IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CROWN CORK & SEAL TECH. CORP., CHEVRON PHILLIPS CHEMICAL CO. LP, and CHEVRON RESEARCH AND TECH. CO.,	:	
Plaintiffs,	:	
	:	Civil Action No. 99-234-JJF
v.	:	
CONTINENTAL PET TECH. INC.,	:	
Defendant.	:	
CHEVRON PHILLIPS CHEMICAL CO. LP, and CHEVRON RESEARCH AND TECH. CO.,	:	
Cross-claim Plaintiffs,	:	
v.	:	
CROWN CORK & SEAL TECH. CORP.,	:	
Cross-claim Defendant.	:	

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MEMORANDUM OPINION

November 25, 2002
Wilmington, Delaware

FARNAN, District Judge

INTRODUCTION

This action was originally brought by Crown Cork and Seal Technologies Corporation ("Crown") against Continental Pet Technologies Incorporated ("Continental") for infringement of U.S. Patent Number 5,021,515 (the "'515 patent"). Subsequently, Chevron Phillips Chemical Company, LP, and Chevron Research and Technology Company (collectively "Chevron") intervened based on a 1993 Licensing Agreement between Chevron and Crown's predecessor-in-interest, CMB,[1] that allegedly granted Chevron exclusive rights under the '515 patent to certain types of products, including Continental's accused product. Chevron raised two claims: (1) patent infringement against Continental; and (2) a cross-claim against Crown seeking a declaration of the scope of Chevron's '515 patent rights under the 1993 License Agreement.

Subsequently, Chevron granted Continental a sublicense under

[1] Crown is the successor to an English company, Metal Box plc, which changed its name on various occasions and was ultimately acquired by Crown's parent, Crown Cork & Seal Company, Inc. On September 30, 1988, Metal Box plc changed its name to MB Group, plc. On April 25, 1989, MB Group, plc changed its name to CMB Packaging (UK) Limited. On May 1, 1990, CMB Packaging (UK) Limited changed its name to CMB Foodcan plc. On November 1, 1992, CMB Foodcan plc changed its name to CarnaudMetalbox plc. For ease of reference, this corporation will be referred to as "CMB." (Stipulation of Uncontested Facts, D.I. 216, tab 1 ("Stipulation") 2). By a Deed of Assignment dated December 20, 1999, all rights and obligations of CMB under the 1993 License Agreement were assigned to Crown. (Stipulation 38). Thus, in this Memorandum Opinion, the Court will refer to Crown without differentiating between Crown and its predecessors-in-interest.

the '515 patent and settled its first claim. The Court then stayed the patent infringement action between Crown and Continental, and therefore, the sole issue now before the Court is the scope of Chevron's rights under the 1993 Licensing Agreement.

The Court has subject matter jurisdiction over this matter pursuant to 28 U.S.C. §§ 1338(a) and 1367. Additionally, the Court has personal jurisdiction over Crown, Chevron, and Continental because they are incorporated in the State of Delaware. Likewise, venue is appropriate in this District under 28 U.S.C. §§ 1391(b)-(c) and 1400(b). Neither jurisdiction nor venue is contested by the parties.

This Memorandum Opinion constitutes the Court's findings of fact and conclusions of law on the claims and defenses presented by Chevron and Crown.

BACKGROUND

The issue before the Court is the scope of the rights of Crown and Chevron under a 1993 License Agreement (the "1993 License Agreement," D.I. 193, tab F), which purportedly granted certain rights to Chevron under patents issued to Crown, including the '515 patent (D.I. 193, tab B).

A. The '515 Patent

The '515 patent is directed to plastic packaging,

"especially for oxygen sensitive materials, such as food and beverages." (Stipulation of Uncontested Facts, D.I. 216, tab 1 ("Stipulation") 17). At the time of the invention disclosed in the '515 patent, a significant difficulty with using plastic containers for oxygen sensitive products was that the container walls were permeable to atmospheric oxygen, which could adversely affect the contents of the container. (Stipulation 18). Beer and fruit juices are examples of products that are particularly susceptible to, and adversely affected by, exposure to oxygen. (Stipulation 19).

The invention of the '515 patent solved the oxygen permeation problem by creating a plastic package that greatly reduced oxygen transmission into the packaged product. (Stipulation 21). The '515 patent teaches that polymeric package walls made of a composition, or including a layer made of a composition, that "scavenges oxygen through the metal-catalyzed oxidation of an oxidizable organic component" of the composition, thereby protects the contents from oxygen ingress. (Stipulation 22). The '515 patent further teaches that MXD6 is "very suitable" for use as the oxidizable polymer. (Stipulation 23). MXD6 is Mitsubishi Gas & Chemical Company's commercial designation for the polymer known as poly (m-xylyeneadipamide), which is the product of the polymerization reaction of m-xylylenediamine and adipic acid. (Stipulation 24). MXD6 is a

polyamide. (Stipulation 24).

B. The 1993 License Agreement

The 1993 License Agreement granted Chevron rights under the '515 patent to make, use, and sell certain defined "Material" and "Products" within the United States, Canada, and Mexico.[2] (D.I. 193, tab F, ¶2(1)). The 1993 License Agreement defines Material as:

> an enhanced oxygen scavenging material suitable for packaging use which comprises:
>
> (a) a structural polymer or copolymer (copolymer meaning a polymer of two or more monomers) comprising any polymer or copolymer which is not a polyester; and
>
> (b) an organic oxidizable component (which may be the polymer or copolymer of (a) above); and
>
> (c) a metallic component which assists the oxidation of the oxidizable component; and which is covered by CMB's and/or PLM's Patents and/or Technical Information.

(D.I. 193, tab F, ¶1(1)).

The 1993 License Agreement further provides:

> "Products" shall mean products (such as monolayer film, multilayer film, mono and multilayer rigid containers, caps and closures, plastic coated paper, packaging products and the like) made from Material wherein such products may include any polymer component so long as Material is used as the oxygen scavenging layer (film as uses herein embraces extruded sheets).

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[2] On November 10, 1999, Crown signed a Deed of Amendment which expanded the territorial scope of Chevron's rights under the 1993 License Agreement to include all countries of the world. The scope of Chevron's rights was not otherwise affected by the amendment in a way material to this litigation. (Stipulation 49).

(D.I. 193, tab F, ¶1.(2)).

Paragraph 2(3) of the 1993 License Agreement (the "Sewell exclusion") reads as follows: "Chevron acknowledges the rights granted by the PLM Group (exclusively until and including 1999 and thereafter non-exclusively) to Sewell Plastics Inc. in the USA, its territories and possessions to manufacture use and sell containers made of PET ...." (D.I. 193, tab F, ¶2(3)).

Paragraph 22 of the 1993 License Agreement provides that the License shall be read and construed according to and shall be governed by the laws of England. (D.I. 193, tab F, ¶22).

C. Continental's Accused Bottles

Continental's accused products are multilayer plastic beer bottles referred to as CPTX-312 containers. (Stipulation 39). CPTX-312 containers are five-layer structures. (Stipulation 40). The inner, core, and outer layers are made from polyethylene terephthalate ("PET"). (Stipulation 40). The two intermediate oxygen scavenging layers are made from CPTX-312 material. (Stipulation 40). PET is a polyester within the meaning of subsection (a) of the definition of Material in the 1993 License Agreement. (Stipulation 42). CPTX-312 material is a mixture of MXD6 with cobalt neodecanoate ("cobalt"). (Stipulation 41). MXD6 is an organic oxidizable component within the meaning of subsection (b) of the definition of Material in the 1993 Licensing Agreement. (Stipulation 41). Cobalt is a metallic

component which assists the oxidation of the oxidizable component within the meaning of subsection (c) of the definition of Material in the 1993 Licensing Agreement. (Stipulation 44).

D. The Parties' Contentions

Chevron contends that under the plain meaning of the 1993 License Agreement it has an exclusive license to make, use, and sell multilayer bottles having layers of PET, provided that the oxygen scavenging Material layers do not contain PET, and Chevron further contends that Continental's accused bottles fall within the preceding definition. (D.I. 241 at 15-16).

In response, Crown makes three arguments that the 1993 License Agreement does not grant Chevron rights to Continental's accused bottles: (1) Continental's containers do not contain a structural polymer as that term is used in the definition of the term Material in Paragraph 1(1) of the 1993 Licensing Agreement; (2) Continental's containers are containers made of PET and PET containers were expressly excluded from the license grant to Chevron by the Sewell exclusion in Paragraph 2(1) of the 1993 License Agreement; and (3) Chevron's consistent pattern of behavior and declarations over a ten-year period confirms the parties' shared assumption that rights to multilayer PET containers were not licensed to Chevron but were retained by Crown, such that Chevron is estopped from reversing its position to the detriment of Crown pursuant to the English doctrine of

estoppel by convention. (D.I. 243 at 1-2).

DISCUSSION

A. Introduction

Continental's accused bottles have three layers of PET and two oxygen scavenging layers containing only MXD6 and cobalt. Chevron contends that under the plain meaning of the 1993 License Agreement it has an exclusive license to make and sell multilayer bottles having layers of PET, provided that the oxygen scavenging Material layers do not contain PET. Crown has stipulated that the oxygen scavenging layers of Continental's bottles do not contain PET; however, Crown contends that the oxygen scavenging layers of Continental's bottles are not Material as defined in the 1993 License Agreement.

The 1993 License Agreement defines Material as: "an enhanced oxygen scavenging material suitable for packaging use which comprises: (a) a structural polymer or copolymer ... which is not a polyester; and (b) an organic oxidizable component (which may be the polymer or copolymer of (a) above); and (c) a metallic component ...." (D.I. 193, tab F, ¶1(1)). The parties have stipulated that MXD6 is an organic oxidizable component and that cobalt is a metallic component within the meaning of subsections (b) and (c) of the definition of Material in the 1993 Licensing Agreement. (Stipulation 41 & 44). As to the structural polymer element of subsection (a), Chevron contends that MXD6 serves as

both a structural polymer and a oxidizable organic component in the oxygen scavenging layers of Continental's bottles. Crown maintains that MXD6 is not a structural polymer suitable for packaging use within the meaning of the 1993 License Agreement.

Thus, the issue of whether MXD6 is a structural polymer within the meaning of subsection (a) of the definition of Material in the 1993 Licensing Agreement is critical to the resolution of the instant dispute. If it is, then Continental's MXD6/cobalt oxygen scavenging layers come within the definition of the Material licensed to Chevron, and, if it is not, then the Continental scavenging layer is within the rights retained by Crown. This is a question of contract interpretation to which the Court will apply principles of English law.

B. Applicable Law

The interpretation of the 1993 License Agreement is governed by English law. (D.I. 193, tab F, ¶22). Under English law, the words of a contract are interpreted in accordance with their plain and ordinary meaning. Investors Compensation Scheme Ltd. v. West Bromwich Bldg. Soc'y, [1998] 1 W.L.R. 896, 913; see generally In re McMahon, 236 B.R. 295, 304-06 (S.D.N.Y. 1999)(explicating principles of contract interpretation under English law and citing seminal cases). The leading English treatise on contracts, Chitty on Contracts, provides:

> The cardinal presumption is that the parties have intended what they have in fact said, *so that their*

> *words must be construed as they stand*. That is to say, the meaning of the document or of a particular part of it is to be sought in the document itself: "One must consider the meaning of the words used, not what one may guess to be the intention of the parties." However, no contract is made in a vacuum. In construing the document, the court may resolve an ambiguity by looking at its commercial purpose and the factual background against which it was made.

I Chitty on Contracts, ¶ 12-040 (28th ed. 1999) (citations omitted)(emphasis in original).

Contract interpretation under English law is subject to the parol evidence rule: "[i]f there be a contract which has been reduced to writing, verbal evidence is not allowed to be given ... so as to add to or subtract from, or in any manner to vary or qualify the written contract." Chitty on Contracts, ¶ 12-081. Pursuant to this rule, preliminary agreements, drafts, and evidence of negotiations between the parties may not be used to interpret contracts under English law. Investors Compensation Scheme Ltd., 1 W.L.R. at 913. The parties' subjective intent also may not be used. Id.; Chitty on Contracts, ¶ 12-105.

Under English law, the test for ascertaining the meaning of terms in a contract is to determine how the language of the contract would have been understood by a reasonable person having all of the background knowledge and information that would reasonably have been available to the parties in the situation in which they were at the time of the contract. Investors Compensation Scheme Ltd., 1 W.L.R. at 912-13.

> The meaning which a document (or any other utterance) would convey to a reasonable man is not the same thing as the meaning of its words. The meaning of words is a matter of dictionaries and grammars; the meaning of the document is what the parties using those words against the relevant background would reasonably have been understood to mean.

Id. at 913.

The relevant background information - referred to as the "matrix of fact" - includes anything which would have affected the way in which the language of the document would have been understood by a reasonable man. Id. at 912-13. Chitty on Contracts further explains:

> where the wording or phraseology is susceptible of more than one meaning, or if an ambiguity emerges when it is sought to apply the language of the document to the circumstances under consideration, extrinsic evidence will be admissible to ascertain the true meaning of the words or phrases used. The court is entitled (and, indeed, bound) to enquire beyond the language of the document and see what the circumstances were with reference to which words were used, and the object appearing from those circumstances which the person using them had in view. The court must place itself in the same "factual matrix" as that in which the parties were.

Chitty on Contracts, ¶ 12-104.

Thus, a court must consider the "matrix of fact" when interpreting a contract under English law but must not consider inadmissible parol evidence. In In re McMahon, the court noted the difficulty created by these competing dictates of English law: "The line between parol evidence and the 'factual matrix' is not easily discernable." 236 B.R. at 307.

The above principles for interpreting contracts under English law apply to all commercial contracts, including patent licenses. Oxford Gene Technology, Ltd. v. Affymetrix, Inc. [2000] F.S.R. 741.

In sum, English law directs a Court to examine the language used by the parties in light of the business purpose they sought to achieve and to construe the contract in such a way as to arrive at a commercially sensible construction. Accord In re McMahon, 236 B.R. at 306.

C. Chevron's Arguments

Chevron contends that MXD6 can serve as both a structural polymer and an oxidizable organic component in the licensed oxygen scavenging Material. Chevron alleges that the entire matrix of fact, including correspondence between the parties, the '515 patent itself, and admissions by Crown, supports its position.

Chevron points to two 1992 letters from Crown that it believes clarifies the meaning of the 1993 License Agreement. Chevron asserts the letters express the opinion that a flexible laminate consisting of a layer of polyethylene and a layer of MXD6 and cobalt would fall within the scope of claims 1 and 49 of the '515 patent. Chevron argues that the letters are significant because they show Crown was aware that Chevron was interested in using MXD6 and cobalt as an oxygen scavenging layer in multilayer

laminates and thus that this use of MXD6 was not excluded from the 1993 License Agreement.

Chevron contends that the '515 patent indicates that MXD6 can perform the dual function of oxidizable polymer and structural polymer. Specifically, Chevron asserts that example 20 of the '515 patent describes a product made only of MXD6 and a small amount of cobalt. Chevron further asserts that claim 49 of the '515 patent claims a package wall where the oxidizable organic polymer (e.g., MXD6) is the only polymer in the wall. Additionally, Chevron cites the specification of the '515 patent, which provides: "[i]t is possible for an oxidizable polymer to be used as the sole polymer in the composition, serving a dual function as polymer and oxidizable organic component." (D.I. 193, tab B, col. 4:41-44). Chevron contends that the language of the '515 patent is an admission by Crown that should preclude it from now denying that MXD6 is a structural polymer.

Chevron argues that Crown's contention that MXD6 is not a structural polymer because it oxidizes is misguided. Chevron contends that all polymers oxidize and points out that the 1993 License Agreement recognizes that a structural polymer can oxidize because it allows the structural polymer component and the organic oxidizable component of the licensed Material to be the same.

Chevron contends that MXD6 has the characteristics of a

structural polymer. Chevron asserts that the National Research Council's definition of structural polymer reflected the state of the art in 1993:

> The familiar categories of materials called plastics, fibers, rubbers, and adhesives consist of a diverse array of synthetic and natural polymers. It is useful to consider these types of materials together under the generic rubric of *structural polymers* because *macroscopic mechanical behavior is at least part of their function*.

(Exhibit 430 at 66)(emphasis added by Chevron).

Chevron contends that structural polymers are rarely used by themselves; instead, they are mixed with fillers. Chevron asserts that MXD6 is combined with chopped glass to make a composite used as a replacement for metal in the manufacture of car parts, watch gears, nails, bolts, fishing reels, and scissors. Chevron argues that because MXD6 is used for such demanding applications, it clearly has the properties of a structural polymer. Furthermore, Chevron contends that MXD6 has physical properties, such as tensile strength, flexural strength, and impact strength, that are comparable or superior to PET, which Crown acknowledges as a structural polymer.

Chevron contends that Crown's assertion that polymers are either functional and structural is false because polymers can be both. In fact, Chevron points out that Crown's technical expert, Dr. Robert C. Armstrong, admitted his primary reference, Plastic Blow Molding Handbook (Norman C. Lee ed., 1990)(the "Lee text"),

classified several polymers, including PET, as both structural and functional. Chevron also contends that two other factors, high cost and the absence of commercial monolithic containers, relied on by Dr. Armstrong in determining that MXD6 is not a structural polymer are of no relevance.

Chevron contends that Crown's argument that a structural polymer must give essential strength to the entire licensed product is contrary to the language of the 1993 License Agreement and is so vague and indeterminate that it does not comport with common sense. Instead, Chevron asserts that the structural polymer need only give strength to the oxygen scavenging layer. Chevron contends that under Crown's definition, whether a polymer is structural is a subjective inquiry that changes from case to case depending on the application at issue.

Finally, Chevron contends that Crown's comparative performance tests of bottles made of PET, MXD6, and MXD6 and cobalt are irrelevant and flawed. Chevron contends the comparison tests are flawed because the MXD6 bottles were poorly made, were too thin, and were not heat set to optimize their strength. Chevron contends the tests are irrelevant because they do not indicate whether a polymer is a structural polymer. Instead, the tests only indicate if the bottles are suitable for use as commercial beer bottles, which is not the relevant inquiry. For these reasons, Crown argues that the tests prove

nothing and should be disregarded.

D. Crown's Arguments

Crown contends that its expert, Dr. Armstrong, testified as to what a reasonable person, given the matrix of fact reasonably available at the time of the agreement, would have understood the term structural polymer to mean. Crown further contends that Chevron's expert, Dr. Edwin L. Thomas, expressed a present day view of what he thinks a structural polymer is, with no reference to the matrix of fact. Consequently, Crown argues that Dr. Thomas's opinion should be rejected as irrelevant and that Crown should prevail. Alternatively, Crown argues that Dr. Armstrong's testimony should be credited over Dr. Thomas's.

Dr. Armstrong defined a structural polymer as "a polymer that is not readily oxidizable, or, if it oxidizes, does so without loss of structural integrity." (Ex. 198; Armstrong, Tr. 804:1-3). Crown contends, based on Dr. Armstrong's testimony, that the term structural polymer would have been understood to refer to the component of the licensed Material that could provide essential strength not only to the Material, but ultimately to a packaging product made from such material while the organic oxidizable component degrades and weakens upon reaction with oxygen during packaging use. In sum, Dr. Armstrong opined that a reasonable person with the relevant matrix of fact would not have considered MXD6 to have been a structural polymer

as that term is used in the 1993 License Agreement.

Relying on Dr. Armstrong's testimony and the relevant literature, Crown contends that there is a distinction between structural and functional polymers. Crown asserts that structural polymers, such as PET, provide strength to the container while functional polymers provide additional performance features such as thermal or barrier properties. Crown contends that MXD6 is a passive oxygen barrier and thus is a functional polymer rather than a structural polymer.

Crown contends that a reasonable person would not regard MXD6 as a structural polymer because, when mixed with cobalt, the MXD6 polymer backbone is known to weaken and degrade upon reaction with oxygen. Thus, Crown asserts it would be counterintuitive to regard a substance that chemically degrades as a structural polymer suitable for packaging use within the meaning of the 1993 License Agreement.

Crown contends the opinion of Chevron's expert that MXD6 is a structural polymer is flawed and should be rejected. Specifically, Crown points out that although Dr. Thomas defined a structural polymer as one that has certain mechanical properties sufficient to make it an outstanding mechanical material at room temperature, he was unable to provide an objective level at which such properties would qualify a polymer as structural. Essentially, Crown argues that Dr. Thomas' definition is a

definition without definition.

Crown contends the two sources relied on by Dr. Thomas, the Lee text and National Research Council, Polymer Science and Engineering: The Shifting Research Frontiers (1994)(the "NRC text"), do not support his opinion, but rather support Dr. Armstrong's contrary opinion. Crown asserts that the NRC text distinguishes between structural and barrier polymers and nowhere classifies MXD6 as a structural polymer. Crown further asserts that the Lee text distinguishes between structural and functional polymers and expressly classifies MXD6 as a barrier polymer rather than as a structural polymer.

Crown also contends that Dr. Thomas incorrectly based his opinion on the fact that MXD6 has been used to make items such as shafts, pulleys, gears, and propellers. Crown contends that those items were not made of pure MXD6, but rather were made of composites that included glass fibers to provide strength. Crown asserts that MXD6 has never been used alone to make any commercial products.

Crown contends that Dr. Thomas' reliance on a white block made of pure MXD6, as well as a bottle made of pure MXD6, is misplaced. Dr. Thomas contended the very existence of the objects made of pure MXD6 confirmed that MXD6 was structural. Crown argues that the bare existence of objects created for litigation does not demonstrate that MXD6 is a structural

polymer.

Crown contends that the MXD6 bottle lacks the mechanical and thermal properties to make it usable as a commercial beer bottle. In support of this contention, Crown offers the results of three tests conducted by its expert, Dr. Armstrong. Dr. Armstrong conducted a thermal stability test, a drop impact test, and a top load test. The thermal stability test assessed whether the bottle would stand up to storage in a warm warehouse. The drop impact test evaluated whether the bottle would survive dropping from a store shelf. The top load test assessed whether the bottle would survive the physical stress of having weight stacked on top of it, as in a warehouse. Crown asserts that the MXD6 and MXD6 plus cobalt bottles failed each of the three tests. Crown maintains that the bottles broke when dropped and deformed under heat and pressure. Crown contends that the test results show that MXD6 lacks the necessary qualities to be a structural polymer in Material that is suitable for packaging use.

Crown contends that the term structural polymer cannot be considered in the abstract as Dr. Thomas suggests by his definition. Crown argues that Dr. Thomas's application-blind approach is flawed because the 1993 License Agreement requires that the licensed Material be "suitable for packaging use." Additionally, Crown argues that Dr. Thomas's opinion ignores the context in which the term structural polymer was used by the

parties and therefore does not take into account the matrix of fact.

On the other hand, Crown contends that Dr. Armstrong's opinion takes the matrix of fact and commercial reality into account. In determining if a material is structural, Dr. Armstrong asserts that it is necessary to consider the use for which the material must provide structure. Crown contends that materials may be structural for some purposes but not for others. For example, glass may be structural for drinking vessels but not for shipping crates. Crown contends that Dr. Thomas's opinion ignores such considerations.

Crown contends that the definition of Material in the 1993 License Agreement requires three components, but acknowledges that the parenthetical phrase in paragraph 1(1)(b) allows the structural polymer and the organic oxidizable component to be the same. However, Crown contends that only a polymer that serves two functions, i.e., a polymer that is both structural and oxidizable, may fulfill both requirements. Crown argues that the parenthetical phrase was drafted solely by Chevron and thus, under the *contra proferentem* rule, should be construed against Chevron. Crown contends that the parenthetical phrase was inserted to ensure Chevron's EMAC oxygen scavenging polymer would be within the scope of the 1993 License Agreement. Crown maintains that Chevron's EMAC polymer is the only known polymer

that simultaneously functions both as the oxidizable component and the structural component of an oxygen scavenging material. Crown contends that the parenthetical phrase encompasses Chevron's EMAC polymer but does not encompass MXD6 because it is not a structural polymer and does not function as a structural component in the Material.

Accordingly, Crown contends that Continental's accused bottles do not contain a structural polymer and thus are not within the rights licensed to Chevron.

E. Findings of Fact and Conclusions of Law

After considering the applicable law, the relevant facts, and the parties' contentions, the Court concludes that MXD6 is not a structural polymer within the meaning of the 1993 License Agreement. Consequently, the Court concludes that Continental's accused bottles are not within the rights licensed to Chevron and are within the rights retained by Crown.

In reaching its conclusions, the Court has construed the 1993 License Agreement in accordance with the applicable principles of English law. Specifically, the Court considered the commercial context and the matrix of fact in which the 1993 License Agreement was executed. The Court found the following discussion by an English court instructive:

> The meaning which a document ... would convey to a reasonable man is not the same thing as the meaning of its words. The meaning of words is a matter of dictionaries and grammars; the meaning of the document

> is what the parties using those words against the relevant background would reasonably have been understood to mean.

Investors Compensation Scheme Ltd., 1 W.L.R. at 913.

The Court finds Crown's expert, Dr. Armstrong, credible and attaches significant weight to his testimony and opinion. Specifically, the Court finds that Dr. Armstrong, the Chairman of the Chemical Engineering Department at the Massachusetts Institute of Technology, correctly opined on what a reasonable person, given the matrix of fact reasonably available at the time of the agreement, would have understood the term structural polymer to mean.

The Court concludes, based on the testimony of Dr. Armstrong, that in the context of the 1993 License Agreement a structural polymer would be understood to be a polymer that is not readily oxidizable, or, if it is readily oxidizable, does so without loss of structural integrity. In this regard, the term structural polymer refers to the component of the licensed Material that could provide essential strength not only to the Material, but ultimately to a packaging product made from such material while the organic oxidizable component degrades and weakens upon reaction with oxygen during packaging use. In sum, the Court concludes that a reasonable person with the relevant matrix of fact would not have considered MXD6 to have been a structural polymer as that term is used in the 1993 License

Agreement.

Relying on Dr. Armstrong's testimony and the Lee text (Exhibit 654), the Court finds that there is a distinction between structural and functional polymers. Structural polymers provide strength and integrity to materials while functional polymers provide thermal or barrier properties. The Lee text classifies MXD6 as a functional polymer and specifically identifies it as a barrier polymer. (Exhibit 654 at 120-21). The Lee text does not identify MXD6 as a structural polymer. Id.

Although the Court recognizes, in the abstract, that a polymer could be both functional and structural, the Court finds, in the context of the 1993 License Agreement, that MXD6 is not capable of fulfilling both roles. The Court concludes that a reasonable person would not regard MXD6 as a structural polymer because, when mixed with cobalt, the MXD6 polymer backbone is known to weaken and degrade upon reaction with oxygen. In fact, cobalt is added to MXD6 to accelerate its structural degeneration. In short, MXD6 is readily oxidizable, and thus, the Court finds it is not a structural polymer.

With regard to the parenthetical phrase in paragraph 1(1)(b) of the 1993 License Agreement (the "parenthetical phrase") that allows the structural polymer and the organic oxidizable component to be the same, the Court concludes that only a polymer that serves two functions, i.e., a polymer that is both

structural and oxidizable, may satisfy both requirements. At the time the 1993 License Agreement was executed, the Court finds that the only known polymer that simultaneously functioned both as an oxidizable component and as a structural component of an oxygen scavenging material was Chevron's EMAC polymer. Chevron's EMAC polymer has a structural backbone that is not readily oxidizable and pendent groups that are readily oxidizable. In contrast to MXD6, EMAC maintains its structural integrity while providing the necessary oxidation effect, and therefore, EMAC satisfies the parenthetical phrase while MXD6 does not.

The Court's conclusion that MXD6 is not a structural polymer is supported by the results of the thermal stability test, the drop impact test, and the top load test conducted by Dr. Armstrong.[3] The tests compared bottles made of PET, a structural polymer, and bottles made of MXD6 and MXD6 plus cobalt (collectively, the "MXD6 bottles"). The MXD6 bottles failed each of the three tests. Thus, in a direct comparison to bottles made of a known structural polymer, the MXD6 bottles failed to exhibit comparable mechanical properties. Specifically, Dr. Armstrong's tests demonstrated that the properties of MXD6, unlike those of PET, are highly moisture dependent. When filled with water and heated to the temperature of a warm warehouse, the PET bottles

[3] The Court will enter a separate Memorandum Order regarding the admissibility of Dr. Armstrong's bottle tests.

retained their shape while the MXD6 bottles did not. Thus, the Court finds that MXD6's moisture sensitivity supports its conclusion that MXD6 is not a structural polymer suitable for packaging use.

The Court further concludes that Chevron's expert's application-blind approach to defining a structural polymer is flawed because the 1993 License Agreement requires that the licensed Material be "suitable for packaging use." Additionally, the relevant principles of English law direct the Court to look to the "commercial purpose and the factual background" when construing a contract. Chitty on Contracts, ¶ 12-040. Thus, the term structural polymer must be evaluated in light of the commercial purpose of the 1993 License Agreement, which is to grant rights to packaging materials. Dr. Thomas's definition fails to take into account the above considerations, and therefore, the Court finds it inapplicable to the instant issues.

The Court further concludes that Chevron's reliance on the pre-1993 correspondence between Crown and Chevron is misplaced. The pre-1993 correspondence addresses whether the use of MXD6 would be covered by the '515 patent claims, which is not the relevant inquiry here. The issue here is whether the use of MXD6 is covered by the 1993 License Agreement, and the definition of Material in the 1993 License Agreement and the '515 patent claims

are not coextensive.[4]

The Court finds Chevron's argument regarding the language of the '515 patent also unpersuasive. Example 20 and claim 49 of the '515 patent show that MXD6 may be used without having been blended with a structural polymer, but, when read in the context of other sections of the '515 patent, Chevron's contention falters. In reference to multi-layered packaging structures, the '515 patent teaches that when MXD6 and cobalt are not blended with a structural polymer, the resulting material is "too thin for the proposed [packaging] use" and requires structural support. (D.I. 193, tab B, col. 12:19-21). In contrast, the '515 patent also teaches that when MXD6 and cobalt are combined with a first polymer, the resulting material is "appropriate to the proposed [packaging] use" and no structural reinforcement is required. (D.I. 193, tab B, col. 12:23-29). Therefore, the Court concludes that, without being blended with a structural polymer, a mixture of MXD6 and cobalt is capable of serving as an oxygen barrier but not as packaging material.

CONCLUSION

For the reasons discussed, the Court concludes that MXD6 is not a structural polymer within the meaning of the 1993 License

[4] Although the pre-1993 correspondence may be part of the matrix of fact, the Court concludes it is inadmissible parol evidence. Under English law, evidence of negotiations between the parties may not be used to interpret contracts. Investors Compensation Scheme Ltd., 1 W.L.R. at 913.

Agreement.[5] Consequently, the Court concludes that Continental's accused bottles are not within the rights licensed to Chevron and are within the rights retained by Crown.

The parties shall confer and submit a Proposed Order no later than December 3, 2002.

[5] Because the Court concludes that MXD6 is not a structural polymer, Crown's arguments based on the Sewell Exclusion and the doctrine of estoppel by convention need not be addressed.