Case Name: Gariepy v. Shell Oil Co.

PROCEEDING UNDER The Class Proceedings Act, 1992

Between

Michael Gariepy, Lyne Marion, Wayne McGowan, Paul Berthelot and Dale Elliott, plaintiffs, and Shell Oil Company, E.I. Du Pont De Nemours and Company and Hoechst Celanese Corporation, defendants

> [2002] O.J. No. 2766 Court File No. 30781/99 (London) Toronto Court File No. 99-CT-030781CP

Ontario Superior Court of Justice Nordheimer J.

Heard: June 18-20, 2002. Judgment: July 9, 2002. (81 paras.)

Counsel:

C. Scott Ritchie, Q.C., Michael A. Eizenga and Dawn M. Sullivan, for the plaintiffs. David W. Kent and Jennifer Dent, for the defendant, Shell Oil Company. Jeffrey S. Leon and Laura Cooper, for the defendant, E.I. Du Pont De Nemours and Company.

J.D. Timothy Pinos and Glenn M. Zakaib, for the defendant, Hoechst Celanese Corporation.

¶ 1 NORDHEIMER J.:— The plaintiffs move to certify this action as a class proceeding under the Class Proceedings Act, S.O. 1992, c. 6. Prior to the certification hearing, a resolution of the plaintiffs' claims against the defendant, E.I. Du Pont De Nemours and Company, was reached. That resolution is subject to court approval which is pending. As a consequence of that resolution, counsel for Du Pont appeared but did not make any submissions on the certification motion.

¶ 2 The claims asserted in this action arise out of alleged defects in two products, polybutylene plumbing pipe and acetal insert fittings. The plaintiffs allege that fittings made from acetal resin, supplied by the defendant, Hoechst Celanese Corporation, and pipe made from polybutylene resin, supplied by the defendant, Shell Oil Company, are unsuitable for use in potable water plumbing

systems. The plaintiffs allege that if such fittings and piping are used in potable water plumbing systems, they will fail prematurely leading to leaks and damages consequent on such leaks.

 \P 3 The defendants assert that their materials are suitable for use in the manufacture of products that are, in turn, used in potable water plumbing systems and that any leaks that are experienced by members of the putative class arise from other factors such as manufacturing defects, installation errors, rodents chewing holes in the pipe, nails being driven into the pipe or improper maintenance.

 \P 4 The plaintiffs assert causes of action including negligent design, failure to warn, misrepresentation and breach of warranty. The plaintiffs have sued only the raw material manufacturers. They have not sued the companies that manufactured the pipe or the fittings. They have also not sued house builders or plumbers who chose and installed the plumbing components.

¶ 5 The proposed class is defined in the plaintiffs' factum as:

All owners of residential dwellings in Ontario who have or had a "polybutylene plumbing system" in their residence which is or was composed of polybutylene pipe or polybutylene pipe and insert acetal fittings manufactured from materials sold and supplied by the defendants. "Polybutylene plumbing system" refers to water supply plumbing containing pipes fabricated, in whole or in part, from polybutylene, and insert fittings, including tees, inserts, elbows, couplings, fabricated in whole or in part, from Celcon acetal resin, whether sold and/or installed as a system or as separate pieces.

Each of the proposed representative plaintiffs claims damages of \$60,000 together with punitive damages of \$1,000,000. The plaintiffs suggest that there are thousands of homeowners in Ontario who would fall within this definition of the class. However, it is apparent that, at this stage of the proceedings, no precise estimate of the size of the proposed class can be made. In addition to this action, there are parallel proposed class actions filed and being pursued in British Columbia (Furlan v. Shell Oil), and in Quebec (Couture v. Shell Oil), neither of which has yet reached the certification stage.

Background

¶ 6 This action was commenced by Statement of Claim on February 18, 1999. Shell is a Delaware corporation with its principal place of business in Texas. Shell manufactured polybutylene resin which was in turn fabricated by others into plumbing pipes. Du Pont is a Delaware corporation with its principal place of business in Delaware. Celanese is a Delaware corporation with its principal place of business in New Jersey. Du Pont and Celanese manufactured acetal resins (under the brand names Delrin and Celcon respectively) which were fabricated by others into fittings.

¶ 7 The plaintiffs allege that the polybutylene plumbing systems are failing or will fail prematurely as a direct result of the material used to make the components of the subject polybutylene plumbing systems. The plaintiffs allege that the material which was designed, developed, manufactured and sold by the defendants to be used as an integral part of these polybutylene plumbing systems is inappropriate for use in potable water plumbing systems. The plaintiffs allege that use of this material represents a design defect in that the material itself is a critical element of the design of these systems for which the defendants are liable. The plaintiffs allege that the defendants failed

to adequately test their products and in all the circumstances were negligent in failing to properly warn class members of the limitations of PB plumbing systems.

¶ 8 The issues raised by this action have been the subject of proceedings in the United States for many years. It appears that very few of those actions, however, have been certified as class actions and none of those certified have been certified on either a state-wide or nationwide basis. It should be noted, however, that in 1995, Shell and Celanese entered into a settlement with a nationwide class of homeowners in Tennessee in Cox v. Shell Oil Company 1995 WL 775363 (Tenn.Ch.). At about the same time, Du Pont entered into a second nationwide class settlement in Alabama state court in Spencer v. Shell Oil Company (unreported, Cir. Ct. of Greene County, Alabama, June 30, 1995). These settlements were made expressly without any admission of liability and, in particular, without conceding that certification of such claims was appropriate.

¶ 9 Plastic pipe made from polybutylene resin has two primary potable water applications. One is for use in cold water service, including underground pipe for transmitting potable water from a municipal line to a residential or commercial building; and the other is for use in plumbing service, consisting of pipe used inside a residential or commercial structure to carry both hot and cold potable water to plumbing fixtures. Not all plumbing pipe is plastic, and not all plastic plumbing pipe is made from PB. Commercial and residential structures will contain plumbing pipes made of one or more of not only PB, but also copper, chlorinated polyvinyl chloride ("CPVC"), cross-link polyethylene ("PEX") or galvanized steel. The supply lines may be made from PB, copper, polyethylene ("PE"), PEX, flex metal or nylon or other flexible plastics. Yard service lines may be made of PB, copper, PVC, PE, PEX or galvanized steel.

¶ 10 There are also many different designs of fittings, made from a variety of materials, which may be used with PB plumbing pipe. Many structures will use more than one kind or style of fitting with their PB pipes. For example, PB pipe may be joined using fittings made from metal (primarily copper and brass), acetal, PB, polysulfone, polypropylene, CPVC, PVC or a combination of metal and plastic. Indeed, in this case, the representative plaintiffs have a variety of fittings in their houses.

¶ 11 Neither Shell nor Celanese have ever commercially manufactured, designed, sold or installed PB pipe, fittings or any kind of plumbing systems. Both of these companies simply made resins in pellet form which they sold in bulk to unrelated companies. These companies then designed and extruded various sizes and types of plastic pipe or designed and manufactured various types of fittings or both. The pipe and/or fitting manufacturers sold the pipes and fittings into the marketplace, often through distributors.

¶ 12 PB pipe, and the fittings used to join PB pipe, were designed, extruded, moulded, distributed and/or manufactured by a wide variety of companies. Each manufacturer designed and implemented its own extrusion process using its own equipment, and these designs and processes varied a great deal. The manner in which the extrusion process is designed and performed can affect the quality and ultimate performance of the pipe.

¶ 13 PB plumbing installations varied according to the instructions followed by, the tools used by, the techniques and practices employed by, and the relative skill and experience of each of the many installers in Canada. PB pipe and acetal fitting manufacturers and resellers variously provided either their own individual instruction guidelines or standardized guidelines prepared by the Plastic Pipe

and Fittings Association from time to time. A variety of types and models of crimping tools were used and were manufactured by different companies at different times. Installation errors, including in particular improper installation of fittings and over bending or misplacing PB pipe, can significantly impair the performance and longevity of the plumbing system in question.

¶ 14 As may be self-evident from the nature of the ultimate products, and as courts in the United States have found, there is no single universal "polybutylene plumbing system". Most plumbing systems are planned in an ad hoc manner by plumbers performing the installations using whatever components are readily and economically available. There will, of course, be considerable variability in the construction and design of the different types of structures into which such systems are installed and, consequently, the combination of components and the manner of their installation will vary greatly. The ultimate, and again perhaps self-evident, consequence of these facts is that there are many different reasons why any plumbing system may fail, that is leak, including failures in the products, the design, the manufacturing, the installation and the maintenance of the system. Further, some leaks which initially may be blamed on the system can in fact be the result of problems with fixtures such as faucets and toilets. Finally, leaks may manifest themselves in many different ways: they may be pipe leaks (i.e., splits or holes in the pipe); leaks at the joints where the pipes and fittings are connected; leaks resulting from pipes and fittings coming loose or separating at the joints; leaks resulting from cracked, corroded or loose crimp rings; leaks resulting from cracked fittings; leaks from rodents chewing through the pipe; leaks caused by an installer or homeowner abusing the plumbing (e.g., putting a nail through the pipe); or any combination of these types of leaks. The determination of the source and type of leak can only be made after an examination of the individual plumbing system.

¶ 15 It will not likely come as a surprise to anyone that there is a dispute among the parties' various experts on the suitability of the defendants' products for use in polybutylene plumbing. The plaintiffs' principal experts are Dr. Stivala and Dr. Chudnovsky. Dr. Stivala is a research professor in chemistry from the United States and has spent considerable time in the research of polymers. He opines that the common cause of failure of acetal fittings and PB pipe is susceptibility of the material to chemical attack in potable water. Specifically, oxidative degradation occurs as a result of the presence of oxygen, and other oxidizing agents including chlorine, in potable water. Dr. Stivala is of the view, therefore, that the defendants' resins are inappropriate for use in potable water systems. Dr. Chudnovsky is a professor of mechanics and materials from the United States who has spent considerable time researching the long-term strength of materials. He gives the opinion that PB pipe and acetal fittings are inherently susceptible to mechano-chemical degradation in an aqueous environment and, therefore, are not suitable for use in potable water plumbing systems. It is Dr. Chudnovsky's opinion that mechano-chemical degradation of PB and acetal is the common root cause of PB plumbing system failure. He states that the susceptibility of polybutylene and acetal to degradation in a potable water environment is a fundamental defect of polybutylene plumbing systems. He further states that "premature failure of existing polybutylene plumbing systems in potable water applications is inevitable."

¶ 16 Shell's principal expert is Dr. Wiles. Dr. Wiles has spent much of his professional career studying polyolefins which is the family of polymers that includes PB. Dr. Wiles has done research on the oxidative degradation of polypropylene which is a polymer that is chemically and structurally very similar to PB. Dr. Wiles disagrees with the theories and conclusions of the plaintiffs' experts. Dr. Wiles concludes that, given the antioxidants used by Shell in its PB resins, Shell's PB is a

completely suitable material from which to manufacture potable water pipes. Dr. Wiles expresses the view that from the polybutylene plumbing systems he has examined, only rarely is there evidence of oxidation and, where there is, it is "almost never enough to have caused a pipe to fail prematurely". Dr. Wiles says that, of the half dozen or so PB pipe failures due to oxidation he had seen, the failures had occurred as a result of mishandling. Other pipe holes or leaks he observed usually occurred because, among other things, the pipe was kinked or excessively bent or flattened, was punctured, was exposed to direct sunlight or was improperly extruded in one of a number of ways.

¶ 17 Celanese's principal expert is Richard R. Geoffroy. Mr. Geoffroy is a consultant who specializes in the study and analysis of polymers. He has worked in the plastics industry for many years. He has developed extensive knowledge of, and experience with, all types of polymers including acetal copolymers such as Celcon. Mr. Geoffroy also disagrees with the theories and conclusions of the plaintiffs' experts. Mr. Geoffroy notes that the plaintiffs' theory and conclusions are inconsistent with the fact that Celcon is used in numerous other applications where it is exposed continuously to chlorinated drinking water and where there have been no significant failures. Likewise, Mr. Geoffroy notes that the plaintiffs' experts admit that premature leaks in polybutylene plumbing may be caused by a variety of different factors, such as installation errors, which have nothing to do with the alleged degradation of the raw materials. The plaintiffs chose not to cross-examine Mr. Geoffroy on his affidavit.

¶ 18 All PB plumbing systems in Ontario are installed pursuant to the Ontario Building Code. The Code provides standards for the proper support of the piping, proper support of the fixtures, and the proper alignment of the piping to avoid strain. It also states that the piping shall not be bent or pulled after it is joined, that hangers shall not compress, cut or abrade the pipe. The Code provides that a plumbing system shall withstand certain tests. It states that "... potable water systems shall be designed, fabricated and installed in accordance with good engineering practice ...". A plumbing inspector must verify that the entire polybutylene plumbing system has been installed pursuant to the Code requirements prior to approving the installation.

¶ 19 There is also disagreement over the likely size of the proposed class. The plaintiffs estimate that the class will consist of thousands of Ontario homeowners. They say that over 300 potential Ontario class members have contacted their counsel with respect to this litigation and that approximately one third of those people have experienced leaks in their PB plumbing systems. The plaintiffs also say that as of April 2000, class counsel in British Columbia (where it is said that there has been far more extensive publicity) had been contacted by over 4,000 potential class members resident in British Columbia who have polybutylene plumbing and/or heating systems. The plaintiffs also rely on a report done in 1997 by ARA Consulting Group Inc., a major Canadian consulting firm, which conducted an analysis of the use of PB plumbing systems for indoor plumbing use throughout Canada. The ARA report estimated that, as of 1996, over 700,000 homes in Canada had been plumbed with PB plumbing systems. In addition, the plaintiffs' counsel have considered the number of mobile homes with polybutylene plumbing systems in Ontario. Plaintiffs' counsel estimate that, as of 1996, there were almost 14,000 mobile homes within the class definition in Ontario. They further note that this number is likely low because such systems continued to be installed after 1996. In the end result, however, the plaintiffs acknowledge that it is not possible to make a precise estimate of the likely class size.

¶ 20 The defendants take a different view of these numbers. They point to the fact that only 311 claimants have contacted the plaintiffs' counsel and only 100 of those had actually experienced a leak. More telling, the defendants say, is the fact that of the 13 homes that the plaintiffs themselves picked to have their litigation inspector attend and review in 1999, only two had experienced any leaks at all. Further, only three of the plaintiffs' four residences have experienced leaks. The defendants therefore submit that the class size is likely to be much smaller than the plaintiffs would portray it to be.

¶ 21 The defendants say that what is of more importance to the issues on this motion is the fact that there are many different kinds of leaks, and equally many different reasons for leaks to occur, in PB plumbing systems. The defendants assert that determining the location of a leak, and the identity of the leaking plumbing component, is a prerequisite for assessing any of the defendant's liability to any plaintiff because each of the defendants supplied resin that was manufactured into entirely different plumbing components. Further, they point to the fact that there are many other plumbing components that are not derived from the defendants' resins at all and, if a leak occurs in those components, it is not disputed that these defendants would not be responsible for it.

¶ 22 The defendants also point to the experience of the Plumbing Claims Group, Inc., a non-profit corporation owned by Shell, Celanese and Du Pont and established to provide a voluntary claims handling program for home owners who have experienced certain kinds of leaks in plumbing systems containing PB pipe with acetal and/or metal insert fittings. There were 193 claims made by 179 Canadian claimants to this group. An examination of those claims, which were alleged to involve leaks in the claimants' PB plumbing systems, demonstrated that the leaks actually occurred in a variety of components - for example PB pipe, acetal insert fittings, acetal insert joints, metal insert joints, plastic valves, toilet risers, faucets, acetal compression fittings, ABS drain lines and a shower valve. The defendants rely on this evidence in support of their contention that the source of any given leak can be both difficult to discover, thereby requiring an examination of the specific system, and can be totally unrelated to any product manufactured from the defendants' resins. Similarly, the defendants say that the mere fact that a leak occurs in a product manufactured from the defendants' resins does not establish liability on the defendants because the leak may occur for a variety of reasons. Again, the defendants say that only an examination of the specific system will answer the question whether the leak is related to a problem that is ultimately the result of the use of the defendants' resins.

¶ 23 Lastly, the defendants say that even the experts on the plaintiffs' side admit that not all PB plumbing systems will fail nor is it possible to predict if and when any given PB plumbing system will fail.

¶ 24 There are additional complications regarding the acetal insert fittings. As I earlier mentioned, such fittings were made from Delrin and from Celcon. Celanese says that while Celcon and Delrin are both acetals, there are significant differences in their properties, including their chemical resistance. Celcon and Delrin were often used interchangeably by component part manufacturers, such that fittings made from each of those materials are frequently found in the same mobile and site-built homes. In addition, Du Pont supplied Delrin to Bow Plastics, Ltd., the primary manufacturer of polybutylene plumbing in Canada. Celanese did not sell or supply Celcon to Bow. Celanese therefore contends that, not only is it unlikely that its product was used in any acetal insert fitting that might be found in a Canadian installation, the fact that a leak is found in such a fitting

does not establish liability on Celanese until such time as it can be shown that the particular fitting was made from Celcon as opposed to Delrin.

¶ 25 Finally, the defendants rely on the fact that Polybutylene plumbing was designed, moulded, manufactured and marketed in the 1970's, 1980's and early 1990's by numerous companies including, among others, Bow, United States Brass Corporation, Vanguard Plastics, Inc., Plasco Manufacturing Ltd., Wrightway Manufacturing Company, Admiral Marine, Inc., Western Plastic and Rubber Co., Inc., Trojan Plastics, Inc., Twentieth Century Companies, Inc., Nibco, Marshall Brass and JACO. The respective product designs, manufacturing methods, installation instructions and marketing representations varied amongst the different companies and changed considerably over the years. Further, these manufacturers sold component parts and tools directly and through distributors to many individual builders, contractors, plumbers, plumbing supply homes, mobile home manufacturers and recreational vehicle manufacturers. Those third parties, sometimes relying on instructions and sales literature furnished by the manufacturers, that differed from each other and changed over time, installed the different components in individual's residences.

 \P 26 In support of this latter point, the defendants point to the fact that the properties of the proposed representative plaintiffs, and a small group of individuals whose homes have been inspected by the plaintiffs' and defendants' witnesses, illustrate the many different types of polybutylene plumbing at issue in this action. For example,

- * Mr. Gariepy's plumbing is comprised of polybutylene pipe manufactured by Bow joined by copper insert fittings and at least one nylon compression fitting;
- * Mr. Berthelot's plumbing is comprised of polybutylene pipe manufactured by Bow joined by both plastic and copper insert fittings, as well as nylon compression fittings;
- * Mr. McGowan's plumbing is comprised of polybutylene pipe manufactured by Bow and U.S. Brass joined by copper insert fittings, Brass-Craft compression fittings and nylon compression fittings;
- * Mr. Elliott's plumbing is comprised of both copper and polybutylene pipe manufactured by Bow joined with a multitude of different fittings, including plastic and copper insert fittings and compression fittings which were manufactured by, among others, Bow, U.S. Brass and Admiral Marine;
- * Marc Gallant's plumbing is comprised of polybutylene pipe manufactured by Bow joined exclusively by copper insert fittings; and
- * Scott Brennan's plumbing is comprised of polybutylene pipe manufactured by Bow and Plasco joined exclusively by copper insert fittings.

¶ 27 Finally, it should be noted that Shell sold PB resin to pipe manufacturers for plumbing pipe from December 1977 to a point in time in 1998. Shell warned its customers not to use PB in hot water recirculating systems or excessively chlorinated water in 1987. In 1993, Shell recommended that PB not be used in systems where the water contained more than two parts per million of free

chlorine. Celanese supplied Celcon from the 1970's to 1990 when it ceased to sell Celcon for this use. In 1986, Celanese informed its customers that it would no longer sell Celcon to manufacturers who intended to manufacture insert fittings from it unless the manufacturer provided an indemnity to Celanese. Celanese says that this decision was unrelated to any concerns as to the suitability of the product for this use but rather reflected the significant litigation costs which it was then experiencing in the United States arising out of allegations of improper manufacture, design and installation. It was this same concern, Celanese says, that led it to discontinue the sale of Celcon for this use in 1990.

Analysis

¶ 28 In order to have an action certified as a class proceeding, the plaintiff must satisfy the requirements of section 5(1) of the Act which states:

"The court shall certify a class proceeding on a motion under section 2, 3 or 4 if,

- (a) the pleadings or notice of applications discloses a cause of action;
- (b) there is an identifiable class of two or more persons that would be represented by the representative plaintiff or defendant;
- (c) the claims or defences of the class members raise common issues;
- (d) a class proceeding would be the preferable procedure for the resolution of the common issues; and
- (e) there is a representative plaintiff or defendant who,
 - (i) would fairly and adequately represent the interests of the class,
 - (ii) has produced a plan for the proceeding that sets out a workable method of advancing the proceeding on behalf of the class and of notifying class members of the proceeding, and
 - (iii) does not have, on the common issues for the class, an interest in conflict with the interests of the other class members."

A. Causes of Action

¶ 29 Shell concedes that the statement of claim alleges sufficient facts to found a proper cause of action in negligence. Shell disputes, however, that the claims in misrepresentation and breach of warranty disclose a reasonable cause of action. Celanese, on the other hand, disputes that the statement of claim discloses any reasonable cause of action. While it raises the same issues regarding the other causes of action, Celanese goes further and asserts that, as a raw material supplier, it "owes no duty of care or duty to warn to the ultimate consumer of a product designed and manufactured by someone else". Both defendants also assert that the claims as pleaded purport to

include persons who do not have a claim because they either have not experienced any loss or because the loss experienced is restricted to the plumbing system itself.

¶ 30 On the duty of care issue, Celanese relies on Harrington v. Dow Corp. (1996), 48 C.P.C. (3d) 28 (B.C.S.C.), aff'd. (2000), 193 D.L.R. (4th) 67 (B.C.C.A.) and Harrington v. McGhan Nusil Corp., [1999] B.C.J. No. 250 (C.A.) in support of its assertion.

¶ 31 I believe that Celanese has misinterpreted the conclusions in those two cases. Those cases dealt with a situation where a party took someone else's product and incorporated it into their product in a manner that caused the final product to be defective. In other words, it was the design, and not the incorporated product, that was defective. It was not a situation, as is the case here, where the plaintiffs say that the defendants' products were themselves defective for use in the final product regardless of the design. Rather, the plaintiffs allege that the defendants manufactured products that they knew, or ought to have known, were not suitable for use as an ingredient in the manufacture of products that were, in turn, to be used in potable water systems. The plaintiffs further allege that the defendants were negligent in putting such products into the marketplace knowing they would be used in the manufacture of such products.

¶ 32 In my view, given the nature of the allegations made, the statement of claim discloses a proper cause of action in negligence against the defendants.

¶ 33 Having reached the conclusion that there is a proper cause of action alleged against the defendants in negligence, I must nonetheless consider whether the other causes of action are properly alleged. While I appreciate that section 5(1)(a) refers to the pleadings disclosing "a" cause of action, I do not interpret that section as meaning that only one cause of action need be established and then the other causes of action alleged can just piggyback on that cause of action. Not only it is necessary to demonstrate a cause of action against each named defendant (see Ragoonanan Estate v. Imperial Tobacco Canada Ltd. (2000), 51 O.R. (3d) 603 (S.C.J.)), in my view, it is also necessary that every cause of action alleged against a particular defendant be demonstrated. This is necessary for a number of reasons. First, a defendant should not be subject to any claim, particularly one asserted on behalf of a whole class of plaintiffs, which does not disclose a proper cause of action. Secondly, all of the claims asserted in the statement of claim impact on the question of whether there are common issues. I do not believe that a plaintiff can purport to set up common issues based on causes of action that are not properly pleaded. Thirdly, the nature of the claims advanced very much determines the proper members of the class. In other words, if certain claims are eliminated because they are based on non-existent causes of action, various individuals who might otherwise be members of the proposed class would be removed as class members. As I will deal with further below, it is important that the definition of any class not be overly inclusive, that is, the class should not include persons who do not have a claim - see Moutheros v. DeVry Canada Inc. (1998), 41 O.R. (3d) 63 (Gen. Div.) at p. 73.

¶ 34 The defendants assert that the causes of action alleged in misrepresentation and breach of warranty cannot survive even minimal scrutiny. It does not appear to be disputed that the material facts required for these causes of action have been properly pleaded. The defendants, however, say that, as a result of the cross-examinations that have taken place, each of the representative plaintiffs have expressly disavowed relying on any representations and have also admitted that they did not receive any information in the nature of a warranty upon which they relied. The defendants therefore

say that the factual foundation for these claims is absent and that they ought not to be allowed to proceed. Indeed, in its factum, Shell states that it would be "an affront to justice to treat the Claim as true and provable" in light of these admissions.

¶ 35 The flaw in the defendants' argument on this point is that it attempts to introduce evidence into the consideration of whether there is a cause of action pleaded. It is well established, both by the Rules of Civil Procedure, R.R.O. 1990, Reg. 194 and by the case law, that evidence is not admissible on a motion to determine whether a statement of claim discloses a cause of action. Contrary to the defendants' position, I do not consider that the approach to that issue should be any different under section 5(1)(a) just because there happens to be evidence before the court on the certification motion - a situation made necessary by the other requirements of section 5(1). I am fortified in my conclusion in this regard by the following quotation from Hollick v. Toronto (City) (2001), 205 D.L.R. (4th) 19 (S.C.C.), where Chief Justice McLachlin said, at p. 33:

"In my view, the class representative must show some basis in fact for each of the certification requirements set out in s. 5 of the Act, other than the requirement that the pleadings disclose a cause of action." [emphasis added]

¶ 36 The above quotation, fairly read, holds that there is a requirement on the proposed representative plaintiff to establish some basis in fact for the requirements set out in sections 5(1)(b) through 5(1)(e) of the Act but, conversely, there is no similar requirement that the representative plaintiff establish some basis in fact for the requirements set out in section 5(1)(a). Therefore, it will be sufficient for the purposes of section 5(1)(a) if the statement of claim alleges the necessary facts to found the cause of action. I repeat that section 5(1)(a) refers to the "pleadings" disclosing a cause of action. The applicable test on that issue is well-established - see Hunt v. Carey Canada Inc., [1990] 2 S.C.R. 959. Had the Legislature wished to change that approach, it could easily have done so by stating, for example, that the claim had to disclose a "genuine issue for trial" or had "a reasonable prospect of success" or any number of other well-known expressions that would suggest that there was an obligation to provide an evidentiary foundation for the claim. The Legislature, however, chose not to do so when it passed the Act.

¶ 37 Absent a clear intention to alter this established practice, I conclude that it ought to continue to be applied. It also avoids turning the certification motion into what otherwise would amount to a form of surrogate motion for summary judgment. It further avoids the court having to engage in any consideration of the degree to which the facts would need to be put forward by the representative plaintiff such as to satisfy any evidentiary requirement in support of the causes of action asserted. The approach cannot be altered by the defendants' assertion that the plaintiffs have expressly disavowed the facts underlying these claims in their cross-examinations. To follow that route would require the court to rely on what is, by definition, inadmissible evidence.

¶ 38 I now turn to the final issue that is raised by the defendants under this requirement. The defendants assert that there is no cause of action at all for those members of the putative class who have experienced no leaks in their pipes or fittings ("non-leakers") nor is there any cause of action for those members of the putative class who have experienced leaks but have suffered damage only to the plumbing itself ("mere leakers") insofar as they claim the right to replace their entire plumbing system as a consequence. This assertion is based on the defendants' contention that the cause of action in negligence only arises when damage occurs not merely when a negligent act is performed.

The defendants further contend that the members of the putative class cannot recover for purely economic loss absent the existence of a substantial danger to the health and safety of those members. There is no suggestion of any such danger here.

¶ 39 On the first point, that is the absence of damages suffered by all members of the proposed class, I will repeat what I said in Pearson v. Inco Ltd., [2001] O.J. No. 4950 (S.C.J.) at para. 11, that it is not necessary that each and every member of the putative class must have already sustained damages as of the time of the certification motion. It is frequently the case in class actions that the damages of the members of the putative class will be sustained at different points in time and often subsequent to the commencement of the litigation and the consideration of whether the action should be certified. To establish a requirement that each and every member of the putative class must have already sustained all of the damages to be occasioned to them before an action could be certified as a class proceeding would erect an insurmountable obstacle to most proposed class actions and thereby defeat the very purposes which underly the class action procedure. The fact that there may be non-leakers included in the proposed class is not therefore fatal to the claim.

 \P 40 The issue of the mere leakers is more complicated because of the issue of economic loss as considered in Winnipeg Condominium Corp. No. 36 v. Bird Construction Co., [1995] 1 S.C.R. 85. In that case, the Supreme Court of Canada held that the costs of repair regarding dangerous defects in a building, prior to any actual physical damage being occasioned, were recoverable in tort by subsequent purchasers of the building notwithstanding that such recovery was for economic loss. In so concluding, Mr. Justice La Forest said, at para. 43:

"I conclude that the law in Canada has now progressed to the point where it can be said that contractors (as well as subcontractors, architects and engineers) who take part in the design and construction of a building will owe a duty in tort to subsequent purchasers of the building if it can be shown that it was foreseeable that a failure to take reasonable care in constructing the building would create defects that pose a substantial danger to the health and safety of the occupants. Where negligence is established and such defects manifest themselves before any damage to persons or property occurs, they should, in my view, be liable for the reasonable cost of repairing the defects and putting the building back into a non-dangerous state."

¶ 41 As I have already noted, there is no suggestion that there is a situation of "substantial danger" that would bring the repairs to the plumbing systems here within the above statement. In other words, we are here dealing with allegedly shoddy products and not with allegedly dangerous ones. However, it remains uncertain whether the Supreme Court will be prepared to extend the principle to shoddy products. Mr. Justice La Forest alluded to this issue, at para. 41, where he said:

"Given the clear presence of a real and substantial danger in this case, I do not find it necessary to consider whether contractors should also in principle be held to owe a duty to subsequent purchasers for the cost of repairing non-dangerous defects in buildings. It was not raised by the parties. I note that appellate courts in New Zealand [citations omitted] have all recognized some form of general duty of builders and contractors to subsequent purchasers with regard to the reasonable fitness and habitability of a building. In Quebec, it is also now well-established that contractors, subcontractors, engineers and architects owe a duty to successors in title in immovable property for economic loss suffered as a result of faulty construction, design and workmanship [citations omitted]. However, it is right to note that from the tone of Dickson J.'s reasons in Fraser-Reid v. Droumtsekas, [1980] 1 S.C.R. 720, at pp. 729-31, he would appear to be cool to the idea, though he found it unnecessary to canvass the point. For my part, I would require argument more squarely focused on the issue before entertaining this possibility."

 \P 42 It would seem, therefore, that the possibility exists that claims for repairs in non-dangerous situations may yet be held to be recoverable. It is at least clear that the issue is not foreclosed. Under the prevailing principles dealing with whether a cause of action is disclosed, it has been held that causes of action which are not settled in the jurisprudence should be allowed to proceed. As Madam Justice Wilson said in Hunt v. Carey Canada Inc., supra, at pp. 990-991:

"Indeed, I would go so far as to suggest that where a statement of claim reveals a difficult and important point of law, it may well be critical that the action be allowed to proceed. Only in this way can we be sure that the common law in general, and the law of torts in particular, will continue to evolve to meet the legal challenges that arise in our modern industrial society."

See also R.D. Belanger & Associates Ltd. v. Stadium Corp. of Ontario Ltd. (1991), 5 O.R. (3d) 778 (C.A.) at p. 782 and Zundel v. Boudria, White et al., [1999] O.J. No. 4244 (C.A.) at para. 5.

¶ 43 I conclude, therefore, that the plaintiffs have satisfied the requirement that the statement of claim discloses a proper cause of action with respect to each of the causes of action alleged as well as with respect to the issue of non-leakers and mere leakers.

B. Identifiable class

¶ 44 There is an identifiable class, at least insofar as Shell is concerned, that is defined by objective criteria. It is possible for any person to determine whether they are a member of the proposed class because the evidence establishes that the manufacturers of polybutylene pipe mark product identification information directly on the surface of the pipe itself. Therefore, any given homeowner only has to look at the pipe installed in his or her house to determine if they are members of the proposed class.

¶ 45 The issue differs, however, with respect to Celanese. The evidence is that visual inspection cannot necessarily determine whether a fitting is made of Celcon (Celanese's product) or Delrin (Du Pont's product) or some other plastic material. While some manufacturers mark their products, those markings may not be readily observable. Further, some manufacturers made their fittings from both Celanese's product and from Du Pont's product and therefore the manufacturer's mark would not indicate whether Celcon or Delrin was used. Consequently, in such situations or in cases where the product markings could not be observed, each fitting would have to be removed and then chemically tested to determine whether it was made from Celcon. There will, therefore, be situations where a given homeowner will be unable to tell from a visual inspection whether he or she has a plumbing system that employs plastic fittings made of Celcon.

¶ 46 The importance of an identifiable class and class definition was highlighted in Western

Canadian Shopping Centre Inc. v. Dutton (2001), 201 D.L.R. (4th) 385 (S.C.C.) where Chief Justice McLachlin said, at p. 401:

"First, the class must be capable of clear definition. Class definition is critical because it identifies the individuals entitled to notice, entitled to relief (if relief is awarded), and bound by the judgment. It is essential, therefore, that the class be defined clearly at the outset of the litigation. The definition should state objective criteria by which members of the class can be identified. While the criteria should bear a rational relationship to the common issues asserted by all class members, the criteria should not depend on the outcome of the litigation. It is not necessary that every class member be named or known."

¶ 47 Although not expressly stated by the Chief Justice, a clearly defined class is also required in order that persons will know if they are members of the class so that they may, in turn, decide if they wish to have their rights determined within the class proceeding, or if they would prefer to opt out of the class proceeding and have their rights determined in another fashion, or not at all. It is extremely important, therefore, that the class definition be one where any person can tell, with a minimum of effort, whether he or she is a member of the proposed class.

¶ 48 This requirement is met with respect to Shell because, as I have noted, the homeowner only needs to look at the pipes to determine if they are polybutylene pipes. The fittings are, however, another matter. It does not provide a clearly identifiable class if each homeowner is required to have the fittings removed from their plumbing systems and chemically tested in order to determine if the fittings are ones covered by the claims advanced. There is no evidence before me as to the costs of removing and testing these fixtures but, in any event, it would seem unlikely that, absent an existing problem with the plumbing system, any homeowner would be prepared to go through the expense and inconvenience of having such testing done nor should they be required to do so in order to determine if they are part of this action and, if so, whether they wish to have their rights dealt with in this action.

¶ 49 It is possible that the problem regarding the identifiable class for Celanese could be dealt with by narrowing the definition of the class to include only those fittings manufactured by specific manufacturers and that are clearly marked. There are two difficulties with that approach, however. First, it is not clear on the evidence that it is beyond doubt that any particular manufacturer used only Celcon to manufacture its fittings (although there is a fair belief that one manufacturer, Qest, may fall into that category). Second, amending the class definition in such a fashion, runs the risk of being arbitrary in its result by including only some who have a claim while excluding others who may also have a claim. I earlier mentioned the difficulty of a class definition that was overly inclusive. It seems to me that a class definition which is arbitrarily under inclusive is equally problematic.

¶ 50 I conclude therefore that the requirement that there be an identifiable class is satisfied with respect to Shell but that it is not with respect to Celanese.

C. Common Issues

¶ 51 The common issues, as stated by the plaintiffs in their factum, are:

"Suitability of the Material/Design Defect

- 1. Does the PB resin supplied by the defendant Shell and used in PB potable water plumbing systems constitute a design flaw?
- 2. Does the acetal resin supplied by the defendant Celanese and used in PB potable water plumbing systems constitute a design flaw?
- 3. Will PB potable water plumbing systems prematurely fail?

Duty and Standard of Care

- 4. In the circumstances of this case, do the defendants Shell and Celanese have a legal duty to the class arising out of the material they supplied for use in PB potable water plumbing systems?
- 5. Did Shell design, promote and market PB resin as appropriate for use in potable water plumbing systems?
- 6. Did Celanese design, promote and market acetal resin as appropriate for use in potable water plumbing systems?
- 7. In the circumstances, did the defendants have a duty to test or adequately test to determine the appropriateness/suitability of the material before putting the material on the market?

Failure to Warn

8. Did the defendants have knowledge of the unsuitability of their raw material for use in potable water plumbing systems and fail (negligently or deliberately) to disclose that information to the marketplace?

Remedies

9. If at the conclusion of the common issues trial, the court finds that the material used in PB water plumbing is unsuitable, are the plaintiffs legally entitled to mitigate their damages by replacing their systems?

Punitive Damages

10. In light of the findings with respect to the common issues, is this an appropriate case for punitive damages?"

¶ 52 Those ten common issues could fairly be combined into the following four issues:

- (a) Do the defendants owe a duty of care to the plaintiffs with respect to their products and did they breach that duty of care?
- (b) Did the defendants owe a duty to warn the marketplace about any defect in their products and did they breach that duty to warn?
- (c) If the defendants' products are unsuitable, are the plaintiffs entitled to mitigate their damages by replacing their systems?
- (d) Is this an appropriate case for an award of punitive damages?

¶ 53 The question on a motion for certification is not simply whether there are common issues raised by the claims advanced. There are, almost by definition, always going to be common issues raised by any proposed class action. Rather, the issue is whether the resolution of the proposed common issues is going to move the litigation forward to a sufficient degree so as to justify the certification of the action as a class proceeding. An important consideration in this regard is whether any individual issues that will remain for determination after the common issues are resolved are limited or whether what remains to be determined is sufficiently extensive such that the determination of the common issues essentially marks the commencement as opposed to the completion of the liability inquiry - see Abdool v. Anaheim Management Ltd. (1995), 21 O.R. (3d) 453 (Div. Ct.) per Moldaver J. at p. 475.

 \P 54 How significant must the contribution of the resolution of the common issues to the overall determination of liability be in order to satisfy this requirement for certification? The plaintiffs rely on the decision in Carom v. Bre-X Minerals Ltd. (2000), 51 O.R. (3d) 236 (C.A.) where MacPherson J.A. said, at para. 41:

"Second, the courts have also been wary of setting the bar too high on the common issues factor. In many cases, the Ontario courts have stated explicitly that certification should be ordered if the resolution of the common issues would advance the litigation. Resolution through the class proceeding of the entire action, or even resolution of particular legal claims in the action, is not required."

¶ 55 However, Mr. Justice MacPherson's view, of what he subsequently characterized as the "low bar" for the common issues, must be read in the context of the later decisions of the Supreme Court of Canada on this issue. In Western Canadian Shopping Centres Inc. v. Dutton, supra, Chief Justice McLachlin, in discussing the requirement of common issues, said, at para. 39:

"Commonality tests have been a source of confusion in the courts. The commonality question should be approached purposively. The underlying question is whether allowing the suit to proceed as a representative one will avoid duplication of fact-finding or legal analysis. Thus an issue will be `common' only where its resolution is necessary to the resolution of each class member's claim. It is not essential that the class members be identically situated vis-à-vis the opposing party. Nor is it necessary that common issues predominate over non-common issues or that the resolution of the common issues would be determinative of each class member's claim. However, the class members' claims must share a substantial common ingredient to justify a class action. Determining whether the common issues justify a class action may require the court to examine the significance of the common issues."

¶ 56 The following factors can be drawn from the Chief Justice's observation:

- * the resolution of the common issues must be necessary to each member's claim;
- the common issues need not predominate over non-common issues nor does the resolution of the common issues need to be determinative of each member's claim;
- * the common issues must be a "substantial" common ingredient of each member's claim;
- * whether the common issues justify a class action involves an examination of the "significance" of the common issues in relation to the individual issues.

¶ 57 The defendants assert that the common issues are not, in fact, common at all. They contend that each plumbing system would have to be examined separately in order to make a proper determination of liability. They say that whether polybutylene is appropriate for use in potable water plumbing systems depends on the particular environment in which it is to be installed. For example, it involves a consideration of the natural quality of the water, the level of chlorine in the water, the temperature of the water and even the prevailing climate in which the system is installed. It should be noted, in this regard, that the evidence establishes that the quality of water, as well as the levels of chlorine found in water, varies considerably around Ontario. The defendants also say that there are any number of reasons why a given plumbing system might leak including improper installation or the use of incompatible components in the system. Consequently, the defendants contend that the liability inquiry will quickly devolve into a need for a system by system examination.

¶ 58 I accept the defendants' point that there will be a number of individual issues that will need to be addressed in order to arrive at the ultimate determination of whether any given class member is entitled to relief. However, that is not the test for the common issues requirement as is made clear by the Chief Justice's observation above. Rather, the test is whether the determination of the common issues will significantly advance the litigation.

¶ 59 The difficult issue, then, is to determine what constitutes "significantly" advancing the litigation? Should it be determined through a comparison of the number of issues to be resolved in

the common issues trial versus the overall number of issues to be tried? Should it be determined through a comparison of the amount of court time it would take to resolve the common issues compared to the amount of court time that would be required to determine the individual issues? Or is there some other comparative analysis that should determine the issue?

¶ 60 As the Chief Justice said in the quotation above, the commonality question should be approached purposively. Having considered the various possibilities, I have concluded that there is no formulaic approach that can be taken to the determination of this requirement. In the end result, the court must balance the pros and cons of the competing positions and reach the best answer that it can given the facts and circumstances of each particular case. In doing so, both of the comparisons I have mentioned may ultimately form part of the overall analysis of the issue but neither is likely to be completely determinative of it.

¶ 61 The fundamental problem with the plaintiffs' position on the common issues is that the determination of whether the defendants' products are defective does not, in my view, materially or significantly advance the overall determination of the ultimate liability issue. It does not do so because of the fact that there are a myriad of reasons why any given class member's plumbing system might fail. This fact is made clear by the plaintiffs' own experts and is exemplified in the following exchange from the cross-examination of Dr. Stivala. Under cross-examination, he said:

"87. Q. Now, we spoke a moment ago about some of the factors which affect the process. I just want run through some of these and make sure I have got them straight. I take it, first of all, that the existence of chlorine in the water is a factor which will affect the speed of the process?

A. That is correct. Well, it is speed in terms of the fact that it is a strong oxidizing agent, yes, that is correct.

- 88. Q. Right. But I think you have said elsewhere that even if it was no chlorine, the existence of oxygen-molecules in the water by themselves would cause oxidation?
 - A. That is correct.
- 89. Q. If there was no chlorine and you only had the oxygen in the water causing it, would your 50-year mandatory failure period still hold? In other words, would you say the oxygen in the water by itself would inevitably cause these systems to fail within 50 years?

A. Yes, it would, because in some cases I was involved, we were talking about well water. And in some of these wells they have not used chlorine and they have failed.

- 90. Q. Okay. So the existence of chlorine is a factor which affects the speed of the process?
 - A. That is correct.
- 91. Q. And then, assuming there is chlorine, the level of chlorine is a factor that would affect the speed of the process?
 - A. That is correct.
- 92. Q. And the existence and level of various minerals would affect the speed of the process?
 - A. Some minerals, yes.
- 93. Q. And just out of curiosity, could you give me two or three?

A. Minerals? The more common ones you find in potable water is iron and you find sometimes copper, but even the titanium, which is used as a pigment, can be another factor. There are a number of metals that will, basically, accelerate the degradation process.

94. Q. Okay. And I take it that whether the water circulating is hot water or cold water affects the speed of the process?

A. The circulation certainly would, hot water certainly would, because temperature is a factor in the acceleration of these reactions.

- 95. Q. Right. So, typically, houses are divided into hot and cold water lines.
 - A. Yes, of course.
- 96. Q. So that will matter in terms of which one is likely to go first?
 - A. That is correct.
- 97. Q. And then, within either, I guess, the relative temperature of the cold and hot water ... in other words, there is hot and hotter ... the temperature at which any given house runs its hot water will have an effect on the process?
- A. An increase of temperature always will have an effect of speeding the reaction.
- 98. Q. All right. The stress to which the pipe has been subjected, I take it, will be another factor?
- A. That is another factor that does accelerate degradation, yes.
- 99. Q. And in these systems, stress can come, for example, from the degree to which the pipe is bent?
 - A. Yes.
- 100. Q. And stress can come, for example, by the degree to which the pipe and fittings are crimped together. That is another form of stress within ...
 - A. That is a form of stress, yes.

- 101. Q. And that is stress relevant to what we are talking about?
 - A. Yes.
- 102. Q. And I think we can agree, based on your experience, that each of these factors is going to vary residence to residence, community to community?
 - A. That is correct.
- 103. Q. And you don't have any information about any of these factors as they relate to Canada; right?
 - A. That is correct,
- 104. Q. I think, on the basis that I am assuming that it is self-evident, I think we can agree that not all failures in people's polybutylene/acetal plumbing systems arise from oxidative degradation?

A. Are you talking about all failures? No, there are some failures which were caused by other factors, even though the sample might show some degree of oxidation.

- 105. Q. And by `failure' here, we just mean a leak?
- A. Leak, exactly, that is what I mean by failure, yes.
- 106. Q. And a leak could be caused by the pipe being punctured, for example?
 - A. Of course, that is obvious, sure.

- 107. Q. And the leak could be caused by the joints separating, any given joint separating?
 - A. They can, yes.
- 108. Q. And it could be caused by fittings, cracks caused by careless installation and over-crimping?
 - A. Yes.
- 109. Q. There could be a leak in, for example, the pipe caused by faulty extrusion at the manufacturing stage?
 - A. That is a factor.
- 110. Q. And those are all factors that can occur independent from the degree of oxidative degradation that the pipe or fitting in question has been subjected to?

A. Well, those things can occur, of course, if that is what you are asking me. Of course, they can."

Virtually, the same evidence was given by the plaintiffs' other expert witness, Dr. Chudnovsky (see Chudnovsky cross-examination, questions #286-303).

¶ 62 While I do not discount the importance of the determination of the issue regarding the suitability of the defendants' products as a stepping stone to the ultimate determination of liability, it is evident that a finding that either or both of the defendants' products are defective does not represent much of a step forward in the overall liability determination. To repeat a prevailing concern in such cases, it would not be the end of the liability inquiry but only the beginning. It is axiomatic that an individual inspection of each and every class member's plumbing system will ultimately be necessary in order to finally determine the liability of the defendants. This question is further complicated because at least one of the plaintiffs' experts also acknowledges that not all plumbing systems made from polybutylene will ultimately fail. This is evident from the following exchange in the cross-examination of Dr. Chudnovsky:

"124. Q. Okay. Now, but with respect to the actual rate of what you say is degradation, micro-cracking and cracking in a particular home, the rate of that will depend upon the specific circumstances of the installation and use of the plumbing system; won't it?

A. Yes, that is correct, but, again, as I mentioned before, I have observed the variation in the rate of failures. Different places, different states, a different location with different plumbers and normally, it would go between, let's say, twelve, eighteen years, for piping.

125 Q. But I take it, you are not saying that every installation is going to fail within 18 years?

A. No, that is not why I am saying. I am saying that what I have seen, the failure which occur within this range and it doesn't mean that every house is supposed to fail. It is ... in many respect, it is a random event and there is a certain acceptable percentage of failures. If it only happens in one house, I believe that we would not worry that much, but when it happens in hundreds ...".

and later:

"255. Q. Do I understand you to say that inevitably, the pipe and fittings will fail before the principal structural components of the house in which they are installed will fail? Do I summarize that correctly based on what you have told my friend, Mr. Pinos, earlier?

A. Yes, that, essentially, my opinion is that in most cases, it doesn't mean that in 100 percent of cases, but in most cases, polybutylene piping system as the system I am familiar with, is failing premature, which means before the major structure would fail.

256. Q. What percent?

A. I cannot give you the number in terms of percent. What I know that percent was quite alarming to raise the problem, to raise the issue and moreover, it is a very unfortunate experience with polybutylene which hurt the entire industry.

257. Q. Well, let's ... we know that there are in the range of 6 million polybutylene houses in the U.S., or at least that is information that comes

out of some judgments to date, and it is U.S. where you have focused your effort, right?

A. Yes.

258. Q. So what percentage of those 6 million households has had a premature polybutylene failure?

A. I don't have number in my hands. In the cases which I examined, which I studied, I notice the failure rate, it means the total failures which exceed 10, 15 percent."

¶ 63 These factors distinguish this case from many other product liability cases. While the plaintiffs assert that product liability cases are the "paradigm" for class actions and point to a number of other product liability cases where certification has been granted, I do not believe that certification can be determined simply by the genre of the claims advanced. Each case has to be evaluated on its own facts. While I do not intend to review every products liability case that has so far been considered for certification, I would note, by way of example, that this is not a case such as Ontario New Home Warranty Program v. Chevron Chemical Co. (1999), 46 O.R. (3d) 130 (S.C.J.) where there was an order by the responsible Provincial Ministry which required all owners of certain furnaces to replace defective piping made by certain of the defendants. In that case, which I note in passing was a settlement class certification, proof of the defect would lead almost immediately to an award of damages for the repairs that had to be incurred. The decision in Campbell v. Flexwatt Corp. (1997), 15 C.P.C. (4th) 1 (B.C.C.A.) is also distinguishable on the same basis. The decision in Chace v. Crane Canada Inc. (1996), 5 C.P.C. (4th) 292 (B.C.C.A.) differs from this case on two grounds. First, in Chace the class was narrowly defined to include only those individuals who had "suffered damages as a result of the cracking of a toilet tank" manufactured by the defendant. Second, the court there held that the determination of whether any class member had suffered damage because of the defective tank and the quantum of those damages were issues that were likely to be "straightforward". In this case, as I have already said, the issues left to be determined are far from straightforward. Indeed, if similarity between cases was to be the test for determining certification, then this case would appear to be most similar to Bittner v. Louisiana-Pacific Corp., [1997] B.C.J. No. 2281 (S.C.) where certification was denied.

 \P 64 The situation here is also not like a medical products liability case, such as Nantais v. Telectronics Proprietary (Canada) Limited (1995), 25 O.R. (3d) 331 (Gen. Div.) or Endean v. Canadian Red Cross Society (1997), 148 D.L.R. (4th) 158 (B.C.S.C.), where proof of defectiveness will likely give rise to either a need to remove the product or otherwise provide treatment or, at the very least, a need to monitor the performance of the product such that, again, immediate damage is occasioned to all members of the class.

¶ 65 In this case, first and foremost, it is not clear that there will be a single answer to the scientific question given the variety of factors which can impact on the alleged reasons why the products may

fail. However, even assuming that a single answer can be arrived at, or that it is possible to provide a "nuanced" answer to the scientific question, a possibility suggested (albeit in a much different context) by Chief Justice McLachlin in Rumley v. British Columbia (2001), 205 D.L.R. (4th) 39 (S.C.C.) at para. 32, it will still leave a great deal of work to be done. Even if the products are inherently defective in all situations, there is still the need to prove that any failure is directly related to the product as opposed to issues of manufacture, design or installation, that any failure is unrelated to poor maintenance or misuse or other error and a host of other considerations including, in the case of Shell, whether installations occurred despite the outstanding warnings as to the use of PB. The matter is more complicated if the scientific issue allows of different answers depending on local water conditions, levels of chlorine, etc. In that eventuality, there are further matters that must be individually assessed. In either scenario, the final determination of causation in this case becomes very much an individual issue with respect to each and every plumbing system. The answers to the common issues, consequently, do not constitute an element that will be conclusive of liability for any given member of the class. Individual members of the class may experience failures with respect to their plumbing systems that are unrelated to any defect in the defendants' products. In other words, success by the representative plaintiffs on the scientific question does not equate to success for all members of the class - see Western Canadian Shopping Centres Inc. v. Dutton, supra, at para. 40.

¶ 66 Considerable reliance was placed by the defendants on the fact that certification has frequently been denied for such claims in the United States. I believe that the assistance one can gain from U.S. decisions on certification in determining whether certification should be granted under our Act is limited, given the very much different tests involved and also the fact that state laws on product liability can vary greatly. Having said that, there are still some common elements between the procedures such that analyses undertaken by judges in the United States, as with similar analyses undertaken by judges in other Provinces, can nonetheless provide some guidance on the subject. It appears that this concern about a wide variety of possible causes for a leak in any given plumbing system has been the major stumbling block for plaintiffs trying to obtain certification of such class actions in the United States. By way of example, in Northland Ins. Co. v. Shell Oil Co., (unreported, D.N.J. April 3, 2000) the court held:

"[T]here is no single, universal `polybutylene plumbing system'. Rather ... the term is used to describe a number of different plastic plumbing systems of different designs, manufactured by different companies with different components at different times, and installed by different persons using different instructions. Furthermore, plaintiffs' ... claims do not arise from a single occurrence, but instead arise from perhaps hundreds of thousands of separate and distinct problems occurring over a period of years ... Causation shall also require individual proofs. Further, numerous individual defences must be adjudicated as to each ... claim, e.g. comparative or contributory negligence, or misuse."

¶ 67 In the end result, therefore, while the determination of whether the defendants' resins are inherently defective might answer a scientific question of interest, it does not assist greatly in answering the question that is of primary interest to this court, which is the question of liability. Given the presence of different manufacturers, different designs, different installations, intervening events including improper maintenance or improper repair, varying water conditions including varying or no chlorine levels, varying mineral contents, varying water temperatures and varying

water pressures, answering the scientific question only starts you on the necessary journey to find the final answer to the liability question in any given case.

¶ 68 Further, the determination of these common issues would not appear to fulfill the purposes behind a class proceeding as stated by Chief Justice McLachlin in Western Canadian Shopping Centres Inc. v. Dutton, supra, at para. 15. First, while a determination of the scientific question might superficially appear to serve judicial economy by avoiding any duplication in the determination of that issue, the reality is that it does not avoid the system by system examination required to resolve the claims of all members of the proposed class. Given the limited role which the scientific question plays in the overall determination of liability, there is little economy that will practically be achieved. Second, a class action would admittedly spread the costs of the scientific determination over the entire class rather than requiring one or a few individuals to bear those costs. However, given that the estimates are that replumbing costs would be in the order of \$6,000 to \$8,000 per house, a claim such as this one with five or more plaintiffs would appear to approach a level of recovery that would justify a small group of claimants incurring the costs of having the scientific issue determined. Indeed, I would note that a great deal of that work and that expense would already appear to have been incurred for the purposes of this motion. Joinder of claims is an acceptable alternative method to that of a class proceeding for resolving such claims. Third, on the issue of behaviour modification, or a "calling to account" of the defendants, if these matters are determined in favour of the class, again, it does not appear, given the limited role that the scientific issue plays, that such a result would necessarily give rise to events that would in turn encourage the defendants to modify their behaviour. Since there would still remain many individual issues to resolve, the defendants would not be exposed to any damage award consequent on the determination of the scientific issue and therefore that behavioural tool would be absent. In any event, given the evidence that none of these defendants produce these products any longer, and that they ceased to do so because of the related litigation expenses incurred in the United States, it would appear that whatever "behaviour modification" might be desired has already been achieved.

¶ 69 I conclude therefore that the identified common issues do not rise to the level of commonality necessary to satisfy the requirement under section 5(1)(c) of the Act.

D. Preferable Procedure

¶ 70 Notwithstanding the conclusion that the common issues requirement is not met, it is prudent to still deal with whether a class proceeding would be the preferable procedure to determine those identifiable common issues as opposed to some other procedure. One reason for considering this issue is the practical reality, that is apparent from a review of the decisions on certification, that the consideration of preferable procedure is inextricably involved with the common issues determination. Indeed, I believe it is evident that my analysis of the common issues above clearly transgressed into this area.

 \P 71 It is true that, as section 5(1)(d) of the Act makes clear, preferability is to be determined only with respect to the resolution of the common issues and not with respect to the claim as a whole. It is also true, however, that the issue of preferability must be considered in the context of the case as a whole. It is in this regard that the issue of preferability generally involves a consideration of the common issues and the degree to which their resolution advances the overall action compared to the individual issues that remain to be determined. In other words, would the ultimate determination of

the issues raised by each member's claim be better accomplished through the class proceeding or would they be better accomplished through other mechanisms such as joinder, test cases or simply by allowing each claim to proceed individually.

¶ 72 The plaintiffs assert that the onus is on the defendants to show that there is a better way to resolve the common issues before this court can conclude that a class proceeding is not the preferable procedure for the resolution of the common issues. I do not accept that there is such an "onus" on the defendants. There is, of course, the obligation that rests on all parties in every case to put all relevant evidence before the court that will assist in the proper determination of the issues raised. But insofar as the issue of onus is concerned, in my view it rests at all times on the plaintiffs to satisfy the court that the requirements of section 5(1) of the Act have been met. In other words, the plaintiffs cannot avoid satisfying the requirements for certification merely by suggesting that the defendants have failed to propose a viable alternative. Presumably the court would only be concerned that a class action was not the preferable procedure for the resolution of the common issues in situations where it could identify other avenues of recourse for the members of the putative class. That said, however, the absence of a solid and detailed alternative plan from the defendants cannot constitute a class action as the preferable procedure by default.

¶ 73 In my view, given the breadth of the issues that are left to be determined outside of the common issues, the determination of the identifiable common issues through a class action is not the preferable procedure. In this regard, this case is more akin to Hollick v. Toronto (City), supra, than it is to Rumley v. British Columbia, supra. In Rumley, the determination of systemic negligence would have left the members of the class only with the requirement of establishing the fact of the abuse and the injuries that flowed from it. In that sense, the members of the class in Rumley would be left, in essence, with only having to prove their damages. Here, however, as I have already mentioned, the members of the class would still be left with many hurdles to overcome on the liability issue alone.

¶ 74 In this case, as in Hollick, I am not satisfied that the determination of the identifiable common issues satisfies any of the three advantages of class actions. First, it is apparent to me that judicial economy will not be achieved through a determination of the identifiable common issues. As I have already said, there are so many issues which remain to be determined after any common issues are resolved before liability can be found against either of these defendants, there are still going to have to be innumerable proceedings undertaken. Second, I am also not satisfied that the denial of certification will carry with it a denial of access to justice. In this regard, it is worthy of note that notwithstanding the apparent inability of plaintiffs in the United States to obtain certification of a class action, either nationally or on a state-wide basis, there have nonetheless been settlements reached of claims both through settlement classes and through voluntary resolution procedures undertaken by the defendants. Third, as I have also already mentioned, it does not appear that any further behaviour modification will be achieved through a class action here. The products concerned have long since been removed from the market and, through the settlement procedures in the United States that I have already mentioned, it appears that these defendants are already having to bear the costs of their conduct.

¶ 75 Before leaving this point, I will acknowledge that the determination of punitive damages would appear to be one that would be justified on a class-wide basis. What the defendants knew about their product and what they did with that information can be determined without any involvement of the

members of the proposed class. However, punitive damages alone cannot justify the certification of an action as a class proceeding. There must be some underlying cause of action to be determined on a class-wide basis to which the claim for punitive damages can attach before certification can be granted.

¶ 76 I conclude, therefore, that the preferable procedure requirement is also not satisfied.

E. Representative Plaintiff

¶ 77 There are three separate considerations to be addressed under this requirement. It is evident to me that the proposed representative plaintiffs satisfy the first and third considerations, that is, that the representative plaintiffs would fairly and adequately represent the interests of the class and they do not have, on the common issues for the class, an interest in conflict with the interests of the other class members. I am not satisfied however that the second consideration, that the representative plaintiffs have produced a plan for the proceeding that sets out a workable method of advancing the proceeding on behalf of the class and of notifying class members of the proceeding, has been met in this case.

¶ 78 On this point, I do not suggest for a moment that counsel for the class are not capable. Both Mr. Ritchie and Mr. Eizenga have considerable experience in the area of class actions and I have no doubt that they would, both vigorously and most competently, pursue the action were it to be certified. Where the problem arises, in my view, is with the adequacy of the litigation plan filed. While some of the elements that are missing from the actual plan, such as the experts to be used, what investigations have been undertaken and which witnesses have been interviewed, can be found from a review of the affidavit of Michael Peerless, filed on behalf of the plaintiffs, I believe that a proper litigation plan should incorporate all of the required elements within the four corners of the plan itself. It is also apparent from the existing authorities, and notwithstanding what the words of section 5(1)(e)(ii) might otherwise suggest, that the litigation plan ought to contain at least some preliminary proposal as to how to deal with the individual issues that remain after the common issues are dealt with. No such preliminary proposal is contained within the litigation plan as filed. Plaintiffs' counsel suggests that these are matters that all of the parties and the court should work on together after certification is granted. While that is, of course, an option, it is not an answer to the concern. It will undoubtedly be necessary to revisit such matters as any class action progresses, but it is still the obligation of the representative plaintiffs to initially set out a workable method of addressing those matters. This is necessary, at least in part, because it will be of assistance to the court's consideration of whether the class action is a preferable procedure and whether the overall objectives of a class action, to which I have already made reference, will be achieved.

¶ 79 Alternatively, plaintiffs' counsel submitted that certification could be granted provisionally, subject to a further and better litigation plan being filed. In the particular circumstances of this case, had I otherwise concluded that certification should be granted, I would have acceded to that request since I believe that the failings in the current plan could likely be addressed. Taking such a route, however, should not be considered the norm. Rather, as I have said, the representative plaintiffs must address all of these issues in their proposed plan or run the risk that certification will be denied on that basis alone.

Conclusion

¶ 80 I am not satisfied that the plaintiffs have established that there is an identifiable class or that resolution of the common issues will significantly advance the litigation or that a class action is the preferable procedure for the resolution of those common issues. The motion for certification is therefore dismissed.

 \P 81 If the parties cannot resolve the issue of costs, they may make written submissions on the appropriate disposition. The defendants' submissions are to be filed within 15 days of the release of these reasons and the plaintiffs' response is to be delivered within 10 days thereafter. No reply submissions are to be filed without leave. The submissions should include the necessary bills of costs or equivalent information that will allow me to fix the costs of the motion should I decide that costs are to be awarded.

NORDHEIMER J.

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