped out of the tank. Mr. Bryer did not discuss the use of the tank with any of Control Data's employees after its installation.

88 Control Data maintains that in using the tank for storage of the waste chemicals, it was using the tank in accordance with the lease. In taking this position, it relies on the evidence of its experts that tanks of this type were used for storage of toxic chemicals when this tank was installed and on the wording of the specifications on the drawing.

89 I accept that in the mid-seventies, toxic chemicals were being stored and disposed of in ways that later proved to be environmentally unsound. This includes the storing of toluene in concrete tanks similar to the tank installed by Control Data. However, that does not mean that Control Data's lease with Tricont provided that the tank could be used in this way. This is particularly so given the very clear wording to the contrary on the face of the architectural drawing on which the tank appears.

90 The waste in the tank was pumped from time to time, though the exact frequency with which that was done is unknown and in issue. It is likely that the tank was pumped out only a handful of times prior to 1990. Years would pass in between pumpings.

91 According to Mr. Lafleur, the tank was used as contemplated. In so concluding, he relies on the words "maintain with periodic pumping" on the drawing and the fact that Control Data did pump the tank from time to time. However, in the context of the directive on the drawing that the tank not be used for waste disposal and storage, and of the tank being identified as a holding tank, periodic pumping cannot reasonably be interpreted as pumping, at best, every few years.

92 Mr. Woeller agreed that the primary purpose of the tank was to address health and safety concerns and as such, to collect chemical spillage. However, he also expressed the view that the tank had a secondary purpose of storing liquid waste generated in the plant.

93 Neither Mr. Lafleur's nor Mr. Woeller's evidence on the issue of whether the use of the tank conformed to Control Data's contractual obligation when it used the tank for storage of waste can be considered to have been given in their capacities as experts and therefore is of no assistance. This question is not one that either was in a position to give expert evidence on, nor one regarding which expert evidence is appropriate.

94 The reference to the storage of flammable liquids in the schedule to the lease providing the specifics for the dye room does not differentiate between unused liquids and waste liquids when it states that the room is to be used for storage of flammable liquids in drums. This provides further support for the position that the lease intended that the waste chemicals be stored in drums and that it did not allow for storage of the waste toluene in the tank.

95 I accept Mr. Bryer's evidence that the intended purpose of the tank was not the storage of waste liquids but rather the collection of spilled flammable liquids. The evidence establishes that until some time in the second half of 1992, all of the waste toluene was disposed of in the tank. It was poured down the drain in the floor of the dye room that connected to the tank.

96 The use of the tank did not accord with its purpose. Control Data failed to instruct its employees on the proper use of the tank.

97 The evidence establishes that whatever procedures Control Data had in place with respect to the monitoring of the pumping of the tank, those procedures were inadequate. The norm at the time was to routinely check and record the level of fullness of the tank and to maintain records of the quantity of liquid deposited in the tank. Doing so would enable the user to detect leakage from the tank. Control Data did none of this.

(b) Who supplied the tank

98 The schedule to the lease dealing with the dye room and tank specified that the tank was to be supplied by Control Data. Control Data argues that the tank was provided by the landlord. Control Data submits that any inadequacies in the tank are the responsibility of Tricont and not of Control Data.

99 The only evidence that the tank was provided by Tricont is Mr. Harper's recollection. However, Mr. Harper was not directly involved and therefore is not a reliable witness with respect to this issue. Meanwhile, it is the evidence of Mr. Bryer, the individual whose responsibilities for the move included the dye room and tank, that it could not have been Tricont that ordered the tank.

100 Given Mr. Bryer's evidence and in the absence of reliable evidence to the contrary, I am satisfied that the tank was supplied by Control Data.

(c) The size of the tank

101 The specifications noted on the drawings provided for a tank size of a minimum of 500 gallons. There is no record of its actual size. No measurement was taken of it when it was removed from the ground in 1993.

102 The size of the tank is of importance to the extent that the smaller the tank, the greater the frequency with which it would have had to be pumped in order to prevent its contents from overflowing. It is also relevant to the question of whether Control Data was in compliance with the terms of its lease with Tricont by ensuring that the volume of the tank was at least 500 gallons.

103 An application for a waste generator number (discussed further below) filed by Mr. Patterson in November of 1988, describes the tank's volume as 200 gallons. Mr. Patterson does not know who provided that information, believing it to have been either Tricont or someone from the Ministry who attended at 45 Commander in response to Mr. Patterson's request for the number. Whatever the source of the information, it cannot be correct.

104 What is known with certainty is that the tank had a volume of at least roughly around 475 gallons. This is based on the records of the volume of waste that was removed in December of 1992 and December of 1993. Arrangements were made for the tank to be emptied in December 1992. The resulting invoice shows 450 gallons to have been pumped from the tank. No waste was deposited into the tank after that. However, when the tank was removed in December 1993, a further 25 gallons were found to have been left in the tank when it had been was pumped the previous December.

105 Mr. Avery, possibly in the late spring or sometime after in 1992, had the tank checked several times to see how full it was. This was done by placing a stick down the manhole into the tank. He estimated the liquid in the tank to be a distance of 18 inches from the top of the tank and the distance from the bottom of the tank to the top of the liquid to be 36 inches. The tank was plugged after it was last measured.

106 Control Data argues that this measurement is unreliable as it fails to take into account the fact that the top of the tank, based on the notation on the architect's drawings was 18 inches below ground level. Mr. Avery said that he could not recall the depth below ground level of the top of the tank, but guessed it to be 3 or 4 inches. This guess may be correct as a result of the tank being installed at that depth rather than at a depth of 18 inches as required by the drawing. Alternatively, the guess may be a significant underestimate of the distance from ground level to the top of the tank. Regardless, Mr. Avery's description of the top of the tank and how the tank was accessed is accurate.

107 Mr. Avery's acceptance, on cross-examination of the suggestion that he measured the contents of the tank from a distance of three or four inches from ground level rather than from the top of the tank cannot be correct in light of the balance of his evidence and must be considered in context. I accept that at the time that the tank was plugged, it was approximately two-thirds full.

108 Mr. Lafleur assumed the tank to have a volume of 450 gallons. This clearly is an underestimate. Control Data's other expert, Richard Woeller, concluded based on the available photographs and documentation that the tank had a volume was 500 gallons of which the useable volume was between 400 and 450 gallons. Mr. Woeller considered only the area below the point at which the vent and drain pipes entered the tank to be useable.

109 Axidata's expert, Richard Lewis, concluded that the tank had a volume of approximately 800 gallons. This is somewhat consistent with Mr. Avery's evidence based upon which the tank would have a volume of roughly 720 gallons.

110 Mr. Lewis' reached his conclusion as to the tank's size based on the photographs taken when the tank was removed, information obtained from a manufacturer of tanks of the same type, and field notes with respect to the tank's removal. Mr. Lewis conceded that his report mistakenly identifies the top of the tank as the bottom, that the diagrammatic representation of the tank is clearly wrong in that it shows the tank extending beyond the vent pipe whereas it is apparent that it did not, and, the manufacturer's information he relied on is with respect to current tank production without confirmation that it manufactured the same tank in 1976 or that it was this manufacturer that supplied the tank.

111 In spite of this, I find Mr. Lewis' conclusions as to the volume of the tank to be compelling. He calculated the length of the tank by measuring the distance between markings visible on the wall adjacent to the tank which appear in the photographs and multiplying that by the number of markings over which the tank extends in the photographs. He also based his calculations on the location of the existing gas line which ran parallel to the tank and appears in the photographs. His evidence with respect to these calculations was unaffected on cross-examination. That evidence combined with the consistency between Mr. Lewis' conclusions and Mr. Avery's assessment, and Mr. Lewis' uncontradicted evidence that 800 gallon tanks were common in the mid 1970's result in my concluding that the tank had a volume of approximately 800 gallons.

(d) Construction of the tank

112 What is known with certainty about the tank is that it was constructed of concrete and had a separate lid that sat over the top of the tank, extending down the side by a few inches. The lid contained two access hatches and had a drainage pipe and vent pipe connected to it.

113 There is a dispute as to whether the tank was manufactured as one piece or two pieces that were joined mid-way up the side of the tank. Based on the line that appears in the photographs, extending around the tank at the mid point of the sides and on current specifications for concrete tanks, Mr. Lewis concluded that this tank was constructed from two pieces.

114 Mr. Woeller rejects the conclusion that the tank was constructed out of two halves joined together. In his opinion, the line seen in the photographs along the inside of the tank is not a seam but a line resulting from the mould into which the concrete was poured to form the tank being made

of two pieces. There is no break in the concrete at this line.

115 Both Mr. Lewis and Mr. Woeller formed their opinion in reliance on their personal experiences with underground storage tanks that were being installed around the same time as this tank. Mr. Lewis additionally relies on current manufacturer's specifications. However, these are of very limited assistance as they are not contemporaneous.

116 I find the evidence to be insufficient to establish that the tank was constructed in two pieces. As a result, leakage from the tank at the mid point of its sides would be impossible.

117 Mr. Bryer stated that he understood that because the tank was intended only for the short term containment of spillage, when it was purchased, Control Data did not specify that it be appropriate for the use to which it was put, that is storage of waste product over a long-term. There is no contrary evidence. I accept that Control Data failed to take any steps to purchase a tank which was suitable for the purpose to which it was put. However, the evidence establishes that the likelihood is that had they sought a tank to be used as a storage tank for the waste products produced, the tank they purchased would have been no different.

(e) The alarm

118 A float was installed near the top of the tank. A wire led from the alarm, through the lid of the tank, to an alarm located at the door to the dye room. When the contents of the tank reached the level of this float, it activated the alarm.

119 The only evidence as to the number of times the alarm went off is Mr. Harper's. He stated that he heard it twice. Some time while the punch card printing machines were being run on three shifts a day and were still running at their highest level of production (Mr. Harper estimated this to be between 1979 and 1981) Mr. Harper was notified that waste product had collected in the sloped area of the dye room floor around the drain as a result of the tank having overflowed. When Mr. Harper checked the alarm, he learned that the last time it had been activated, it had been disconnected by someone who did not realize that the alarm had a shut off switch. Mr. Harper reconnected the alarm and made certain that it worked.

120 That was the only time that the tank overflowed while Mr. Harper was the maintenance supervisor. There is no evidence of any overflow following his retirement in 1991.

121 The tank did not have an overflow alarm. It was the evidence of Mr. Patterson, which I accept, that there was a space between the location of the float and the top of the tank. This would allow for some additional toluene to be added to the tank after the alarm sounded, without overfilling the tank.

(f) The piping connected to the tank

122 The drain from the dye room entered the tank on the east side just below the lid. A vent pipe exited the tank at the west side. All of the experts agreed that there was leakage where these pipes were connected to the tank. As is discussed under the heading Contamination', they disagree on how soon that leakage would have begun and on its significance.

123 The pipes were sealed where they exited the building and entered the tank. The only evidence as to the composition of the seals that were used is that of Mr. Lewis and I accept it. He said that based on his experience with seals on other tanks in the same time period, the seals were likely made of butyl rubber or an equivalent. Such material is incompatible with toluene which would very quickly dissolve it.

(g) Fitness of the tank for the purpose to which it was put

124 Mr. Lafleur stated that the tank was fit for the use to which it was put. He identified that use as the temporary holding of waste liquids. However, that fails to take into account Mr. Bryer's evidence that the tank was intended to be used to collect spilled waste. Further, the statement is unreliable, as in making it Mr. Lafleur was not aware of the fact that from the time Control Data began to use the tank in 1976 until its use was discontinued in 1992 it continually contained waste but for the few occasions on which it was pumped.

125 The fact of the extensive leakage of toluene into the ground is evidence of the tank not being fit for the use to which it was put, first by Control Data and then Axidata. There is no credible evidence to the contrary.

PUMPING OF THE TANK

126 The tank was emptied of its contents by pumping performed by companies contracted to do the work. The number of times the tank was pumped is not known.

127 Mr. Patterson was responsible for arranging for the tank to be pumped. Although there was some evidence of the possibility that another employee may also have arranged for pumping on occasion, I find the probability to be that it was only Mr. Patterson who did so.

128 It is unreasonable to assume that Mr. Patterson, or anyone else in his circumstances, could have precise recall today as to the number of times he arranged for the tank to be pumped. Taking his evidence together with that of Mr. Harper, I find that the tank was likely pumped no more than three of four times over the ten year period during which Control Data used it. On two of those occasions, the tank had not yet filled to the point of activating the alarm. The likelihood is that the last time the tank was pumped before the sale of the business was at the time of the overflow incident around 1980.

129 In 1988, Mr. Patterson applied to the Ministry of Environment and Energy for a generator

number' that he learned had become necessary in order to have waste pumped. The number was part of the Ministry scheme that would enable it to track toxic waste disposal. In December of that year, having failed to obtain a response from the Ministry employees with whom he had spoken, Mr. Patterson wrote to the Ministry, asking that they deal with his request as the tank at 45 Commander was nearly full. I accept Mr. Patterson's evidence that he described the tank as being full to spur the Ministry to action, though he did not believe it to be in need of pumping at the time. In February 1989, Axidata obtained its generator number.

130 Mr. Patterson's evidence, which was unchallenged on cross-examination, is that he arranged for the tank to be pumped in August 1989. His memory of that is refreshed by a purchase order signed by him for the pumping of the tank on August 4, 1989. Control Data argues that the purchase order, in the absence of either an invoice from the company that did the pumping or proof of payment, is insufficient to establish that the pumping was done in accordance with the purchase order. It points to the fact that there is no record with the Ministry of waste having been pumped pursuant to that purchase order. However, the absence of clear evidence of pumping in the Ministry records is not determinative. I find that the tank was pumped in 1989. This is the only time the tank was pumped from 1986 when Axidata purchased the business until the tank was plugged in 1992.

THE CONTAMINATION

131 In 1993, Trow Consulting Engineers Ltd. conducted a Phase I Environmental Audit in connection with the sale of 45 Commander from Tricont to HOOPP. It was through this that the contamination was discovered. The discovery led to a Phase II Environmental Audit which involved the taking of subsurface samples through boreholes dug in the area of the underground storage tank. Based on Trow's resulting recommendations, in December 1993, the tank and approximately 1,500 tonnes of contaminated soil were removed.

(a) How did the toluene leak into the subsurface

132 The experts agree that leakage occurred where the piping entered the tank, at the top of the tank where its walls met the lid, and through the access hatches in the lid. The primary area of disagreement is the role played by overfilling. Mr. Woeller and Mr. Lafleur are both of the opinion that repeated overfilling of the tank caused the leakage. Mr. Lewis, on the other hand, is of the opinion that overfilling was only a supplemental contributor to the accumulation of toluene in the subsurface.

133 Mr. Lewis' evidence is that the leakage occurred primarily where the pipes entered the tank and at the dye room floor. He also stated that there was a possibility of leakage from the bottom of the tank and at its horizontal centre line; however, the evidence does not support this. Mr. Lewis conceded that his opinion as to the possibility of leakage through the bottom of the tank was based on a misreading of a photograph of the tank top. As I do not accept that the tank was constructed in

two pieces, there is no basis for a finding that there was leakage at the centre line of the tank.

134 Leakage at the ends of the vent and drain pipes is consistent with the evidence of staining in the photographs and with the incompatibility of the seals with toluene. Mr. Woeller acknowledged that there would be leakage at the point where the pipes entered the tank and that even a small amount of leakage there would result in significant leakage over a protracted period of time.

135 Leakage from the dye room floor is consistent with the staining seen in the photographs. In challenging the assertion that there was significant leakage from the dye room floor Mr. Woeller could only say that the testing done under the floor "suggested" that the leakage was not extensive. In my view, that is insufficient, to cast doubt on the reliability of Mr. Lewis' conclusion.

136 Repeated overfilling of the tank as the primary source of leakage is inconsistent with my finding as to the tank size. It is also inconsistent with the tank having overflowed into the dye room on one occasion only, that being when the alarm was disconnected sometime around 1980. The absence of staining across the lid of the tank further puts into doubt the likelihood that the tank was regularly overfilled. Mr. Woeller attempted to explain this inconsistency by suggesting that the inside surface of the lid was not level. This does not satisfy me as being a probable explanation and does not appear to be borne out by the photographs.

137 I find that there was leakage at the drain pipe's point of entry into the tank, at the drain in the dye room floor and through the floor itself. Further, I find that this leakage began almost immediately and that it was a substantial cause of the contamination.

138 There also was leakage as a result of the overflowing of the tank. The frequency with which it overflowed cannot be estimated based on the evidence. However, the combination of the evidence which I have accepted as to the volume of toluene used after the sale to Axidata, the size of the tank and the pumping of the tank in 1989 and 1992, establish on a balance of probabilities that the tank did not overflow after 1986.

(b) How much toluene entered the subsurface

(i) the quantity of toluene purchased

139 There are no invoices with respect to toluene purchases prior to 1986 and only partial invoices for the years after. The experts used the available records to estimate the amount of toluene that was purchased.

140 Control Data submits that the estimates of not only Mr. Lewis, but of its own expert Mr. Lafleur, grossly underestimate the amount of toluene purchased. In doing so, it relies on Mr. Patterson's evidence that most of the purchases were from a supplier other than one from which there are no invoices. However, having heard Mr. Patterson's evidence on this point, I am not satisfied it can be relied on as establishing that far more toluene was purchased than evidenced by

the existing invoices, especially as the balance of the evidence is inconsistent with such a conclusion.

141 If the experts' estimates of toluene purchased after the 1986 sale of 45 Commander are reliable, then it is clear that Control Data disposed of the vast majority of the toluene that contaminated the soil. If, as Control Data now argues, the estimates are low then it follows that the tank would have filled more quickly over the entire course of its use and would have required more frequent pumping. That, in turn, would increase the amount of overflow from the tank during Control Data's use of it. That would lend further support to Axidata's position that the leakage had occurred prior to its purchase of the business.

142 Having found that the amount of toluene used at 45 Commander was directly related to the volume of punch card production, it follows that the toluene purchases decreased with decreased production. Control Data points to Mr. Lewis' annualized estimate of toluene purchase for 1990 as being inconsistent with this finding. The purchase estimate for that year, 1230 litres, is approximately 800 litres and 1000 litres respectively lower than the amounts purchased in 1991 and 1992, years for which there are purchaser reports for the entire year and in which punch card production was decreasing.

143 None of the witnesses who gave evidence with respect to punch card production were given an opportunity on cross-examination to provide an explanation for what Control Data relies on as demonstrating an increase in toluene use. Given the overwhelming evidence to the contrary, I do not accept that these numbers demonstrate that toluene purchases were unconnected to punch card production. They are more likely to reflect the fact that more toluene was purchased in the previous year than used.

144 To arrive at purchase volumes for the years for which there are no invoices, Mr. Lewis applied the average of the annualized numbers in the available invoices to the periods of production broken down into peak, moderate and low based on an analysis consistent with my findings at punch card production' under the heading The use of Toluene at 45 Commander'. Adding this to the other annualized amounts, results in a total estimate of approximately 178,000 litres of toluene having been purchased.

145 Assuming only 10% to 15% of the toluene purchased was deposited into the tank, 178,000 litres is substantially more than is accounted for by what I accept to be, for reasons stated below, a reasonable estimate of the amount of toluene removed from the subsurface through clean up and remediation. This is so after taking into account the toluene that was disposed of off site, assuming the highest possible amount based on the evidence was pumped. Accordingly, Mr. Lewis' estimate of the amount of toluene purchased cannot be considered to be an underestimate.

146 Mr. Lafleur estimated only the toluene purchased by Axidata. In doing so, he failed to take into account the impact on purchases of the decline in punch card production. The result is not an underestimate as Control Data submits, but rather an over estimate of the amount of toluene

purchased.

147 There is no basis for Control Data's position that more toluene was purchased and disposed of than the experts have concluded to be the case. The result is that Control Data's only evidence as to the amount of toluene purchased, and hence disposed of, is the evidence of Mr. Lafleur, evidence which it rejects.

(ii) the amount of toluene removed from the subsurface

148 Mr. Lewis calculated the starting point for estimating the amount of toluene removed from the subsurface. To do so, he added the volume of toluene reported by Trow to have been removed by various means as of the end of 2005 and an estimate of toluene removed through bailing. The total is approximately 5,500 litres. Mr. Woeller did not take issue with the reasonableness of that number. Although Mr. Lafleur did not accept it, he did not credibly challenge it in any significant way. I accept that this is the base amount of toluene that has been removed from the subsurface.

149 This base amount of 5,500 litres does not include the toluene removed in the course of the excavation. Though the experts agree that it was a significant amount, the actual amount is unknown. Mr. Lafleur estimated it to be 660 litres, but gave no indication as to how he arrived at that amount

150 This base amount also fails to take into account the amount of toluene that remains in the subsurface and the amount that has been biodegraded into the soil. Mr. Lewis is of the opinion, which I accept, that this amounts to at least as much as has been removed from the subsurface.

151 Assuming the accuracy of Mr. Lafleur's estimate of the volume of toluene removed with the excavated soil, and adding to that the 163 litres of toluene recovered from the subsurface from the end of 2005 to June 2006, and the 5,500 litre base amount, produces a total of 6,576 litres as a quantified minimum of toluene that has been released into the subsurface. The minimum amount of toluene poured down the drain in the dye room floor would have been this amount plus what was removed from the tank through the pumping of the tank. Based on Mr. Lewis' opinion that the base figure is less than half of the total toluene that entered the subsurface, the amount of toluene poured down the drain would be closer to 13,000 litres.

(iii) when the contamination entered the subsurface

152 It is Control Data's position that all of the toluene entered the subsurface after it ceased operations at 45 Commander. I reject that position for reasons which include the following:

1. It is inconsistent with my findings that the tank began to leak immediately

and that it did not overflow after 1986.

2. Given what I have found to be the vastly greater quantity of waste product poured down the dye room floor drain during the period of Control Data's tenancy than in the subsequent six years over which the tank was used and given what is known about the pumping of the tank, the assumption that none of the waste product was released prior to 1986 is simply not credible.
3. Mr. Lafleur came to his conclusion that it was only after 1986 that the tank overflowed in the absence of any information as to the operational practices at 45 Commander prior to 1986. He did not know when, or if at all, the tank had been pumped prior to 1986.
4. Based on Mr. Lafleurs' own assumptions which include what I consider to be a higher than appropriate disposal rate and the assumption that the tank was not pumped in 1988, contrary to what I have found, Axidata still did not dispose of enough toluene in the tank to produce the amount of contamination in the ground. Even if all of Mr. Lafleur's assumptions were accepted, it would result in a finding that Axidata disposed of only 4,223.02 litres in the tank whereas the base amount of toluene removed is 6,576 litres and is likely to be around 13,000 litres.

153 I have already found that the toluene entered the subsurface prior to the sale to Axidata. Mr. Lafleur's calculations do not alter my conclusion that 90% of the toluene that entered the subsurface did so while Control Data was the tenant at 45 Commander.

(c) The migration of toluene through the subsurface

(i) the experts

154 When the toluene reached 67 Commander and 70 Commander is critical to the issue of the reasonableness of the remediation and contamination related costs incurred and being claimed by Axidata. Mr. Lewis and Mr. Lafleur are in substantial disagreement on this issue.

155 It is Mr. Lewis' opinion that the contamination likely reached both neighbouring properties by the time the tank was removed at the end of 1993. It is Mr. Lafleur's opinion that it had not migrated off site before December 1993. Yet, in reaching that conclusion Mr. Lafleur assumes a far faster travel time to 70 Commander than does Mr. Lewis.

156 To arrive at their conclusions, both Mr. Lewis and Mr. Lafleur engaged in a complex analysis involving a myriad of assumptions and extensive data. The process used is known as modeling. As Mr. Woeller acknowledged, the result of this modeling is not a representation of

reality. Nor, as Mr. Lewis recognised, is the process an absolute science.

157 The experts prepared reports, extensive and detailed in Mr. Lewis' case, which were entered into evidence on agreement. Additionally, both experts gave lengthy oral evidence. The oral evidence did serve, through cross-examination, to narrow some of the issues between them. But, the evidence was complex and the assessment of the relative reliability of the opinions was made even more difficult by the fact that the experts used different criteria for their analyses. Mr. Lewis based his analysis of when the toluene had reached the neighbouring properties on the migration of dissolved phase toluene. Mr. Lafleur used an altogether different model for his analysis, basing it on the migration of free phase toluene. (In its simplest terms, free phase refers to toluene that remains in the ground in its original state; dissolved phase toluene is toluene that is dissolved in water.)

158 Each of the experts' reports was critiqued by Mr. Woeller. He had been retained by Control Data to provide a review of Mr. Lewis' report but also, on cross-examination gave evidence with respect to Mr. Lafleur's. Mr. Woeller rejected Mr. Lewis' opinion that toluene was released into the subsurface before 1986 and concluded that Mr. Lewis' modeling did not produce a reliable conclusion as to the travel time of the toluene.

159 Mr. Lewis has, in my opinion, adequately addressed many of Mr. Woeller's criticisms. For example, Mr. Woeller says that Mr. Lewis' modeling assumption that the aquifer was homogeneous or uniform throughout was inapplicable given the known nature of the aquifer. I accept Mr. Lewis' explanation as to why, in the circumstances, the assumption was appropriate and further find that he did not disregard the homogeneity of the aquifer. Mr. Woeller says that Mr. Lewis failed to take into account the increase in the spread of toluene as a result of its having been mixed with methanol when disposed of in the tank. But, Mr. Lewis convincingly explained that while the methanol would cause the toluene to move through the subsurface more quickly, its impact is short lived and therefore of limited consequence as a result of the speed with which it degrades in the subsurface and its solubility in water.

160 Mr. Woeller supports Mr. Lewis on a number of significant points. I previously referred to Mr. Woeller's acknowledgement that there was some leakage from the tank by means other than overfilling and his agreement that the interceptor trench was not installed to a sufficient depth to prevent migration. (In fact, according to Mr. Woeller the trench contributed to the contamination by acting as a manmade pathway for it). As well, he agreed that the dissolved phase contamination could have crossed the boundary of 67 Commander in a relatively short time after the release of toluene from the tank.

161 While Mr. Woeller agrees with Mr. Lewis that the ground gradient was a significant factor in the flow of groundwater, and therefore the movement of dissolved toluene, and agrees with Mr. Lewis' assessment of the change in gradient from 45 Commander to 70 Commander, he disagrees with how this change in gradient effects the flow of groundwater. As a result, Mr. Woeller disagrees with Mr. Lewis' conclusion that it would take 17 to 18.6 years for the dissolved phase toluene to

migrate to 70 Commander.

162 The evidence of the experts with respect to the migration of the toluene must be considered in the context of my findings with respect to the toluene leakage and with regard to common sense. While, as I have said, overall I prefer the evidence of Mr. Lewis, where I find Mr. Lewis' conclusions with respect to the migration of the toluene to be unconvincing, I do not accept them.

(ii) when the toluene reached 67 and 70 Commander

163 As the toluene leaked from the pipes and tank, it moved downwards through the subsurface through what is known as the unsaturated zone. Once it reached the water table, subject to the influence of sand seams, it moved horizontally until it reached a point beyond which the mass of contamination did not expand.

164 The speed with which the toluene reached the water table was dependent on the nature of the soil through which it had to travel. While generally the soil at 45 Commander and the surrounding area is dense till, I accept that the soil around the building footings and adjacent to the tank was primarily fill. This is consistent with the observations of Trow and is based on the evidence of Mr. Lewis who reached his conclusion based on such things as the absence of weeping tiles along the building footings, and the likelihood that gravel was used to backfill the excavation following the installation of the tank and under the footings.

165 Because the soil surrounding the tank was fill, toluene passed through it to the building footings almost instantaneously. There it pooled while it more slowly migrated through the remaining distance to the water table.

166 In calculating travel time to the water table, Mr. Lafleur used a distance slightly less than twice that used by Mr. Lewis. The difference is a result of Mr. Lafleur's assumption that the toluene took time to pass through dense till before reaching the level of the footings. His estimate of 1.4 to 6.3 years is therefore almost double the actual time it took.

167 Mr. Lafleur calculated a contaminant travel velocity of 16 metres per year through the saturated zone, a velocity substantially higher than Mr. Lewis' calculation of 1.8 to 7.6 metres per year. If Mr. Lafleur's calculations were correct, then the toluene would have travelled to the neighbouring properties far more quickly than based on Mr. Lewis' calculations. This is more so after making the adjustment for Mr. Lafleur's overestimate of the travel time through the saturated zone.

168 Mr. Lafleur assumes that the toluene did not reach the neighbouring properties until it was observed there in 1996 in the case of 67 Commander and 1998 in the case of 70 Commander. However, the fact that this is when the contamination was first discovered on these properties does

not establish that this is when it arrived there. The amount of dissolved phase toluene found in the borehole dug in 1998 at 70 Commander was so high as to signify the presence of free phase toluene. That means that the dissolved phase toluene must have been in that location prior to then as its arrival precedes the arrival of free phase toluene.

169 The borehole test results did not confirm this migration because they and the monitoring wells installed before 1998 were too shallow to intersect the main zone of the subsurface in which the contamination was located. The majority of the toluene was in a band of sand seams located between 6 and 12 metres below grade, far deeper than those boreholes and monitoring wells.

170 The seams or layers of sand in the subsurface at the site were considered to be an important pathway for the migration of the toluene by both Mr. Lewis and Golder and Associates Ltd., who completed a review of the data compiled by Trow for Axidata in 1996. These seams would provide the path of least resistance for the dissolved phase toluene to follow and resulted in a significant amount of toluene present below the water table despite that being very unusual.

171 Had this been a conventional site, the depths to which the boreholes were dug would have been appropriate. As it was, the testing results were misleading as samples used were taken at locations above the locations of the highest concentrations of toluene. Those results, when considered in the context of what was subsequently learned about the site are consistent with the toluene having migrated to 67 Commander and under the roadway to 70 Commander by December 1993.

172 Mr. Lafleur conceded on cross-examination that based on his calculations, had the leakage started before 1987, the contamination could be at 67 Commander and 70 Commander before 1993. However, he rejected this conclusion as being inconsistent with site observations that showed there had not been migration by those dates. That is not a valid basis for rejecting the conclusion.

173 The site observations that support Mr. Lafleur's opinion were based on insufficient evidence and were therefore unreliable. As stated, the boreholes from which the samples were taken in 1993 through to 1998 were not dug at a sufficient depth to provide reliable sampling.

174 Mr. Lafleur's opinion that the toluene contamination had not reached either neighbouring property prior to the discovery of the contamination in 1993 is further undermined by the fact that he failed to take into account the presence of dissolved phase toluene below the water table and the evidence of free phase toluene in two monitoring wells in 1993. As well, he appears not to have considered ground water contamination when he concluded that there was no contamination at 70 Commander by 1993.

175 Most significant however is the fact that Mr. Lafleur's opinion is dependent on the assumption that the toluene was released from the tank after 1986. Mr. Lafleur reached this conclusion without having any information as to the operational practices at 45 Commander prior to 1986. He did not know when, or if at all, the tank had been pumped prior to 1986.

176 Mr. Lafleur acknowledged on cross-examination that if the toluene entered the subsurface prior to the 1986 sale, then his conclusions as to arrival times are wrong. Based on Mr. Lafleur's own theory of travel times, accepting that the toluene began to leak in 1976 and that almost all of the leakage occurred before the 1986 sale, the toluene would have migrated to the neighbouring properties by 1993, or very much sooner depending on which end of his range is applied and the speed with which the toluene travelled through the unsaturated zone.

177 It is, of course, impossible to determine with precision how long it took the toluene to reach the point where it stopped migrating. However, based on the evidence that is consistent amongst the experts and considering their evidence in the context of the other findings, I accept that dissolved phase toluene was at 67 Commander and had arrived at 70 Commander by the time the contamination was discovered and the tank removed in 1993.

THE REMEDIATION

(a) The initial stages

178 Although Trow Consulting Engineers were originally retained in connection with the sale of 45 Commander to HOOPP, they, and their various successor companies, became the environmental consultants for the remediation of the property. It was through their initial audits that it was determined that the storage of chemicals in the underground tank adjacent to the dye room had resulted in contamination and that the tank and surrounding soil should be removed.

179 The area excavated covered an area of approximately 240 square metres extending from the wall adjacent to which the tank had been installed outward into what was paved area of the property. The excavation went to a depth of 3 metres to 4.2 metres at which level the soil was very dense silt till. As stated above, the amount of toluene removed in the process is unknown as no samples of the soil were collected.

180 The contaminated soil below the dye room and the building footings was not removed. Trow's opinion was that its removal was not necessary.

181 Prior to backfilling, samples were taken and analysed to assess whether there was residual contamination exceeding the Ministry of Environment criteria considered at the time to be applicable (Level III of the three levels of MOE criteria). Other than samples taken directly below the building footings adjacent to the dye room, all of the samples met this criteria, but some did not meet the more stringent criteria.

182 Trow recommended that a groundwater remediation system be installed. It was Trow's assumption at this time that there had not been any off-site migration of the contamination. To prevent migration, it recommended the construction of a cut-off trench and recovery well and that water from the well be treated in activated carbon absorber units.

183 The cut-off trench and recovery well were installed in December 1993. The trench was a long excavation dug less than two metres from the property line with 67 Commander and dug to a depth of 5.5 to 6 meters and back filled with gravel covered with a layer of filter fabric and sand. It was designed to channel ground water to the recovery well, a culvert with a diameter of 24 inches.

184 Trow's recommendation was that the water in the recovery well be continuously pumped, in what is referred to as active remediation. The plan that was implemented, however, was a less active form of remediation that involved only periodic pumping. The number of times the well was pumped is unknown, but it is clear that it was not pumped frequently. Trow had also recommended that a water treatment system be installed. This was not done; the water that was recovered was hauled off-site for treatment and disposal.

185 The water in the recovery well was hand bailed and the site continued to be monitored by Trow.

186 Control Data takes the position that Axidata's decision not to follow Trow's original recommendation to undertake active remediation resulted in the expansion of the area of contamination that would not have occurred had the recommendation been followed. Control Data says that the decision was prompted by nothing more than a desire to save money. For reasons discussed above under Contamination' and for additional reasons below, I do not accept that the toluene contamination would have taken a materially different course had active remediation been implemented in December 1993; however, in any event, I find that Axidata was entitled to make the decision it did given the information available to it at the time.

187 Mr. Heffernan was involved in the decision not to accept the active remediation recommendation. His evidence, which I accept, was that he understood from Trow that the benefit of active remediation over the more economical approach that was chosen was simply that it would clean the site up more quickly. Mr. Heffernan's recollection is that the cost differential was in the area of $50,000. The expectation was that following the approach chosen by Axidata, the contamination at the site would be reduced to acceptable levels within three to five years by comparison to one to two years using active remediation.

188 The decision to adopt the more passive and less costly approach to the remediation was based on a belief that the need to clean up the site was not urgent as toluene was not a serious contaminant. The documentary evidence from Trow gives no indication that such a belief was unfounded and confirms that the contamination was not considered to be of a seriously threatening nature at the time that the decision was made. Indeed, three years later, Golder Associates Ltd., the consultant retained by Axidata to review the Trow reports and provide its own recommendations, stated directly that the available data did not suggest that there existed "an immediate threat to public health and safety or the environment."

189 While it is clear that Trow's preference was the active system, I accept Mr. Heffernan's evidence that Trow was not against the course chosen by Axidata.

190 Control Data is dismissive of the impact of hand bailing on the clean up of the site. There is no record of the amount of toluene that was hand bailed. Mr. Lafleur stated that the toluene removed by hand bailing could account for as much as almost one third of the total mass of the contamination; an amount that he agreed was significant. In his report he used the more conservative figure of 10.9%. I find that the hand bailing that was done did play a meaningful role in the remediation of the site. This is consistent with Mr. Lewis' evidence that hand bailing is a significant form of remediation.

(b) The Trench

191 It was assumed by Trow, and accepted by Mr. Lafleur in his report that as a result of the removal of the tank and the exaction of the surrounding soil that the site was free of contamination except for under the building. Trow reached its conclusion based on the absence of toluene in the trench and well that were installed. However, the assumption was wrong.

192 What Trow did not know at the time was that the trench and wells installed in 1993 and even the deeper trenches in 1996, were not deep enough to intersect much of the area impacted by the toluene. As stated in the September, 1996 report of Arthur D. Little, prepared as part of the due diligence of Abitibi-Consolidated on its purchase of the Axidata shares, the trench installed in 1993 was not intercepting the entire column of contaminated ground water. This is consistent with the opinion of both Mr. Lewis and Mr. Woeller.

193 Control Data takes the position, relying on Mr. Lafleur's evidence, that even if dissolved phase toluene had reached 67 Commander by 1993, had the trench been pumped continuously that contamination would have been dissipated and within a span of three to five years would have been gone. However, that opinion fails to take into account such things as the depth at which the toluene was migrating off site and the quantity of toluene that had migrated by 1993. Mr. Lafleur's evidence fails to challenge the conclusion that the failure to actively pump the trench resulted in the need to remediate the neighbouring properties.

194 I find that actively pumping the trench that was installed in 1993 would not have materially altered the outcome.

(c) The years following the detection of toluene migration

195 The quality of the water in the recovery well was checked regularly by Trow. Testing conducted in January 1996 revealed that the concentration of toluene in the groundwater at the site was higher than it had been six months earlier. In light of this, Trow wrote to Carr Hatch, the Axidata employee responsible for managing the remediation at that time, suggesting that it might be prudent to increase the frequency of pumping. While it did say that consideration should be given to implementing the original recommendation of an on-site treatment unit, it made that

recommendation subject to a cost analysis. Relying on the available evidence, Trow gave no indication of urgency. It was reasonable for Axidata to conclude that the remediation did not require that they immediately commit to the on-site treatment unit.

196 Trow's letter of July 31, 1996 to Mr. Hatch changed this. Trow was now saying that more aggressive remediation had to be undertaken. Trow's opinion was consistent with the conclusions reached by Arthur D. Little after its review of the Trow data. The opinion expressed in the Little report of August 1996 was that it was likely that the toluene had migrated off site.

197 By early September 1996, Axidata had committed to adopting a more active approach to the remediation. However, with the realization that the contamination was now at deeper levels than previously detected and the resulting concern that the contamination was expanding, it was felt that it was necessary to first obtain more information about the extent of the contamination and the range of options available to respond to it. Axidata had also decided to seek the consent of the neighbour at 67 Commander to drill on that property to obtain samples to determine whether the contamination had migrated onto it.

198 In contrast to its early recommendations, in its report of October 28, 1996, Trow expressed urgency with respect to the implementation of an active pump and treat system. This was based on the results of the additional testing which Axidata had requested and which involved obtaining samples from nineteen new boreholes, some of which were on 67 Commander.

199 This time, the boreholes were dug to a depth of 6.75 to 9.3 metres below grade. The testing revealed that contamination in excess of the applicable Ministry of Environment criteria, which was by then known as the Table B criteria, had migrated to 67 Commander. Trow said that an active treatment system should be implemented immediately and provided two alternative proposals, one being based on a carbon system, the other on an air stripper system.

200 At this point, Axidata retained Golder & Associates to undertake a peer review of Trow's drilling and analytical results as insurance that Trow's recommendations were appropriate. Based on its review, Golder proposed a different method of remediation, which was the use of a high vacuum extraction system.

201 Throughout the following months, the various options were considered. Again, it was understood that the principle difference between the two methods of site restoration to which the options had been narrowed, that is a new recovery trench and treatment of ground water and a high vacuum extraction technique was the time that would be required to complete the process. The former option was the more economical, but would take 5 to 7 years as opposed to 6 months to a year under the latter option.

202 The decision was made to proceed with the former option. Axidata was encouraged in its choice by information provided by Trow that the MOE clean up criteria had increased the acceptable level of contamination with the result that clean up would be achieved in a shorter period

of time. Instructions were given to Trow to prepare a detailed design and management proposal as well as to do further verification sampling of some of the wells to determine whether there had been any changes since testing the previous fall that could affect the design.

203 As reflected in an April 9, 1997 e-mail from Catherine Levis, the person at Abitibi-Consolidated leading the remediation response, to other members of the group with responsibility for it, the intention was to get the remediation program under way in a very timely fashion. It is apparent from this e-mail that the fact that there had not yet been an acceptance by all the pre-sale Axidata shareholders of the proposed remediation was not relevant to the decision to proceed.

204 The anticipated costs of the remediation plan were estimated to be $244,000.

205 Trow was asked to do a verification sampling before construction got underway to determine whether there had been any changes in the level of contamination which might necessitate a change in design of the plan. At Trow's request, further proposals for the remediation were sought from consultants. After considering the various proposals, Axidata chose CHL Technologies to complete the remediation using hydro-fracturing as it had recommended in its report of November 1997.

206 After delay resulting primarily from lack of co-operation by the landlord at 67 Commander in providing his approval for the clean up, in April 1998, Mr. Arnott, who was now the on-site person in charge of the remediation, authorized the commencement of the hydro-fracturing. CHL advised that it would be commencing the initial on-site construction in August. However, new developments prevented the implementation of this remediation plan.

207 In September 1998, Monarch Corporation gave notice to Axidata and HOOPP that it had learned, through due diligence activities carried out by a potential purchaser of Monarch's properties at 70 Commander and the adjacent 30 Northwind Place, that the groundwater at 70 Commander was contaminated. Monarch stated that the discovery of this contamination had resulted in the potential purchaser of these properties withdrawing from the purchase.

208 The discovery of contaminant at 70 Commander required a reevaluation of the drilling needs. In October 1998, seven new boreholes were dug by Trow. These boreholes were dug to depths up to 12.95 meters, substantially deeper than the wells dug in 1993 which were 5.5 meters deep. Observation and analysis confirmed the migration of the toluene. It also revealed the continuing presence of free phase toluene at 45 Commander.

209 Meanwhile, HOOPP had retained Conor Pacific Environmental Technologies Inc. to provide an independent review of Trow's remediation plan. This consultant raised concerns regarding the Trow plan, specifically the hydro-fracturing that was at its core. At the end of September 1998, HOOPP demanded that work be suspended until those concerns could be addressed.

210 The hydro-fracturing could not proceed in any event at that time. In response to the test

results of samples from the newly installed boreholes, CHL revised its proposal. The costs on the basis of its new proposal of November 1998 had almost tripled to $717,000 and therefore the proposal required another look.

211 The long anticipated hydro-fracturing plan was put on hold.

212 In early 1999, Trow requested, received, and reviewed proposals from Biotechnik to recover the free phase toluene and complete the remediation of the soil and groundwater.

213 Soon after, questions arose as to the applicable MOE standard for the remediation of this site. The issue was whether it should be the coarse or fine grain standard. After the involvement of a number of consultants, it was ultimately decided that the remediation would proceed on the basis of the coarse grain standard.

214 By this time, the remediation had mushroomed. It went from involving Axidata, HOOPP and Trow in 1993, when the contamination was discovered, to involving four property owners, including the City of Toronto with respect to the roadway, five current and former tenants of the affected properties, and fourteen environmental consultants and other advisors. As of 1996, the Ministry of Environment became involved adding to the concerns that had to be addressed. That progress was slow in these circumstances is not surprising.

215 In May 2000, Trow submitted the Remedial Action Plan (RAP'). Its purpose was to remove free phase toluene from the site and adjacent properties. This was deemed necessary before steps could be taken to remove the dissolved phase toluene.

216 The RAP involved two stages. The first was the installation and operation of four recovery wells and the associated infrastructure and treatment system at 45 Commander. The second involved the continued operation of the wells and the installation and operation of five additional recovery wells on neighbouring properties.

217 The RAP began in August 2000. Its progress was reported on a quarterly basis by way of detailed reports. The second phase was fully operational in December 2002. The RAP's completion in December 2003 was followed with the development and submission of the ERAP by ERM, in April of 2004. It evaluated the various options for the final step of the remediation and provided a detailed description and cost breakdown for the recommended remedial option.

218 What was recommended and has since been implemented is a Dual Phase Extraction that remediates the site through physical extraction of the contaminants in both liquid and vapour and through microbial biodegradation. The installation of the ERAP was completed in June 2004. It is ongoing and is reported on semi-annually. It will be completed within the time estimated.

219 Once completed, verification testing will be done over time to ensure that there is no remaining contamination. The system will be removed and decommissioned when the necessary

verification has been obtained.

220 Monarch has been remediating 70 Commander as a result of a contamination on that property unrelated to the toluene from 45 Commander. Since 1999 Monarch and Axidata's environmental consultants have been monitoring the two remediations in order to ensure that the two remediations did not negatively impact on each other.

221 In 2005, Axidata agreed to share with Monarch the costs of installing a hydraulic barrier between the two remediation programs to ensure that they would not adversely impact each other. The costs are to be shared equally by Axidata and Monarch.

THE COST OF THE REMEDIATION

222 From a starting point of a few tens of thousands of dollars, the costs of this remediation have soared to what is anticipated to be close to $3 million dollars once the decommissioning is completed. Control Data submits that Axidata bears responsibility for the escalation of the costs. Relying on the opinions of Mr. Woeller and Mr. Lafleur, it argues that the costs are unreasonable. They should have been in the $700,000 range according to Mr. Woeller and $549,500 according to Mr. Lafleur.

223 The opinions of both of these experts are based on the assumption that the contamination had not yet migrated off 45 Commander when it was discovered in 1993. Mr. Lafleur's opinion also assumes that had the trench installed in December 1993 been actively pumped, the contamination would have been contained on 45 Commander. I have rejected both of these assumptions. As a result, the calculations of these experts as to the reasonable costs of this remediation are not applicable.

224 However, that is not to say that an examination of whether the time it will have taken to complete this remediation is reasonable is not required.

225 Control Data submits that the remediation ought not to have taken as long as it did and that because of the unwarranted delay the costs were increased.

(a) Trow's initial assessment and its recommendations

226 Mr. Woeller is critical of Trow for not having taken the necessary steps to better understand the site at the outset. This, he submits, is what permitted the contamination to expand beyond the boundaries of 45 Commander and the costs of remediation to escalate. What this fails to take into account is the unique geology of this site and the resulting difficulties in interpreting the data and predicting the locations of the toluene contamination.

227 I have referred earlier to the significance of sand seams in the subsurface at this site, which

provided pathways for the toluene to travel through the subsurface at greater depths than would be expected. The fact that boreholes drilled within several metres of each other did not have the same number or thicknesses of sand seams demonstrates the difficulty involved in understanding the site. That difficulty was compounded by the likely existence of hydraulic connections between the sand seams as well as the heterogeneity of the soil at the site.

228 It is noteworthy that Mr. Lafleur does not consider either the boreholes or the trench to have been installed by Trow at an inadequate depth.

229 Mr. Lafleur criticizes the choice of remediation technology in the RAP and ERAP. I am not satisfied that his criticism reflects a full understanding of these remediation plans; in any event, his comments are inadequate to justify the conclusion that the technology chosen resulted in increased costs.

230 Mr. Woeller candidly acknowledged the unfairness inherent in criticizing the decisions of another consultant. It amounts, as he put it, to playing Monday morning quarterback'. He has the benefit, in his review, of all of the subsequently obtained data and all of the outcomes, none of which, of course, were available to Trow when it made its decisions.

231 That reasonable environmental consultants can come to different conclusions as to the most appropriate course of action to be taken is demonstrated by the difference in views between Control Data's two experts -- differences that exist even with the benefit of all of the data and outcomes.

232 Mr. Woeller is of the opinion that all of the contaminated soil should have been removed from around the building's footings and under the floor of the dye room. Mr. Lafleur holds the opposite opinion, saying that there was no need to remove it from these areas. Mr. Woeller's opinion is that more than three times as much soil as was removed during the excavation should have been removed. Mr. Lafleur, on the other hand, is of the opinion that far less soil than was removed should have been removed. Mr. Woeller considers the depth of the trench and boreholes initially installed to be inadequate. Mr. Lafleur, as stated above, takes no issue with the depths.

233 The evidence fails to demonstrate that a reasonable consultant could not have approached the remediation as did Trow.

(b) The delay in implementing remediation

234 There is no question that there was delay in getting the remediation under way once it became known that the initial plan was inadequate. Control Data submits that the delay was a result of poor management of the process by Axidata and the involvement of so many parties in the decision-making.

235 Control Data is correct in its assertion that delay resulted from the need to involve the neighbouring landowners, including the City and the Ministry of Environment. However, this was

inevitable once the toluene had migrated off site, which I have found to have occurred by December 1993. The stage was set by then for the complications and resulting delays that would make it 2000 before active remediation was in place.

236 There is no doubt that Axidata could have avoided some of the delay. The immediate implementation of the 1997 hydro-fracturing plan was delayed by Axidata's inability to obtain the co-operation of the owner of 67 Commander. Axidata had delayed in approaching the owner after it was realised that remediation would involve his land. However, it cannot be assumed that the owner would have dealt with Axidata's requests any sooner but for Axidata's delay. In any event, the delay resulting from the efforts to obtain the landlord's co-operation did not materially contribute to the implementation of a remediation plan.

237 Control Data relies on the evidence of the failure of the Axidata shareholders who sold to Abitibi-Consolidated to provide their approval of the proposed remediation plan. However, from the time that their approval became an issue, Axidata did not control the shareholders. But, more importantly, the evidence does not support a finding that the shareholders failure to provide their approval delayed the remediation in any material way.

238 While there were many factors contributing to the delay of the implementation of a remediation plan between 1996 and 2000 when the RAP was started, the primary reasons were:

1. the need to repeatedly reevaluate the remediation plan as the understanding of the contamination changed;
2. the differing opinions of the consultants retained by the interested parties as to how the remediation should be conducted; and,
3. the quotidian problems that arose that were largely beyond the influence of the parties.

239 I do not accept that there was unreasonable delay on the part of Axidata that resulted in a notable increase in the ultimate cost of the remediation.

(c) Axidata's alleged determination to save money

240 Control Data submits that it was Axidata's extreme reluctance to incur costs that caused decisions to be made that prolonged the remediation. It points to Axidata's recycling of Control Data stationary as evidence of the reluctance on the part of Axidata to spend money. However, the evidence does not show that the decisions made by Axidata were inappropriate in the circumstances. The evidence does not establish Axidata's behaviour went beyond the exercise of reasonable fiscal prudence.

(d) The cost consequences of the delay

241 Mr. Woeller makes the blanket statement that the delays in adopting the strategies used resulted in an increase in costs. Setting apart the issue of whether these delays could have been avoided, there remains the fact that he has not indicated what increased costs he attributes to the delay.

242 In response to the reports of Mr. Woeller and Mr. Lafleur, Mr. Lewis examined the question of whether had the remediation program been commenced somewhere between 1996 and 1998, after a full investigation and determination of the extent of the contamination, the cost of the remediation would have been significantly different. He concludes that it would not have been for the following reasons. The technology had advanced over the few years before the implementation of the RAP and ERAP thereby increasing efficiencies and reducing costs of some aspects of the program. The infrastructure for the program would have been much the same; however there has been a decrease in the costs of pumps. At the same time, there has been an increase in labour costs. It is Mr. Lewis' opinion that these increased costs would be compensated for by the savings in the costs of the treatment systems and efficiencies gained.

243 On that basis, he concludes that the cost of the remediation, had it been underway sooner, would have been similar, if not less, than the actual cost. I accept this conclusion.

(e) ERM's role in the ERAP

244 I referred earlier to the fact that Mr. Lewis is not independent in relation to the ERAP and its implementation, which at a cost of $656,175.00 plus a further approximately $150,000 for the verification testing and decommissioning, represents a substantial portion of the total remediation cost. I have been mindful of this in my consideration of the evidence regarding the appropriateness of the ERAP.

245 The criticisms of the ERAP appear to be that Ms. Pearce, who was principally responsible for it, was not qualified and that the technology chosen was not the most suitable. Control Data called no evidence as to what qualifications might be expected of someone acting in her capacity and Ms. Pearce was not cross-examined on her qualifications. As for the inappropriateness of the remedial technology chosen, I do not find Mr. Lafleur's criticisms to be convincing.

(f) Trow's billings

246 Finally, Control Data submits that Trow over billed Axidata. Even if this were so, I am not satisfied that if Axidata paid the invoices in good faith, Axidata is not entitled to reimbursement for the amount paid. However, the evidence does not establish that Trow over billed Axidata.

247 What the evidence shows is that Axidata and Abitibi-Consolidated were careful in their review of the Trow invoices. Their criticisms and concerns were responded to by Trow with a reduction in the amount invoiced.

(g) Conclusion

248 In the end, Control Data has not demonstrated that the costs of the remediation that Axidata seeks to recover should be reduced because of a failure to mitigate or because the amounts claimed are unreasonable.

LIABILITY

(a) Contractual Liability

(i) Control Data's breach of the Agreements

249 On March 31, 1986, Control Data sold its business at 45 Commander to Axidata by way of an asset sale. Pursuant to the terms of the Asset Purchase Agreement giving effect to the sale, Axidata agreed to assume, as of the closing date, the liabilities and obligations of Control Data under its leases with Tricont. However, pursuant to Article 2 of the Asset Purchase Agreement, Control Data remained responsible for any liabilities and obligations under its leases until closing. As a result, Axidata did not assume Control Data's environmental obligations.

250 Control Data represented and warranted that as of the closing date it was not in default on any of the terms of the leases. However, it was in breach of that representation and warranty for the following reasons:

1. it failed to abide by and comply with all laws and regulations and requirements respecting the use of the premises in contravention of Article 5.07 of the leases;
2. it created a nuisance by permitting the escape of toluene in contravention of Article 5.09 of the leases;
3. it caused damage to the land by the misuse of the tank which was inadequate for the purpose to which it was put in contravention of Article 6.05 of the leases.

251 The Assignment of Leases was entered into at the same time as Axidata entered into the Asset Purchase Agreement with Control Data. The leases which were assigned to Axidata required Control Data to repair damage resulting from its breaches and to indemnify and save harmless the landlord from any claims resulting from Control Data's breach of any provision of the leases.

252 Pursuant to the terms of that Assignment, Control Data again covenanted that as of closing the covenants and conditions of the Leases had been performed. Control Data's defaults under the leases at the time of closing are a material breach of the Asset Purchase Agreement and of the Assignment Agreement. Control Data is therefore liable to Axidata for the damages resulting from those breaches.

253 Pursuant to Article 7.14 of the Asset Purchase Agreement, Control Data agreed to indemnify Axidata against all liabilities, suits, claims and actions of any kind resulting from its failure to fulfill any of its covenants or agreements under the Agreement. It is therefore required to indemnify Axidata for the claims arising out of the toluene contamination, to the extent that Control Data is responsible for that contamination.

254 Pursuant to Article 6.06 of the leases, Control Data provided the same indemnity to the landlord. Tricont and HOOPP are entitled to rely on it and the provisions of the Lease referred to above.

(ii) release from contractual liability

255 The Leases assigned by Control Data to Axidata in 1986, provide that their assignment shall not release Control Data from performance of its obligations and responsibilities under the Leases.

256 In April 1993, Axidata entered into a Second Amending Agreement with its landlord Tricont. The Agreement gives Axidata the sole benefits and responsibilities under the assigned Leases and provides that Control Data will have no further rights, responsibilities or liabilities under the provisions of the Leases.

257 Control Data takes the position that this Amending Agreement between Axidata and Tricont releases Control Data of all liability to Axidata. I do not agree.

258 Article 9.11(c) of the Leases provides that their terms cannot be modified except by an instrument in writing signed by both parties. Control Data is not a signatory to the Second Amending Agreement. It was not a party to it and was unaware of its existence.

259 There is nothing in the Amending Agreement with respect to Axidata's rights against Control Data. It contains no release of Control Data from its obligations to Axidata. Axidata has not waived reliance through this Amending Agreement on Control Data's warranties and representations in the Asset Purchase Agreement and in the Assignment Agreement. The agreement is limited to Axidata not requiring Tricont to seek fulfillment of the tenant's obligations or damages arising from the breach of those obligations, from Control Data.

260 Nor does the Amending Agreement affect Tricont's rights against Axidata pursuant to the Leases. The agreement is limited in its affect to the rights of the signatories as between themselves.

261 Equally, HOOPP, which became the landlord in 1993, cannot be found to have released its rights against Control Data pursuant to the Leases. Even if the Amending Agreement has the effect of releasing Control Data from its obligations to Tricont, which I have found it does not, HOOPP has not ratified the Second Amending Agreement. The Third Amending Agreement into which HOOPP entered specifically provides that the Lease, as ratified and confirmed, excludes the Second Amending Agreement.

(i) novation

262 Control Data submits that even if the terms of the Second Amending Agreement do not release Control Data from its obligations under the Leases, the operation of the doctrine of novation does in that it shows an intention on the part of Axidata to release Control Data.

263 The cases on which Control Data relies are mortgage cases in which the mortgagee seeks recovery from the parties originally indebted pursuant to the mortgage. The issue in those cases was whether the mortgagee was entitled to recovery against debtors who had been replaced by a new debtor but to whose release the mortgagee had not consented. These cases have no application to Axidata.

264 In *National Trust Co. v. Mead*, the Supreme Court of Canada defined novation as "a trilateral agreement by which an existing contract is extinguished and a new contract brought into being in its place." The court continued to say that "for an agreement to effect a valid novation the appropriate consideration is the discharge of the original debt for a promise to perform some obligation ..."[3]

265 There is no trilateral agreement to which Control Data and Axidata are parties. Further, Axidata claims pursuant to the Asset Purchase Agreement and the Assignment of Leases and the breaches of those agreements at the time they were entered into. There is no new debtor who has assumed Control Data's obligations pursuant to those agreements and no discharge of the original debt.

266 Tricont and HOOPP's claims against Control Data are based on the provisions of the Leases. Control Data argues that by the terms of the Second Amending Agreement Axidata has assumed Control Data's liabilities and therefore novation applies.

267 In considering whether Control Data has met the three part test for establishing novation as set out in *National Trust*, the Court's statement in that case that the burden of establishing novation is not easily met, must be borne in mind.

268 Although Axidata did assume Control Data's liability to Tricont pursuant to the Leases, Tricont did not accept Axidata as principal debtor, but rather as an agent or guarantor and did not accept the Second Amending Agreement in full satisfaction and substitution for Control Data's obligations under the Leases and Assignment of Leases.

269 Finally, there is no evidence of an intention on the part of HOOPP or Tricont to release Control Data. Indeed, through HOOPP's excluding of the Second Amending Agreement from the documents that it ratified, HOOPP can be said to have demonstrated an opposite intention.

270 I find that Control Data has not met the burden of establishing novation.

(ii) estoppel

271 It is Control Data's position that Axidata is estopped from pursuing this claim by its failure to advise Control Data of its intention to claim against it. To establish estoppel, Control Data must demonstrate that there was a mutual understanding between it and Axidata that Axidata would not rely on the terms of the Asset Purchase Agreement and the Assignment of Leases and that Control Data relied on this understanding.[4] The evidence does not disclose any such shared assumption or understanding.

272 In the absence of evidence of a shared assumption, Control Data relies on estoppel by representation. Axidata's failure to voice an intention to rely on the terms of the Agreements can only be taken as a representation not to rely on those terms if there was a legal duty owed by Axidata to Control Data to make such disclosure and Axidata's failure to do so was relied on by Control Data as creating an estoppel.[5]

273 Axidata had no legal obligation under the Agreements with Control Data to disclose its intention to rely on them.

274 Control Data argues that such an obligation existed pursuant to s. 92(1)(c) of the *Environmental Protection Act*.[6] It requires every person having control of a pollutant that is spilled or causes or permits a spill of a pollutant to notify certain parties, including the owner of the pollutant if the person in control is not the owner. However, as "person having control of a pollutant" is defined in s. 91(1) as the person having control over the pollutant immediately before the first discharge of the pollutant, the obligation to disclose under s. 92(1) is that of Control Data, not Axidata.

275 Accordingly, there is no basis for a finding of estoppel. Even if that were not so, the evidence falls short of establishing that Control Data relied to its detriment on Axidata's failure to notify it prior to December 1999 of its intention to rely on the provisions of the Asset Purchase Agreement and Assignment Agreement.

276 Control Data argues that it lost the opportunity to locate documents, obtain evidence and reduce the damages. But, it is the belief of John Reid, Control Data's Corporate Secretary and General Counsel, that it transferred all relevant documents to Axidata at the time of the sale in 1986. Similarly, he confirmed that the witnesses from whom Control Data might have sought evidence became the employees of Axidata upon the sale. Finally, Control Data has made no attempt to involve itself with the remediation or demand that it be completed in a more expeditious manner. There is no reason to believe that it would have done so had it had earlier notification.

277 Pursuant to the terms of the Asset Purchase Agreement, Control Data explicitly covenanted and agreed to indemnify Axidata against "any claims, demands, actions, causes of action, damage, loss, costs, liability or expense" resulting from any nonfulfillment of any covenant or agreement on its part or breach of any representation or warranty contained in the Assignment of Leases. Included in this is Control Data's representation and warranty that, as of the Closing Date, the Leases were in full force and effect and no default existed on the part of Control Data. Control Data has not been

released from these obligations.

(iii) waiver of warranty

278 Control Data submits that for the plaintiffs to succeed pursuant to the warranties in the Asset Purchase Agreement and Assignment of Leases, they must establish reliance on that warranty. It relies on the British Columbia Supreme Court decision in *Olsen v. Behr Process Corp.*[7] However, this case has no application.

279 In *Olsen*, the court considered a motion to strike portions of a class action statement of claim against the manufacturer of liquid wood coating. The plaintiffs alleged that the coating was defective and that the manufacturer had breached its warranty. The plaintiffs failed to plead that the manufacturer made a statement intended by it to be a warranty and that this statement induced the plaintiffs to purchase the product. Their claim based on breach of warranty was therefore struck.

280 The facts in *Olsen* are entirely distinguishable. The warranties upon which Axidata relies are express warranties contained in the Asset Purchase Agreement and Assignment of Leases, granted by Control Data as an inducement to Axidata to enter into the Agreements.

281 There is no obligation on the part of Axidata to demonstrate reliance on the warranties contained in the Agreements. Axidata is entitled to rely on the warranties.

(b) Negligence

282 Having found that Control Data is liable to Axidata, Tricont and HOOPP in contract, it is not necessary for me to consider Control Data's liability in tort. However, I do so should my findings with respect to the contractual obligations be wrong.

283 Control Data argues that there should not be a finding of negligence against it because its use of the tank was in accordance with the standard of the day. While there is evidence that concrete tanks such as the one installed by Control Data were being used around that time for the storage of liquid chemical waste, that does not absolve Control Data of liability. Control Data's failure to monitor the quantity of waste that was disposed of in the tank and the degree of fullness of the tank were, as I have found, negligent.

284 In its argument, Control Data enumerates acts of Axidata with respect to the maintenance and operation of the tank that it relies on as evidence of negligence on the part of Axidata. However, those alleged specifics of negligence apply equally, if not more so, to Control Data. It failed to take steps to ensure that contamination had not been released, as it alleges Axidata failed to do. It failed to take measurements of the liquid in the tank, as it alleges Axidata failed to do. And, it failed to take any steps to investigate the condition of the tank and surrounding area at the time it gave its warranties in the Asset Purchase Agreement and the Assignment of Leases, as it alleges Axidata failed to do when it stopped using the tank in 1992. Control Data's negligence is

demonstrated through its own arguments.

285 Control Data asserts that Axidata was negligent based on its not being aware of dramatic changes in environmental standards in 1986. However, other than the requirement to obtain a waste generator number and to file manifests with the Ministry of Environment, there is no evidence that there were any changes in environmental legislation from 1986 to 1993 that affected the use of the tank. For the reasons stated above under the sub-heading pumping of the tank', I find the delay in obtaining the waste generator number did not contribute to the contamination.

286 According to Control Data, both landlords, Tricont and HOOPP, were negligent in their response to the contamination. However, Tricont did not know that the tank was being used in breach of the lease and did not know of the contamination until the sale to HOOPP.

287 I do not accept Control Data's argument that HOOPP contributed to the costs of the remediation by putting a halt to the implementation of the hydro- fracturing system recommended by Trow. HOOPP's actions were reasonable in the circumstances. They retained an expert to satisfy themselves that the approach recommended by Trow was appropriate. When they learned that their expert did not agree with Trow's approach, they were not prepared to have it implemented without further consideration. In any event, as discussed above under Remediation', I find that the delay resulting from HOOPP's halting of the installation of the hydro-fracturing system did not materially contribute to the costs of the remediation.

288 HOOPP cannot be said, as Control Data argues, to have disregarded the damages being sustained by the neighbouring landowners as a result of the contamination. It was not until the fall of 1996 that toluene migration beyond 45 Commander became a concern. Although the contamination was not responded to promptly between then and the summer of 1998 when HOOPP retained its expert, the evidence does not establish that HOOPP bears responsibility for that delay.

289 In conclusion, I find that Control Data was negligent. Axidata was contributorily negligent to the extent that its use of the tank contributed to the contamination. Axidata was responsible for approximately 10% of the toluene disposed of in the tank. Accordingly, I find the extent of its contributory negligence to be 10%.

290 I find no contributory negligence on the part of the landlords.

(c) Liability pursuant to the Environmental Protection Act

291 Axidata relies on the *Environmental Protection Act* as an alternative basis for its claim. Based on the above findings, it is not necessary for me to consider this claim, but will do so briefly.

292 Control Data denies Axidata's entitlement to recovery pursuant to the *EPA*, relying on the following arguments:

1. The *EP*A contains a two year limitation period which expired before this claim was issued.

   This defence was not pleaded and no leave to amend to include the defence was sought though Control Data did move at the close of trial to amend its pleading to add other additional defenses. Control Data cannot rely on this defence.

2. Section 93(1) imposes the responsibility for clean up and remediation on Axidata.

   This is correct, but only to the extent of the contamination it caused, which I have found to be 10%. The duty is on the owner and person having control over the pollutant. It is Control Data that is responsible with respect to the contamination that occurred between 1976 and 1986. The *EPA* does not shift the onus to Axidata to remediate the contamination caused by Control Data.

3. Section 99(1) which provides for compensation for loss or damage resulting from contamination did not come into force until November 29, 1985.

   The decision in Pearson v. Inco Ltd.,[8] supports Control Data's position that Axidata is entitled only to damages which can be established as having resulted from spills that occurred from the date the section came into force to the date of the sale in 1986. This is a period of less than a year.

293 Axidata's rights of recovery under the provisions of the *EPA* are very limited.

DAMAGES

294 Axidata claims the following amounts:

1. 1993 removal of underground storage tank, soil excavation and installation of recovery trench and well	$300,000.00

2. Pre-remediation action plan $331,972.03 investigations

3. Remediation Action Plan $1,505,897.40

4. Extended Remediation Action Plan $498,900.00 to August 25, 2006
5. Additional ERAP costs to $157,275.00 completion
6. Verification testing and $150,000.00 decommissioning

7. Hydraulic Barrier $60,000.00

8. Premium Properties Ltd. damages $133,000.00 settlement
9. Monarch Construction Ltd. damages $616,400.00 settlement

Sub-total $3,753,444.43

10. Less settlement funds recovered $150,000.00 from Tricont

Total damages $3,603,444.43

(a) Amounts claimed

1. Removal of tank, soil excavation and installation of recovery trench

295 Control Data takes the position that Axidata is not entitled to reimbursement of any of the amounts paid for this work, as it has been unable to locate the invoices pursuant to which the payments were made. However, as there is no dispute that the work was done and that payment was made, I reject that position. The only issue is whether the amount claimed is appropriate.

296 The $300,000 figure is based on Mr. Arnott's recollection of the cost of this work. Based on Mr. Lafleur's and Mr. Woeller's evidence, the cost would have been expected to be between

$250,000 and $255,000. I consider that to be more reliable than Mr. Arnott's recollection given the passage of time since the payment was made. Accordingly, I find damages under this heading to be $255,000.

2. Pre-remediation action plan investigations

297 Control Data submits that I should exclude from this portion of the claim the amounts for which there are no invoices as well as the costs associated with the hydro-fracturing which was not implemented.

298 Axidata has restricted its claim for amounts paid to Trow to those for which there are invoices and those which appear on an invoice summary prepared by Trow in August 1999. Together, this totals $180,545.48, the reasonableness of which has not been challenged. I find Axidata to be entitled to recovery of that amount.

299 An additional amount of $22,807.25 is claimed for payments made to other service providers. No issue is taken with this amount and I find Axidata entitled to it.

300 The balance of 128,619.30 claimed is for amounts paid with respect to the hydro-fracturing. I accept Axidata's position that these costs were incurred in good faith and that the decision not to proceed with the hydro-fracturing was reasonable in the circumstances.

301 I find the damages under this heading to be the full amount claimed.

3 & 4. RAP and ERAP

302 I have found that the full costs of the RAP and ERAP were properly incurred and therefore are recoverable. The costs are as set out above.

5 & 6. Costs not yet incurred

303 Axidata is claiming the amount budgeted in the ERAP for costs to be incurred in the future. As of August 2006 when the calculation was done, $88,700 of costs was to be incurred in the balance 2006 and $68,575 was to be incurred in 1997. Additionally, Axidata is claiming the anticipated costs of the verification testing and decommissioning which will be undertaken after the completion of the ERAP. The total is $307,275.

304 Control Data submits that Axidata is not entitled to any amount for costs that have yet to be incurred. I fail to understand the rationale behind this position. I find that Axidata is entitled to the costs not yet incurred with respect to the remediation and its finalization through verification testing and decommissioning. This leaves the question of how the appropriate amount is to be determined.

305 Counsel for Axidata proposed that I direct a reference to be heard following the completion of the decommissioning. Counsel for Control Data is in agreement with this. In the event that the

parties cannot agree as to the amount owing with respect to these future costs, then they may have the issue determined by way of reference before a Master.

7. The hydraulic barrier

306 Ms. Pearce testified that the estimated cost of the hydraulic barrier being installed between the toluene remediation zone and the contamination caused through other sources at Monarch's properties on the other side of Commander is $120,000. This cost is being shared equally with Monarch.

307 Control Data did not take issue with the cost of the barrier. Nor did it suggest that the barrier is unnecessary or that the apportionment of its costs is inappropriate. Neither Mr. Woeller nor Mr. Lafleur had any criticism of the barrier nor questioned its requirement. I find that the barrier is required as a result of the toluene contamination and, accordingly, that the amount attributable to this head of damages is $60,000.

8, 9 & 10. The settlements

308 Control Data has agreed to the reasonableness of the Monarch settlement.

309 There is no such agreement with respect to the Premium settlement in the amount of $133,000 though Control Data has not made any submissions or called any evidence regarding its reasonableness.

310 The payment made by Axidata to Premium was in settlement of its claims for the costs of its action and the expenses it incurred for legal fees, other than those incurred in the litigation, and in retaining environmental consultants. The total consists of $110,000 for Premium's costs and expenses to the date of the settlement, March 30, 2006, plus reasonable legal and environmental consulting fees in connection with Premium's monitoring of the remediation to a maximum of $23,000. The settlement avoids the payment of any amount for environmental stigma damages.

311 In addition to the making of this payment, as part of its settlement with Premium, Axidata has agreed to remediate 67 Commander to the agreed to standard by June 30, 2009 failing which Premium has the right to commence an action seeking the loss in the value of the property as a result of environmental stigma.

312 The evidence upon which I must decide as to the appropriateness of this settlement, and hence Axidata's entitlement to recover the amount paid for it, is limited. However, it does establish that Premium retained lawyers to advise it with respect to Axidata's remediation proposals and that it retained environmental consultants to review Trow's recommendations. As to Premium's costs of its action, I have the pleadings and my awareness of the fact that Premium participated in a pre-trail mediation held in conjunction with the mediation in the other actions.

313 No amount has been claimed by Axidata for the costs it will incur in bringing 67 Commander to the agreed to standard of remediation, though in its written submissions it seeks those costs. I assume that there will be no additional costs beyond those that have been and continue to be incurred for the RAP and ERAP. If that is not correct, in the absence of any evidence as to what the additional efforts might be involved, I am not prepared to award any amount for them.

314 Taking all of the relevant evidence into account and recognizing both that it was in Axidata's interests to achieve the most favourable settlement available to it and to settle the Premium action rather than allowing it to proceed to trial, I find the damages attributable to this settlement to be $110,000. If Axidata seeks recovery of any additional amount as a result of some or all of the agreed to $23,000 having to be paid, a determination of the amount to which it is entitled shall be made at the reference ordered with respect to the remediation costs not yet incurred.

315 Control Data has not suggested that the $150,000 payment made by Tricont to Axidata in settlement of Axidata's and HOOPP's claims against Tricont is either inadequate or excessive. Tricont seeks to recover this amount against Control Data. As I have found Control Data to be liable to Tricont, I find this amount to be recoverable.

(b) Reductions to be made

316 Control Data submits that the above amounts should be reduced by one third to reflect the costs resulting from "delay and duplication." Having found that delay did not increase the costs and that the involvement of so many parties, which presumably is what the duplication is alleged to refer to, was inevitable, I see no basis for this reduction.

317 I have found contributory negligence on the part of Axidata in the amount of 10%. Accordingly, Axidata and Tricont are entitled to damages in the above amounts, which as of August 25, 2006 totalled $3,378,169.43, less 10%.

REMAINING MATTERS

318 At the request of counsel, I have agreed to deal with the issue of interest on the amounts owing following the delivery of these reasons. Counsel may make arrangements through my assistant for a conference call to address the hearing of that issue together with the mechanics of the disposition of the various actions and the issue of costs.

E. FRANK J.

1 [1970] S.C.R. 1010, at p. 102

2 [1997] O.J. No. 3928 (Gen. Div.) at para. 28

3 [1990] 2 S.C.R. 410 at p. 427

4 *Engineered* Homes *Ltd. v. Juniper Lands Ltd.* [1983] 1 S.C.R. 641, 146 D.L.R. (3d) 577, at para. 7

5 *Ryan v. Moore***,** [2005] 2 S.C.R. 53, (2005) at p. 88: "... estoppel by representation cannot arise from silence unless a party is under a duty to speak. Silence or inaction will be considered a representation if a legal duty is owed by the representer to the representee to make a disclosure, or take steps, the omission of which is relied upon as creating an estoppel".

6 R.S.O. 1990, Chap. E.19.

7 [2003] B.C.J. No. 627 (S.C.)

8 [2001] O.J. No. 4950 (Sup.Ct.)

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