

# United States Court of Appeals For the First Circuit

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No. 99-1227

FOSTER-MILLER, INC.,  
Plaintiff, Appellee,

v.

BABCOCK & WILCOX CANADA,  
Defendant, Appellant,

No. 99-1228

FOSTER-MILLER, INC.  
Plaintiff, Appellant,

v.

BABCOCK & WILCOX CANADA,  
Defendant, Appellee.

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APPEALS FROM THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF MASSACHUSETTS

[Hon. Richard G. Stearns, U.S. District Judge]

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Before

Selya, Circuit Judge,  
Campbell, Senior Circuit Judge,  
and Stahl, Circuit Judge.

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Peter L. Resnik, with whom Emily E. Smith-Lee and McDermott, Will & Emery, were on brief for appellant/cross-appellee.

James J. Foster, with whom Christopher S. Schultz and Wolf, Greenfield & Sacks, P.C., were on brief for appellee/cross-

appellant.

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March 31. 2000

**STAHL, Circuit Judge.** At the conclusion of a nine-day trial, a jury determined that defendant Babcock & Wilcox Canada (BWC) had breached a confidentiality and non-disclosure agreement that it had reached with a competitor, plaintiff Foster-Miller, Inc. (FMI). The breach sued upon was BWC's alleged use of confidential FMI technology in the development of a small diameter, high pressure, flexible hose. The jury set FMI's damages at \$5,084,587. BWC appeals from an interlocutory order denying one of its discovery motions, the judgment entered pursuant to the jury's verdict, and the judgment entered pursuant to a memorandum and order denying its post-verdict motion for judgment as a matter of law. BWC's principal claim is one of evidentiary insufficiency. FMI cross-appeals from orders sanctioning it for a discovery abuse and denying its motion for a partial new trial on damages. We affirm in all respects.

I.

This case already has been the subject of three published opinions. See 46 F.3d 138 (1<sup>st</sup> Cir. 1995) (vacating and remanding 848 F. Supp. 271 (D. Mass. 1994)); 975 F. Supp. 30 (D. Mass. 1997). We therefore eschew a comprehensive recitation

of the litigation and confine our present focus to matters relevant to these appeals. In doing so, we sometimes defer more detailed descriptions of pertinent events to our discussions of the specific arguments advanced. And as in any case that challenges the sufficiency of the evidence, we present the historical facts as the jury might have found them, consistent with the record but in a light most favorable to the verdict. See, e.g., Grajales-Romero v. American Airlines Inc., 194 F.3d 288, 292 (1<sup>st</sup> Cir. 1999).

In the 1980s, both FMI and BWC became involved in the business of cleaning nuclear powered steam generators. Impurities in the water boiled off in a nuclear generator leave on the generator's bundled tubes an often extremely hard sediment called "sludge." Over time, sludge deposits corrode and wear away the tubes. Sludge-generated corrosion is a major problem in nuclear generators. If unchecked, it can lead to radioactive leaks and astronomically expensive plant shutdowns needed to effectuate repairs.

In the 1980s, FMI and BWC were the only two companies engaged in the business of "sludge lancing." Sludge lancing flushes away accumulated sludge on a generator's tubes with a thin stream of pressurized water delivered through a high pressure hose encased within a metal water lance. By the late

1980s, BWC had developed a manual sludge lancing system for cleaning the nuclear generators of Ontario Hydro, a Canadian public utility. The relationship between BWC and Ontario Hydro was longstanding; BWC had designed Ontario Hydro's generators. But because the water lance and stainless steel reinforced hose in BWC's system were insufficiently flexible to maneuver into more than half of the many nooks and crannies between and among the tube bundles in Ontario Hydro's generators, the tubes - which are significantly closer together in Canadian generators than in the typical United States commercial generator - were caked with a disconcerting amount of unreachable sludge.

In contrast, by the late 1980s, FMI had developed a robotically controlled "flexlance" sludge removal system. As initially designed, FMI's lance contained a stainless steel braided hose flexible enough to bend 90 degrees. This flexibility permitted the lance to enter the relatively wide gaps between and among the tubes in United States commercial generators for purposes of sludge removal. In 1988, FMI began research into adapting its flexlance system for use on the steam generators used in United States Navy nuclear powered vessels. The adaptation process was not straightforward because, like the Canadian generators, the naval generators had significantly smaller inter-tube gaps than United States commercial

generators, and the lance and hose developed for use in the commercial generators would not fit into these narrower spaces. Thus, in August 1988, FMI began research into one of the central problems of the adaption process and the problem at the heart of this lawsuit: acquiring or developing a hose small enough (.125 inch outer diameter) to maneuver into the tube gaps in the naval generators, strong enough to withstand the very high burst pressures (10,000 pounds per square inch) needed for effective sludge removal, and yet flexible enough to bend up to 90 degrees.

Initially, FMI retained an outside consultant, Philip Lichtman, to look into whether such a hose might be available from a commercial hose vendor. Lichtman did not testify at trial, but notes he made in connection with his hose search (which were admitted into evidence over BWC's objection) suggested that his search was unsuccessful. The following is an excerpt from the so-called Lichtman notes that is particularly important to this appeal:

Time after time, other vendors refer to Rogan & Shanley as the prime source for small-diameter high pressure hose. I spoke with Dr. Rogan twice . . . . [T]here are technical problems which Rogan feels may be virtually insuperable at almost any price. In short, Rogan thinks [FMI] is wasting [its] time; that only [insufficiently flexible] metal tube will do the job.

In other sections, the Lichtman notes indicate that a second vendor also had described the project as "insuperable," and that a third vendor had thought developing such a small, strong, and flexible hose would be "very difficult."

In September 1988, an FMI engineer named Chip Babbitt conducted a second commercial hose search. Babbitt used Lichtman's notes as a starting point and followed up with several of the vendors Lichtman previously had contacted. Like Lichtman, Babbitt had no luck finding a commercial hose suitable for the naval application. He then mentioned his problem to another FMI engineer, Jay Boyce. Boyce suggested that a hose with a Kevlar braid reinforcement be used. Kevlar is a strong and flexible fiber, but it is highly susceptible to fraying. Boyce also suggested that Babbitt discuss his problem with Glenn Freitas, an FMI engineer who had experience with fiber braiding. Freitas concurred in Boyce's Kevlar suggestion and further recommended that the braided Kevlar be coated with an elastomeric matrix (i.e., a flexible coating typically made from rubber or plastic) to protect the Kevlar from abrasion.

Subsequently, Babbitt began to look for a company that could manufacture a hose of the size and strength needed for the Navy project. In the fall of 1988, Babbitt wrote to a number of hose manufacturers. In his letters, he set forth the size,

flexibility, and pressure requirements of the contemplated hose. Although the letters explicitly mentioned the possibility of using stainless steel to reinforce the hose (the approach advocated by many of the manufacturers Babbitt had contacted during his hose search), the letters also suggested that the hose might be constructed with a flexible nylon core, reinforced with a Kevlar overbraid, and coated with a flexible elastomeric matrix "such as a urethane." One of the companies Babbitt contacted at this time was U.S. Composites, a braiding company that had not previously been involved in designing or manufacturing hoses.

In December 1988, FMI commissioned U.S. Composites and another manufacturer to create some Kevlar hose samples in the event a suitable stainless steel reinforced hose could not be designed. In January 1989, U.S. Composites shipped FMI a set of uncoated Kevlar-braided hose samples, which FMI found to be "among the most promising" of the hose prototypes then available. In February 1989, Daniel Fischbach, another FMI engineer, replaced Babbitt on the hose development project. The following month, although FMI was still experimenting with a stainless steel reinforced hose, FMI and U.S. Composites entered into a contract under which U.S. Composites would continue to manufacture and supply to FMI hose samples with Kevlar

overbraids. This contract, along with two other FMI/U.S. Composites contracts covering the emerging naval hose technology, contained a confidentiality agreement designed to protect the emerging technology.

In the spring and summer of 1989, FMI tested a number of Kevlar-wrapped hose samples and experienced problems with bursting. Throughout this time, FMI was still contemplating whether to protect the Kevlar by coating it with a matrix such as urethane or by surrounding it with a separate outside cover. By fall, FMI was leaning towards a coated, coverless hose and had U.S. Composites experimentally coat its samples with various types of urethanes and epoxies. By December 1989, U.S. Composites had generated samples of hose using a number of different coating materials. Eventually, FMI chose for the Navy project a hose with a nylon core, a single layer of Kevlar braid, and a urethane coating.

Meanwhile, back in 1988, after FMI had begun work on the naval project, Ontario Hydro approached FMI about the possibility of applying its flexlance technology to clean the tube bundles within its generators. Shortly thereafter, William Schneider of BWC called FMI and proposed that the two competitors cooperate, as each of the companies had information and technology that might prove useful in solving Ontario



Hydro's sludge problem. Eventually, the companies submitted to Ontario Hydro separate proposals for jointly studying and addressing the problem. The companies did not share their proposals with each other, as each proposal contained confidential information. FMI subsequently entered into a separate agreement with Ontario Hydro to study the feasibility of using the flexlance system in Canadian generators.

In January 1990, FMI assigned William Leary, an engineer who had assisted in the completion of the Navy project, the task of obtaining a flexible hose for a lance to be used in the Canadian generators. The hose could be slightly larger (.200 inch outer diameter) than the Navy hose, but it required a greater pressure retention capacity. Like Lichtman and Babbitt, Leary first attempted to find a suitable commercial hose. Using Lichtman's and Babbitt's search notes as his starting point, Leary contacted twenty-five different manufacturers. His search was unsuccessful. Leary thus turned to the naval project engineers and asked how the Navy hose might be adapted to the Canadian application. The engineers agreed that wrapping a second layer of Kevlar around the hose might do the trick. Subsequently, FMI contacted U.S. Composites and asked it to create a hose similar to the Navy hose but with a

double wrap of Kevlar. In early April 1990, U.S. Composites shipped samples of the requested hose to FMI.

Leary's hose work proceeded as FMI was preparing its feasibility study for Ontario Hydro. On May 11, 1990, an Ontario Hydro representative agreed to travel to FMI's research and development facility in Waltham, Massachusetts, for a meeting to discuss the progress of the study. Ontario Hydro requested that a BWC engineer, Daniel St. Louis, also attend the meeting. St. Louis understood that he had been invited to provide input with respect to certain water lancing tests necessary to completion of the study. FMI agreed to St. Louis' presence but required BWC to execute a confidentiality agreement to protect confidential information that would be discussed at the meeting. In relevant part, the agreement provided that, for a period of five years, BWC would not "use FMI's [confidential, proprietary or novel information] for any purpose unless specifically authorized in writing by FMI." The agreement also explicitly excluded from the definition of "confidential, proprietary or novel information" that which, "in its disclosed combination[s], is in the public domain through no fault of [BWC]."

The meeting lasted the better part of the day, and St. Louis was excluded from a number of discussions involving

sensitive FMI technology and information. But in a brief presentation towards the end of the meeting, Leary showed St. Louis a sample of the hose FMI was developing for the Canadian application. Leary told St. Louis that the hose had a nylon core, Kevlar-wrap, and urethane coating. Leary also informed St. Louis that U.S. Composites was manufacturing the hose for FMI. Unbeknownst to Leary and FMI, St. Louis was at the time spearheading an effort by BWC to develop a 90-degree flexible lance of its own. At some point after the meeting, St. Louis called Leary and obtained from him the address of U.S. Composites.

Thereafter, St. Louis contacted U.S. Composites and spoke with its president, Hugo Kruesi. St. Louis asked Kruesi if U.S. Composites could make for BWC "a similar hose to that . . . provided for [FMI]." In the course of several subsequent telephone conversations between Kruesi and St. Louis, Kruesi provided St. Louis with two price quotations and detailed information regarding the FMI hose's construction. St. Louis also obtained from U.S. Composites a sample of FMI's hose, which he subjected to analysis and testing. By the fall of 1990, however, Kruesi had become concerned that his interactions with BWC were violative of the confidentiality agreements between FMI and U.S. Composites. He thus telephoned FMI and asked whether

there would be a problem if U.S. Composites were to produce a high pressure flexible hose for BWC. FMI asked Kruesi to hold off on manufacturing anything for BWC. Subsequently, BWC asked FMI for permission to develop a high pressure flexible hose through U.S. Composites, but FMI declined to grant such permission.

In March 1990, two months prior to the May 11 meeting at FMI, BWC had still been proposing sludge removal with the relatively inflexible stainless steel technology it had been using for years. It was not until April 1990, when Ontario Hydro suggested to it the need for a more flexible lance, that BWC even began to contemplate designing its own product capable of bending up to 90 degrees. And it was not until after the May 11 meeting, during the period of time that St. Louis initiated contacts with U.S. Composites, that BWC documented any research into the development of a such a product.

On June 20, 1990, BWC made its first proposal to Ontario Hydro to develop a water lance of sufficient size and strength to meet Ontario Hydro's sludge lancing needs yet capable of bending up to 90 degrees. The proposal specifically disclaimed any guarantee of success "in view of the developmental nature of the work." At some point in the months that followed, BWC performed its own unsuccessful search for a

commercial hose suitable for use in Canadian generators. During this same period of time, St. Louis also subjected the FMI hose sample to destructive testing. The FMI hose was the only sample St. Louis ever tested. By November 1990, BWC's flexible lance was complete "except for the tubing."

Meanwhile, at some point after its efforts to work with U.S. Composites had fallen through, BWC contracted with a Canadian company known as Barrday to manufacture its hose. As initially designed, the BWC hose, like the FMI hose, had a nylon core reinforced with a sheathing of urethane-coated and braided Kevlar. But it was different in many respects. Unlike the FMI hose, the BWC hose was not "wet braided"; it instead was pulled through a bucket of urethane (of a different type than that used by FMI) after the Kevlar had already been braided upon the hose. Moreover, the BWC hose had an outer abrasion cover. Finally, the BWC hose used thicker strands of Kevlar weaved onto the core tube at a somewhat different angle than that employed by FMI.

During the life of the FMI/BWC confidentiality agreement, Ontario Hydro sought bids on sixteen jobs requiring the contractor to perform sludge removal with a water lance flexible enough to bend 90 degrees. FMI successfully bid on one of these jobs; BWC won the other fifteen. At trial, FMI took the position that, but for BWC's wrongful use of confidential

information regarding the FMI hose disclosed at the May 11, 1990 meeting, FMI would have won all sixteen contracts. FMI's theory was that BWC copied and then built upon FMI's basic hose design, the basic elements of which (along with the name of the hose's manufacturer) BWC ascertained from Leary's presentation at the meeting. FMI argued to the jury that this breach of the confidentiality agreement permitted BWC to enter the relevant market quickly enough to secure contracts that otherwise would have gone to FMI. The jury agreed and, as we have stated, set FMI's damages at just over five million dollars. These cross-appeals followed.

## II.

BWC's principal argument, made from various vantages, is that the district court erred in denying its motion for judgment as a matter of law based on evidentiary insufficiency. BWC also contends that the court erred in admitting the Lichtman notes in evidence and then compounded its error by failing to give a curative instruction after the notes were misused by FMI during its closing argument. Finally, BWC asserts that the court committed reversible error in instructing the jury on the weighing of expert testimony, in denying its motion in limine seeking to limit or exclude the testimony of FMI's damages expert, and in making certain FMI documents obtained by BWC

during discovery the subject of a protective order. For its part, FMI argues that the court erred in declining to award it a new trial on damages after erroneously precluding it from introducing lost profits evidence relating to a Canadian subsidiary FMI established in 1994, and in sanctioning it for failing to comply with a Fed. R. Civ. P. 30(b)(6) deposition notice served during discovery by BWC.

A. Standard of Review

We review the district court's denial of BWC's motion for judgment as a matter of law de novo, viewing the evidence in the light most favorable to FMI and drawing all reasonable inferences in its favor. See, e.g., Collazo-Santiago v. Toyota Motor Corp., 149 F.3d 23, 27 (1<sup>st</sup> Cir. 1998). Our inquiry is whether the evidence, when viewed from this perspective, would "permit a reasonable jury to find in favor of [FMI] on any permissible claim or theory." Id. (citation and internal quotation marks omitted).

We review the other district court actions challenged in these appeals only for an abuse of discretion. See, e.g., United States v. Cunan, 152 F.3d 29, 36 (1<sup>st</sup> Cir. 1998) (evidentiary rulings); Beatty v. Michael Bus. Machs. Corp., 172 F.3d 117, 121 (1<sup>st</sup> Cir. 1999) (decision whether the evidence warrants a particular jury instruction); Kumho Tire Co., Ltd.

v. Carmichael, 526 U.S. 137, 141-42 (1999) (decision whether to admit challenged expert testimony); United States v. Gilbert, 181 F.3d 152, 162 (1<sup>st</sup> Cir. 1999) (discovery rulings); Puerto Rico Aqueduct and Sewer Auth. v. Constructora Lluch, Inc., 169 F.3d 68, 77 (1<sup>st</sup> Cir.) (denial of motion for new trial), cert. denied, 120 S. Ct. 175 (1999). We will not, however, uphold any decision within the court's discretion that has been tainted by an error of law. See, e.g., United States v. Ticchiarelli, 171 F.3d 24, 31 (1<sup>st</sup> Cir.), cert. denied, 120 S. Ct. 129 (1999). Moreover, we may affirm on any independently sufficient ground supported by the record. See, e.g., Ticketmaster-New York, Inc. v. Alioto, 26 F.3d 201, 204 (1<sup>st</sup> Cir. 1994).

#### B. BWC's Appeal

##### 1. Denial of Motion for Judgment as a Matter of Law

BWC's challenge to the district court's denial of the motion for judgment as a matter of law is, as we have stated, an evidentiary insufficiency argument pressed from various angles. Primarily, BWC contends that, in denying the motion, the court erroneously and prejudicially conceptualized "confidential" information more broadly than is permitted under Massachusetts law, which the parties reasonably have agreed governs this diversity action. See, e.g., Merchants Ins. Co. of New Hampshire, Inc. v. U.S. Fidelity and Guar. Co., 143 F.3d 5, 8



(1<sup>st</sup> Cir. 1998) (we will give effect to the parties' reasonable agreement as to controlling state law without further choice-of-law analysis). To be specific, BWC argues that the information disclosed at the May 11, 1990 meeting is not covered by the confidentiality agreement because it was neither "proprietary" nor a "trade secret" and because, as a matter of Massachusetts public policy, confidentiality agreements can protect only trade secrets and proprietary information. Central to this argument is a subsidiary claim that the information disclosed at the meeting was neither a trade secret nor proprietary because it was an obvious solution to an engineering problem derived from information in the public domain.

As an initial matter, a review of the Massachusetts cases BWC has cited leaves us in some doubt about whether and how the Massachusetts courts differentiate between confidential information, proprietary information, and trade secrets. Compare Warner-Lambert Co. v. Execuquest Corp., 691 N.E.2d 545, 547 (Mass. 1998) ("We further have recognized that confidential and proprietary business information may be entitled to protection, even if such information cannot claim trade secret protection."), with Jet Spray Cooler, Inc. v. Crampton, 385 N.E.2d 1349, 1354 (Mass. 1979) ("The essence of an action for the wrongful use of trade secrets is the breach of the duty not

to disclose or to use without permission confidential information acquired from another." ). But be that as it may, we do not in this case measure the sufficiency of FMI's evidence against whatever standard Massachusetts law may supply; we measure it against the relevant jury instructions, which were not patently erroneous and thus became the law of the case when BWC failed to object to them. See, e.g., United States v. Zanghi, 189 F.3d 71, 79-80 (1<sup>st</sup> Cir. 1999) (evidentiary sufficiency is measured against instructions to which no objection has been lodged, at least where such instructions are not "patently incorrect"), cert. denied, 120 S. Ct. 839 (2000); Campos-Orrego v. Rivera, 175 F.3d 89, 97 (1<sup>st</sup> Cir. 1999) (similar).

The district court instructed the jury extensively on the issues implicated in BWC's challenge to the denial of its motion for judgment as a matter of law. Because these instructions are relevant not only to BWC's primary argument, set forth above, but also to alternative arguments BWC advances in support of its challenge to the court's ruling, described and addressed infra, we quote the instructions at some length:

Now, this case involves an alleged breach of contract that hinges on a seminal event, the client briefing held at [FMI's] Waltham, Massachusetts, headquarters on May 11, 1990, which was attended by [BWC's] Daniel St. Louis.

Mr. St. Louis, as you will recall, was admitted to portions of the briefing only after BWC signed an agreement promising that it would not make any use for five years of confidential information disclosed by [FMI]. That the agreement was a binding contract is not in dispute. What is disputed can be sketched as follows:

[FMI], the plaintiff, alleges that confidential information regarding the construction of its flexible lance hose, specifically, the facts of its Kevlar braid and urethane coating, [and] the name of the supplier, U.S. Composites, were disclosed to Mr. St. Louis at the May 11 meeting.

[BWC], for its part, maintains that nothing of a confidential nature was conveyed to Mr. St. Louis at that meeting. What information was conveyed, [BWC] contends . . . was information that was in the public domain.

In deciding this . . . issue, you will want to consider the testimony that was offered about the May 11 meeting and about the information that both preceded the meeting and those [sic] that occurred afterward, as well as the reasonable inferences that can be drawn from the entire history of the case.

If you find that confidential information was, in fact, disclosed to Mr. St. Louis during the May 11 meeting, you will then move to the second point of contention.

[FMI] maintains that [BWC] used this information in developing a flexible lance of its own. [BWC] contends that its flexible lance was the brain child of its own engineers and technicians . . . who, [BWC] argues, conceived the lance without the

benefit or use of any confidential information provided by [FMI].

In resolving this issue, you will have to look to the testimony that has been offered as to how [BWC's] flexible lance came into being and the testimony that you've heard about the similarities and the differences between the two lances.

\* \* \*

Let me turn now to a fuller explanation of the critical aspect of this case, the confidentiality agreement that gave rise to this dispute. You remember that under the terms of the confidentiality agreement, [BWC] promised not to use for five years, at least not without [FMI's] express written approval, any information disclosed by FMI at the May 11, 1990 meeting that was "confidential, proprietary, or novel."

The kinds of information that could be considered confidential, proprietary or novel were, as you will see in the agreement, very broadly defined. The agreement, however, allowed for [an] exception[].

The agreement did not apply to otherwise protected information . . . if [BWC] could . . . [s]how that such information, in its disclosed combinations, was in the public domain through no fault of [BWC].

\* \* \*

[T]he parties recognized that information, if in the form it was disclosed, was already public knowledge, even if one or both of the parties was unaware of the fact, [it] could not be

deemed confidential even if the agreement defined it as such.

\* \* \*

[BWC thus could] make use of any information that was already in the public domain or became so through no fault of [BWC].

"Public domain" is a legal term of art, but it refers to information that is generally known to the public at large or the people in a particular trade or business or could be obtained by an interested person with reasonable ease from information publicly available.

\* \* \*

The term "confidential," as used in the agreement, means information of a private nature that is entrusted to a third party with the expectation that it will be kept secret. "Novel" means something different from anything ever seen or known before. "Proprietary" refers to some protectable ownership interest in information.

Obviously, the term "confidential" has a broader meaning in the [sic] than the terms "novel" and "proprietary," and it is the term that the parties have focused upon.

The test of whether information is, in fact, confidential has both an objective and subjective component.

The test is objective in the sense that the information must be of the kind that a reasonable person would recognize as exclusive or private and likely to be known or appreciated only by its possession, even if it does not amount to a "secret" in the popular sense of the word.

Information that is, on the other hand, readily known or knowable to the interest of the public cannot, as I have said, be made confidential simply by slapping it with a restrictive label.

The test is subjective in the sense that the party imparting the information must manifest an expectation that it will be kept private by the person to whom it is conveyed.

One obvious measure of whether a party truly regards information as confidential is the extent to which it takes diligent precautions to safeguard the information from inadvertent dissemination or improper use by others.

To this point, it be apparent that [FMI] has the burden of proving by a preponderance of the evidence, that, one, confidential information was disclosed to [BWC] at the May 11, 1990 meeting and, that, two, [BWC] made use of that information in developing its flexible lance.

As we have suggested, BWC ignores these instructions and, citing to Massachusetts trade secrets law, contends that FMI's hose was not subject to protection under the agreement because it was an obvious solution to the engineering problem posed by the Canadian project. In so arguing, BWC highlights the following uncontested evidence: (1) the idea of combining Kevlar and urethane (used as an adhesive but not a coating) was disclosed in two pre-1988 hose patents, and the same combination was advertised by another hose company in 1989; (2) FMI engineer

Boyce acknowledged on cross-examination that "the simple idea of combining polyurethane as a matrix with Kevlar fibers" was not a secret; and (3) BWC's liability expert - the only formally designated liability expert to testify in the case - asserted that the FMI hose was based on well-known engineering principles and materials in common use, and could easily have been designed by "an engineer using principles available in 1990 and using well-established technology." BWC also points to the fact that Leary provided St. Louis with the address of U.S. Composites after the May 11, 1990 meeting, asking why FMI would so freely share this information if it were truly a trade secret.

If a properly instructed jury had found that BWC had misappropriated an FMI trade secret under Massachusetts law, a sufficiency challenge to the verdict might well present a close question. But here, the jury was not asked to make such a finding. Instead, after being told without objection that "confidential" information has "a broader meaning" than "novel" or "proprietary" information, the jury merely was asked to decide whether (1) there had been a disclosure of information that a "reasonable person would recognize as exclusive or private and likely to be known or appreciated only by its possession, even if it does not amount to a 'secret' in the popular sense of the word"; (2) FMI had "manifest[ed] an

expectation that [such information would] be kept private by [BWC]"; and (3) the information, "in its disclosed combinations," was, through no fault of BWC, "known to the public at large or the people in [the relevant] trade or business or could be obtained by an interested person with reasonable ease from information publicly available."

With respect to the first question, the jury reasonably could have found that, prior to May 11, 1990, there was no generally available hose small, strong, and flexible enough for the Canadian application. The jury also reasonably could have found that, during the May 11, 1990 meeting, FMI disclosed to BWC that it had developed such a hose; that the hose was constructed from a unique "recipe" involving a nylon core, a double-braided sheath of Kevlar, and a polyurethane coating; and that U.S. Composites had successfully manufactured the hose. Finally, the jury reasonably could have found that the hose was the culmination of nearly two years of research and development, and that the hose would give FMI a significant leg up in bidding on Ontario Hydro's sludge removal business, which the utility clearly regarded as an urgent and time-sensitive problem. If indeed the jury made these permissible findings, it was entitled to conclude that a reasonable person would regard FMI's hose technology as both likely to be appreciated only by its



possession and something FMI would have wanted to keep from its only competitor for the sludge removal contracts.

With respect to the second question, the very fact that FMI compelled BWC and U.S. Composites to sign confidentiality agreements prior to making any disclosures allowed the jury to conclude that FMI had manifested a subjective expectation that the hose technology would be kept confidential. In so ruling, we acknowledge that Leary's openness with St. Louis at and after the May 11, 1990 meeting seems to undermine FMI's claim that it regarded as confidential the information disclosed in the Leary/St. Louis conversations. But in the end, we think that the jury reasonably could have regarded Leary's disclosures as unusual revelations of protected information during an unusual period of cooperation between competitors, made more freely because of Leary's knowledge of the signed confidentiality agreement.

Finally, with respect to the third question, we believe that the jury reasonably could have found that the information Leary related to St. Louis at the May 11, 1990 meeting was neither known within the hose industry "in its disclosed combinations" nor obtainable from public information with reasonable ease. In making its public domain argument, BWC understandably focuses on the fact that, generally speaking,

there was at the relevant point in time nothing secret about constructing a hose with a nylon core, a Kevlar braid, and polyurethane. But nothing in the instructions required the jury to decide the public domain issue at this level of generality. Rather, we think that, as instructed, the jury was entitled ask itself a much more specific question: On May 11, 1990, could an interested party have learned with reasonable ease from publicly available information that there existed a polyurethane-coated, Kevlar-reinforced nylon hose that was small, strong, and flexible enough to remove sludge within even the tiny gaps between the tube bundles in Canadian nuclear reactors? The evidence is more than sufficient to sustain the jury's negative response.

Having disposed of BWC's primary argument, we turn to its alternative challenges to the district court's denial of its motion for judgment as a matter of law. BWC's first alternative argument is that, even if FMI disclosed confidential information on May 11, 1990, BWC never "used" the information in violation of the agreement because BWC engineers did not "incorporate" the information into the BWC hose. (BWC Brief at 35.) We recognize that, in addressing BWC's motion, the trial judge accepted that incorporation was the standard by which the jury should have gauged whether there had been an unlawful use. See Foster-

Miller, Inc. v. Babcock & Wilcox Canada, No. 93-12465-RGS, at 6-7 (D. Mass. December 31, 1998) (memorandum of decision and order on defendant's motion for judgment as a matter of law). The court reached this conclusion because, in its opinion, FMI had argued exclusively at trial that there had been such an incorporation. See id. But even if we shared the lower court's view of the trial record, we would disagree with its conclusion. Theories presented in opening and closing arguments do not necessarily curb a jury's discretion in this way. As we already have stated, a jury verdict will stand so long as the evidence makes it reasonable under "any permissible claim or theory." Collazo-Santiago, 149 F.3d at 27 (emphasis supplied). Here, the jury was not asked to find incorporation; it more broadly was asked, without objection from BWC, whether BWC "used" the information in violation of the agreement. BWC cannot now complain that the jury may have understood the term "use" in its ordinary sense.

So viewed, the use issue is not close. There was abundant evidence that BWC developed its hose far more quickly than otherwise would have been possible because it started with and proceeded from the knowledge that a viable hose could be constructed from nylon, Kevlar, and polyurethane. Moreover, there was evidence from which the jury reasonably could have

found that BWC "used" the May 11, 1990 disclosure of U.S. Composites as the hose manufacturer to obtain an FMI hose sample from U.S. Composites, test the sample, and apply the test results in developing its own hose. Thus, the evidence adequately supported the jury's conclusion that BWC wrongfully used the confidential information disclosed on May 11, 1990.

Pointing to evidence that Ontario Hydro in fact owned the hose technology at issue in this case, BWC next contends that the evidence was insufficient to support the conclusion that the technology was proprietary to FMI under Massachusetts law. In BWC's view, one cannot protect under a confidentiality agreement that which one does not own. BWC did not, however, present this argument to the lower court when it moved for judgment as a matter of law. Accordingly, we deem the argument waived. See, e.g., Hammond v. T.J. Little & Co., Inc., 82 F.3d 1166, 1171 (1<sup>st</sup> Cir. 1996).

Finally, BWC argues that it should prevail because FMI did not formally designate an expert to testify as to liability issues. More particularly, BWC takes the position that expert testimony was required for the jury rationally to have answered whether (1) the "combination of materials [in the FMI hose was] an idea so unique that an engineer with the appropriate training

and experience could . . . readily discover it"; and (2) "BWC had incorporated aspects of the FMI hose that were proprietary to FMI." (BWC Brief at 47-48 (emphasis in original)). But as we have explained, these questions - which again are based on the premise that the jury was instructed in strict accordance with Massachusetts trade secrets law (or at least BWC's view of such law) - were not questions that the instructions required the jury to answer. Based on our review of the record as a whole, we are satisfied that competent evidence supports the jury's verdict.

2. Admission in Evidence of Lichtman Notes and Failure to Give Curative Instruction

BWC asserts that the district court erred in admitting the Lichtman notes in evidence, and then exacerbated its error by failing to give a curative instruction after FMI, in arguing to the jury during its closing that its hose was not an obvious extension of existing technology, used the Lichtman notes in a manner prohibited by the hearsay rule. See Fed. R. Evid. 802 (prohibiting the introduction of hearsay evidence). In BWC's view, the court's failure to give a curative instruction effectively permitted FMI to use inadmissible double hearsay as substantive expert testimony on a crucial liability issue. FMI responds that the Lichtman notes were admitted for two

permissible non-hearsay purposes - (1) to show what information Babbitt and Leary had when they conducted their hose searches; and (2) to show the falsity of the vendors' impressions, see United States v. Adkins, 741 F.2d 744, 746 (5<sup>th</sup> Cir. 1984) ("When statements are introduced to prove the falsity of the matter asserted, they are not inadmissible as hearsay.") - and, in any event, were properly admitted as a business record. See Fed. R. Evid. 803(6) (setting forth the "[r]ecords of regularly conducted business activity" hearsay exception).

FMI successfully moved the Lichtman notes in evidence during its direct examination of Chip Babbitt. After overruling BWC's objection to admission of the notes, and in response to BWC's subsequent request for a limiting instruction, the district court addressed the jury as follows:

Jurors, if I can anticipate what [BWC's counsel] is asking me to tell you with respect to this last exhibit, the man - that is, Mr. Lichtman - who prepared these notes upon which this witness relied, because of medical problems, is unavailable to testify.

He had a cerebral hemorrhage so he cannot come into court and testify about the circumstances under which he prepared these notes which contain a fair amount of hearsay.

He is in the business of calling on people and asking them certain questions about the availability of this product.

I'm sure what [BWC's counsel] wants me to do is to point this out to you, that while this witness [Chip Babbitt] may have relied on these notes, we are in a position today, even though I've admitted them as evidence, of not being able to go back to their author to really explore the manner in which these notes were assembled.

When asked if this was what BWC's counsel had in mind in requesting the limiting instruction, counsel informed the court: "It is exactly, your Honor." FMI then went on to question Babbitt about the particulars of his hose search, asking whether and why Babbitt did or did not contact vendors with whom Lichtman previously had spoken.

The context in which the notes were admitted, the court's admonition that the notes contain "a fair amount of hearsay," and the court's two explicit references to Babbitt relying on the notes, combine to suggest that the court did not admit the Lichtman notes as evidence tending to prove the truth of the matters asserted therein. Instead, these factors make it far more likely that the notes were admitted for the limited purpose of helping to establish the factual context in which Babbitt began his hose search. Admission of the notes for this limited purpose would not have violated the hearsay rule and therefore would have been within the court's discretion. See Fed. R. Evid. 801(c) (defining hearsay as a "statement, other than one made by the declarant while testifying at the trial, or

hearing, offered in evidence to prove the truth of the matter asserted"). Moreover, even if the court admitted the notes for a different purpose, the fact that the notes were admissible for the purpose just described is sufficient to support their consideration by a properly instructed jury. See LaBarre v. Shepard, 84 F.3d 496, 500-01 (1<sup>st</sup> Cir. 1996) ("[W]e can affirm the admission of evidence on any proper basis, even if the trial judge relied on a different ground.").

Of course, whether the notes conceivably could have come into evidence for a proper purpose is a different question from whether the court permitted FMI to use them improperly. And it is on this latter issue that BWC primarily focuses its appellate argument. In particular, BWC complains about the following passage from FMI's closing argument:

What [FMI] did in 1988 was they called the leading hose companies in the world and said, This is our problem, do you have an answer, which is the way it works in real life.

And what we found out was two things: First of all, the top guy in the world, Rogan, from Rogan & Shanley, other vendors refer to Rogan & Shanley as the prime source for small-diameter high-pressure hose, spoke to Lichtman twice.

He said there are technical problems which Rogan feels may be insuperable at almost any price. In short, Rogan thinks we're wasting our time. People told



Columbus he shouldn't have sailed to America.

BWC contends that this portion of FMI's closing argument effectively converted Rogan's out-of-court statement (as related by the non-testifying Lichtman) into substantive expert testimony that the hose FMI developed was not an obvious extension of extant, publicly known hose technology.

BWC's contention fails to take account, however, of the unusual procedural posture in which this issue comes before us. BWC did not object to this argument when it was made. It instead brought the issue up at the sidebar conference following the court's jury instructions, when it asked the district court to repeat its earlier limiting instruction:

[BWC's Counsel]: Your honor, [FMI's counsel] again emphasized the importance of the Lichtman notes in his closing, and we would ask for another cautionary instruction on the hearsay nature of this document.

The Court: If he did emphasize it, it [e]luded me completely.

[BWC's Counsel]: Your Honor, what [FMI's counsel] did was to take the hearsay portions of those notes, Mr. Rogan, what Mr. Rogan said about this being an impossible task, and used those as expert testimony where, in fact, Mr. Rogan was not before the Court.

The Court: Yes.

[BWC's Counsel]: We understood those were only admitted to show this was the

beginning of a hose search and Mr. Rogan - anything of a hearsay nature about what Mr. Rogan believed about the difficulty would not come in as expert testimony.

The Court: Well, I just want to call attention to specific - I'm just going to have to trust that the jury will understand that they have to follow my instructions limiting, excluding, and disregarding evidence.

Thus, the question is not whether the court should have instructed the jury to disregard FMI's counsel's argument; it is only whether, in light of unobjected-to interceding events, the court should have repeated its earlier instruction to the effect that the Lichtman notes should only be considered for limited, non-hearsay purposes. The court did not abuse its discretion in declining to repeat what it already had said.

### 3. Remaining Arguments

BWC's remaining arguments do not require extended discussion. BWC first complains that the district court committed reversible error in instructing the jury on the weighing of "differ[ing]" expert testimony because FMI presented no expert testimony as to liability. In rejecting BWC's challenge to its instruction, the court stated that it had given the instruction to guide the jury with respect to the differing testimony given by each side's damages expert. The court did not abuse its discretion in so reasoning.

BWC next asserts that the district court erred in failing to evaluate BWC's motion to exclude FMI's damages expert under the reliability standard set forth in Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579 (1993), and refined in Kumho Tire Co., 526 U.S. 137. BWC also contends that, had the court performed a Daubert analysis, it would have excluded the testimony.

In arguing that the district court failed to assess whether FMI's damages expert's testimony "both rests on a reliable foundation and is relevant to the task at hand," Daubert, 509 U.S. at 597, BWC wrests out of context the court's statement that the proposed testimony "raises no issues . . . that . . . implicate[] the rule of Daubert." The statement BWC relies upon is more fairly evaluated in full context:

With respect to the testimony of [each side's damages expert], I've had the opportunity last night to review the reports and exhibits that I was provided . . . .

[FMI's damages expert's] report, to my mind, raises no issues of unconventional hypothesis or unorthodox methodology that, in my mind, implicates the rule of Daubert v. Dow Pharmaceuticals . . . .

I don't find that these differences [between each side's experts' proposed testimony], again, raise any of the kind of concerns that Daubert addresses, nor do I find anything about the credentials of either economist that would cause me to

doubt that they are unqualified to give testimony of this kind.

Rather, the conflict[s] between the two views [are] the ordinary sorts of differences that I encounter all the time between economists over issues like this which, to some degree, are speculative and have to be speculative because you're talking about events that did not occur, about a future that hasn't been revealed.

So I think that I'm not going to allow the motion to hold . . . .

If there is a fundamental difficulty that emerges with either expert's testimony, I'll handle that in a more conventional method by simply striking or telling the jury to disregard that aspect of the testimony.

In our view, this passage makes clear that the district court evaluated the proposed testimony for reliability and concluded that it was sufficiently reliable for admission in evidence. We thus reject BWC's claim that the court did not evaluate the testimony under Daubert. And having rejected the argument that the court improperly failed to perform its gatekeeping function under Daubert, we also reject as based on a faulty factual premise the argument that the court would have excluded plaintiff's damages expert's testimony had it applied Daubert. In reaching this latter conclusion, we think it significant that BWC has not here challenged the damages verdict as based upon speculative or insufficiently reliable evidence

introduced at trial. Indeed, in connection with this issue, BWC's brief makes no mention at all of the testimony FMI's damages expert gave at trial.

BWC's final argument is that the district court abused its discretion in ordering that (1) certain documents produced by FMI during discovery "be used only for purposes related to the instant litigation"; and (2) "any notations made [by FMI] on the documents after their creation be deleted." The documents in question were all initially marked confidential by FMI and produced under an agreed-to protective order which limited the parties' ability to use materials so marked. BWC alleges that the documents demonstrate "that FMI had, on numerous occasions, gained unauthorized access to information about BWC's sludge lance designs and financial information, in some instances by taking it from desks of Ontario Hydro employees or directly off Ontario Hydro's facsimile machines." (BWC Brief at 20.) BWC does not suggest that the court's order hampered its trial preparation. Rather, BWC appears interested in using the materials for purposes unrelated to this litigation.

Whatever merit there might be to BWC's claimed entitlement to use as it sees fit the documents, complete with FMI's notations thereon, the fact is that BWC never argued such an entitlement to the district court. These documents only were

brought to the lower court's attention by means of BWC's "Motion to Remove Confidential Designations from Certain Documents Produced by Plaintiffs," which the court granted subject to the restrictions noted above. In that motion, BWC asserted only that the inaccurate confidential designations were hampering its trial preparation efforts; it in no way argued an entitlement to use the materials for non-litigation related purposes. Moreover, BWC never asked the court to reconsider the restrictions, which were imposed in response to FMI submissions expressing concern that BWC intended to use the materials for such purposes (which submissions BWC did not oppose on grounds of entitlement to use the material for such purposes). Under the circumstances, we regard the argument BWC presses here as waived. See, e.g., National Amusements, Inc. v. Town of Dedham, 43 F.3d 731, 749 (1<sup>st</sup> Cir. 1995) (arguments not presented below are waived).

### C. FMI's Appeal

#### 1. Denial of Motion for New Trial on Damages

In March 1994, FMI established a wholly owned subsidiary named Foster-Miller Canada (FMC) to compete for water lancing contracts in Canada. During discovery, FMI acknowledged that FMC, and not FMI, would have bid on any post-March 1994 contracts wrongfully won by BWC as a result of its breach of the

confidentiality agreement. FMI's damages expert, without explaining why, included FMC's projected lost profits in arriving at the FMI damages calculations set forth in his report. Prior to trial, BWC moved in limine to preclude FMI from presenting evidence of FMC's lost profits, arguing that FMI alone was the plaintiff and that FMI was not entitled to profits that would have gone to its wholly owned subsidiary. In opposition, FMI simply asserted that "the law thoroughly and indisputably establishes that a parent/stockholder ([FMI]) can recover damages to a subsidiary/corporation ([FMC]) flowing from breach of an agreement with the parent/stockholder (BWC's agreement with [FMI]) . . . ." The district court agreed with BWC and barred FMI from presenting testimony regarding FMC's lost profits.

Following the verdict, FMI moved for a partial new trial on damages, arguing for the first time that it had been entitled to FMC's lost profits because such profits accurately measured the diminution in the value of FMC caused by BWC's conduct: "FMI was a 100% shareholder of [FMC, and] profits lost by [FMC] translated, dollar for dollar, into a loss to [FMI] because of the loss in the value of its ownership interest in [FMC]." (FMI's Motion for Partial New Trial at 4.) In other words, rather than simply asserting an entitlement to its wholly

owned subsidiary's lost profits (as it had done prior to trial), FMI now was asserting both an entitlement to the diminution in value of its wholly owned asset, and that the asset's lost profits accurately measured such diminution. In a margin order, the district court rejected this theory as, inter alia, "raised too late in the game." (Id. at 1.)

On appeal, FMI renews its claimed entitlement to recover the diminished value of BWC. In so arguing, FMI once again asserts that BWC's lost profits are the proper measure of such diminution. But even if we assume arguendo that FMI was entitled to recover FMC's diminished value as part of its damages, we think that the "FMC's lost profits = FMC's diminished value" premise of FMI's argument is sufficiently debatable to have required its disclosure to BWC during discovery. Clearly, lost profits and diminished corporate value are distinct concepts, see, e.g., Protectors Ins. Service, Inc. v. United States Fidelity & Guar. Co., 132 F.3d 612, 617-18 (10<sup>th</sup> Cir. 1998), and we are not prepared to say that the measure of diminished corporate value will always meet or exceed the measure of the corporation's lost profits. Had FMI afforded BWC notice that it was seeking FMC's lost profits as a measure of FMC's diminished value, BWC would have been afforded the opportunity to develop a competing valuation theory. The



district court's decision to reject FMI's theory as untimely was thus within its discretion.

## 2. Discovery Sanction

During discovery, BWC served upon FMI a Fed. R. Civ. P. 30(b)(6) deposition notice covering fourteen topics. FMI did not produce witnesses competent to testify as to five of the topics because BWC had in the early stages of the case already deposed the employees FMI regarded as most knowledgeable on those topics. Instead, with respect to these five topics, FMI's counsel wrote BWC's counsel and asked him to specify whether he wanted FMI (1) to recall these witnesses; (2) to produce additional witnesses; or (3) to designate the prior deposition testimony as Rule 30(b)(6) testimony. BWC subsequently moved for an order compelling FMI to comply with its Rule 30(b)(6) deposition notice, which the district court granted. The court also awarded BWC the costs and fees it incurred in bringing the motion to compel. See Fed. R. Civ. P. 37(d) (requiring an award of costs and fees upon the granting of such a motion "unless the court finds that the failure was substantially justified or that other circumstances make an award of expenses unjust").

On appeal, FMI argues that its conduct was reasonable under the circumstances and that the district court's sanction was an abuse of its discretion. But our review of the record

reveals that the court had reason to conclude that FMI, by asking BWC whom it wished to testify on behalf of FMI for Rule 30(b)(6) purposes (or what testimony it wished FMI to designate as Rule 30(b)(6) testimony), effectively attempted to shift to BWC the onus of identifying who best spoke for FMI on the matters in question. Such a burden shift is contrary to the purposes of Rule 30(b)(6). See Mistui & Co. (U.S.A.), Inc. v. Puerto Rico Water Resources Auth., 93 F.R.D. 62, 66-67 (D.P.R. 1981). In any event, FMI cannot and does not deny that, strictly speaking, it failed either to designate witnesses competent to address each of the topics specified in the Rule 30(b)(6) notice or to obtain from the court an appropriate protective order. The court thus did not abuse its discretion in strictly enforcing Rule 30(b)(6). See id. Nor did the court abuse its discretion in concluding that FMI's failure to comply with the notice was not "substantially justified" within the meaning of Fed. R. Civ. P. 37(d).

### III.

For the reasons stated, we affirm the orders and judgments appealed from in all respects.

**Affirmed.** No costs.