2014-1431, -1462

IN THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

THE DOW CHEMICAL COMPANY,

Plaintiff-Cross-Appellant,

v.

NOVA CHEMICALS CORPORATION (CANADA)
AND NOVA CHEMICALS INC. (DELAWARE),

Defendants-Appellants.

Appeals from United States District Court for the
District of Delaware in No. 1:05-cv-00737-LPS,
Judge Leonard P. Stark.

CORRECTED REPLY AND RESPONSE BRIEF FOR DEFENDANTS-APPELLANTS NOVA CHEMICALS CORPORATION (CANADA) AND NOVA CHEMICALS INC. (DELAWARE)

Donald R. Dunner
Darrel C. Karl
Ronald A. Bleeker
Mark J. Feldstein
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.
901 New York Avenue, NW
Washington, DC 20001-4413

Attorneys for Defendants-Appellants
NOVA Chemicals Corporation (Canada)
and NOVA Chemicals Inc. (Delaware)

January 22, 2015

TABLE OF CONTENTS

Page

CERTIFICATE OF INTEREST i

TABLE OF CONTENTS ii

TABLE OF AUTHORITIES iv

I. INTRODUCTION 1

II. SUMMARY OF THE ARGUMENT 3

III. ARGUMENT 5

A. *Nautilus* Requires this Court to Vacate the Supplemental Damages Award Because It Was Based on Indefinite Claims 5

1. Judge Farnan's Jury Instruction and the Dow Panel Majority's Decision Were Rendered Using a Standard Now Repudiated by the Unanimous Supreme Court 5

2. Dow's Claims Are Indefinite as a Matter of Law Under the Intervening *Nautilus* Test 11

a. The Omission of Figure 1 Prevented Persons of Ordinary Skill in the Art from Learning the Scope of the Strain Hardening Limitation (SHC) 11

b. Persons of Ordinary Skill in the Art Would Not Know the Location Along the Curve at Which To Measure the Newly-Created Slope of Strain Hardening Coefficient 14

c. Persons of Ordinary Skill in the Art Would Not Be Able To Determine the Units in Which the Slope of Strain Hardening Is Measured 20

3. This Court Has Jurisdiction and the Duty To Dispose of the Indefiniteness Issue Under the Intervening Law Exception 22

B. The District Court Clearly Erred in Finding that Dow Had Satisfied the "Capacity" Prong of Panduit 27

1. Dow's Incumbency Argument Is Unsupported by Law 28

2. Dow's Hypothetical "Potential" Capacity Theory Is Legally Erroneous 30

3. The District Court's Factual Findings, Contradicted by the Record, Are Clearly Erroneous 32

a. Dow Made Less ELITE and More HDPE 32

b. Dow Could Not Acquire More Octene in 2010 33

c. Dow Deferred Production of ELITE Products and Had Limitations on How Much HDPE It Could Free Up in Certain Months 35

C. The District Court Committed Legal Error and Thereby Abused Its Discretion in Adopting Dow's Proposed Profit Margin By Allowing Dow To Use Estimated Ethylene Costs That Admittedly Overstated Dow's Margin on ELITE 35

DOW'S CROSS-APPEAL

I. COUNTERSTATEMENT OF THE CROSS-APPEAL ISSUE 40

II. COUNTERSTATEMENT OF FACTS RELATING TO WILLFULNESS AND ENHANCED DAMAGES 40

III. SUMMARY OF THE CROSS-APPEAL ARGUMENT 46

IV. CROSS-APPEAL ARGUMENT 47

A. Standard of Review 47

B. Dow Has Failed To Show that NOVA's Post-Judgment Conduct Was Objectively Reckless As A Matter of Law 48

V. CONCLUSION 52

TABLE OF AUTHORITIES

Page(s)

Federal Cases

Affinity Labs. Of Texas, LLC v. BMW North America, LLC,
783 F. Supp.2d 891 (E.D. Tex. 2011), *aff'd*, 2014 WL 3892903
(Fed. Cir. Aug. 11, 2014) (per curiam).....51

Amado Corp. v. Microsoft,
517 F.3d 1353 (Fed. Cir. 2008) 50

Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.,
682 F.3d 1003 (Fed. Cir. 2012) 47, 48

Bobby v. Bies,
556 U.S. 825 (2009).....26

Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.,
509 U.S. 209 (1993).....16

Carella v. Starlight Archery & Pro Line Co.,
804 F.2d 135 (Fed. Cir. 1986) 36

Cioffi v. Google Inc.,
2014 U.S. Dist. LEXIS 123760 (E.D. Tex. Aug. 28, 2014).....9

Cohesive Techs., Inc. v. Waters Corp.,
543 F.3d 1351 (Fed. Cir. 2008) 48

Curtiss-Wright Corp. v General Electric Co.,
446 U.S. 1 (1980).....24

Datamize, LLC v. Plumtree Software, Inc.,
417 F.3d 1342 (Fed. Cir. 2005) 9, 15, 19

Dow Chem. Co. v. Nova Chems. Corp. (Canada),
458 Fed. App'x 910 (Fed. Cir.),
cert. denied, 133 S. Ct. 544 (2012).....7-8, 11-12, 14-15, 18, 21-22, 41, 43-44

Every Penny Counts, Inc. v. Wells Fargo Bank, N. A.,
4 F. Supp.3d 1286 (M.D. Fla. 2014).....9

Exxon Research & Eng'g Co. v. United States,
265 F.3d 1371 (Fed. Cir. 2001) 6-10, 13, 21

Fresenius USA, Inc. v. Baxter Int'l, Inc.,
721 F.3d 1330 (Fed. Cir. 2013),
cert. denied, 134 S. Ct. 2295 (2014).....23, 24, 25

Grain Processing v. Am. Maize-Products Co.,
185 F.3d 1341 (Fed. Cir. 1999) 28, 29

Graves v. Kemsco Group, Inc.,
864 F.2d 754 (Fed. Cir. 1988) 35

Harper v. Virginia Dept. of Taxation,
509 U.S. 86 (1993).....26

Honeywell Int'l Inc. v. International Trade Comm'n,
341 F.3d 1332 (Fed. Cir. 2003) 16

i4i Ltd. P'ship v. Microsoft Corp.,
598 F.3d 831 (Fed. Cir. 2010) 50

Internal Revenue v. Sunnen,
333 U.S. 591 (1948).....26

Interval Licensing LLC v. AOL, Inc.,
766 F.3d 1364 (Fed. Cir. 2014) 9, 10, 15, 19, 20

John Simmons Co. v. Grier Bros. Co.,
258 U.S. 82 (1922).....24, 26

Joy Technologies, Inc. v. Flakt, Inc.,
954 F. Supp. 796 (D. Del. 1996).....36

Juicy Whip, Inc. v. Orange Bang, Inc.,
382 F.3d 1367 (Fed. Cir. 2004) 47

Loyalty Conversion Sys. Corp. v. Am. Airlines, Inc.,
2014 U.S. Dist. LEXIS 122181 (E.D. Tex. Sept. 2, 2014).....10

Marconi Wireless Tel. Co. v. United States,
320 U.S. 1 (1943).....24

Markman v. Westview Instruments, Inc.,
517 U.S. 370 (1996).....10

McClain v. Ortmayer,
141 U.S. 419 (1891).....10

Mendenhall v. Barber-Greene Co.,
26 F.3d 1573 (1994).....23, 25

Micro Chem., Inc. v. Lextron, Inc.,
318 F.3d 1119 (Fed. Cir. 2003) 29

Minco, Inc. v. Combustion Engineering, Inc.,
95 F.3d 1109 (Fed. Cir. 1996) 30

Modine Mfg. Co. v. Allen Group, Inc.,
917 F.2d 538 (Fed. Cir. 1990) 51

Nautilus, Inc. v. Biosig Instruments, Inc.,
134 S. Ct. 2120 (2014).....1-11, 15, 20, 22, 24, 26, 49, 52

Nova Chem. Corp. v. Dow Chem. Co.,
133 S. Ct. 544 (2012).....49

Oiness v. Walgreen Co.,
88 F.3d 1025 (Fed. Cir. 1996) 36, 39

Paice LLC v. Toyota Motor Corp.,
504 F.3d 1293 (Fed. Cir. 2007) 29

Paper Converting Machine Co. v. Magna-Graphics Corp.,
745 F.2d 11 (Fed. Cir. 1984) 35

Polaroid Corp. v. Eastman Kodak Co.,
1990 WL 324105 (D. Mass. Oct. 12, 1990),
amended, 1991 WL 4087 (D. Mass. Jan. 11, 1991) 31

Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.,
711 F.3d 1348 (Fed. Cir. 2013) 29

Read Corp. v. Portec, Inc.,
970 F.2d 816 (Fed. Cir. 1992) 51

In re Seagate Technology, LLC,
497 F.3d 1360 (Fed. Cir. 2007) (*en banc*) 47, 48

Stryker Corp. v. Intermedics Orthopedics, Inc.,
96 F.3d 1409 (Fed. Cir. 1996) 48

SynQor, Inc. v. Artesyn Techs., Inc.,
709 F.3d 1365 (Fed. Cir. 2013) 46, 51

Federal Statutes

28 U.S.C. § 1291 24

28 U.S.C. § 1292(c)(2).....25

28 U.S.C. § 1295 .....24, 25

35 U.S.C. § 283.....51

35 U.S.C. § 284.....51

Federal Rules of Civil Procedure

Rule 54(b).....22, 24, 25, 26

Other Authorities

18 Moore's Federal Practice - Civil § 132.02[2][f][1].....26

I. INTRODUCTION

The issue in this appeal is not whether the prior panel correctly decided the issue of indefiniteness under the governing law at the time of the prior appeal. Rather, the issue is whether the new standard adopted by a unanimous Supreme Court in *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014), requires a different result as a matter of law. Do the patents' claims, read in light of their specifications and the prosecution histories, inform those skilled in the art how to determine the newly-coined Dow SHC parameter "with reasonable certainty"? The intrinsic record lacks a promised Figure 1 describing where along the curve in the strain hardening region the parallel line defining the slope of strain hardening should be drawn to consistently distinguish between infringement and noninfringement relative to the 1.3 SHC limitation in the claims. Consequently, the intrinsic record fails to specify with "reasonable certainty" to those skilled in the art the required slope location to be used from among innumerable alternative locations. Because of this uncertainty, selection of location by a skilled practitioner is outcome-determinative.

Additionally, the patents-in-suit say the slope should be 1.3 or greater but never say 1.3 "what." Is it metric units (g/cm or Pascals), psi (as used in Table 3 for reporting film properties), or lb/in (as argued by Dow but never mentioned in the patents or intrinsic record)? Different units yield different claim scope, yet the

intrinsic record similarly fails to identify with "reasonable certainty" the particular units to be used from among multiple available units. These facts reveal a hopeless zone of uncertainty about the scope of Dow's claims, requiring Dow's claims to be held invalid for indefiniteness under *Nautilus*.

Dow has not successfully rebutted the challenges that NOVA has made to the district court's award of supplemental damages. The district court's finding that Dow had sufficient capacity to manufacture the patented product for NOVA's customers is clearly erroneous because (a) the undisputed evidence establishes that Dow was already operating at full capacity and (b) the court's finding was based on a legally untenable and entirely speculative argument that Dow would have taken steps to free up necessary capacity when (i) it could not have predicted the octene shortage that limited its ability to make more ELITE and (ii) it in fact made conscious business decisions to use existing capacity to increase its production of high-margin, non-infringing HDPE products during the supplemental damages period. The district court also committed legal error and thereby abused its discretion when it adopted Dow's inflated profit margin based on Dow's *projected* cost *estimates* in the face of undisputed evidence of Dow's higher *actual* ethylene costs.

As to Dow's cross-appeal, NOVA's post-judgment infringement was properly found not to have been willful on summary judgment. Dow failed to

prove by clear and convincing evidence that NOVA's post-judgment conduct was objectively reckless and, since the Federal Circuit's decision was not handed down until after Dow's patents had expired, there were no new facts regarding NOVA's conduct during the appeal that subsequently could have called the correctness of the district court's summary judgment ruling into question.

II. SUMMARY OF THE ARGUMENT

In light of *Nautilus*, this Court is obligated to reevaluate definiteness under the intervening law exception, which applies regardless of whether this Court's prior decision is treated as the law of the case or given collateral estoppel effect. It should then hold Dow's patents invalid, and vacate the supplemental damages judgment because the claims of the patents-in-suit, read in light of the specification and the prosecution history, fail to inform, *with reasonable certainty*, those skilled in the art of the scope of the invention. Dow's patent applications were filed with a missing figure that could have specifically informed the public (1) the location on the strain hardening curve where the slope should be measured and (2) the particular units that should be used in that measurement. As a result, the patents-in-suit fail to give proper notice as to what materials are within the scope of Dow's claims. Whether the accused products fall within the claims depends entirely upon an arbitrary selection both of undisclosed, nonstandardized slope locations and

measurement units from among innumerable location/unit combinations, particularly given the array of options available to and used by Dow.

By adopting the concept of "maximum slope," the Court in fact utilized an erroneous "narrowing construction" in order to salvage the validity of Dow's patent claims. Moreover, the *only* support for Dow's asserted "maximum" slope for the SHC limitation is conclusory extrinsic expert testimony not supported by the intrinsic record at the time that the patent applications were filed, as required by *Nautilus*, or even by the prior art.

If the Court rules in NOVA's favor on indefiniteness in light of *Nautilus*, it need not consider the merits of the supplemental damages issues. However, the district court's finding that Dow possessed the necessary capacity to manufacture ELITE products was clearly erroneous, requiring the lost profits component of the supplemental damages award to be vacated in light of undisputed evidence that Dow's plants were already operating at full capacity. Dow's novel incumbency theory is devoid of legal support in the context of a post-trial supplemental accounting. Dow's speculative option to sell high-margin ELITE at the expense of other products was negated by the particular market conditions in existence at the time and belied by the real-life business choices that Dow actually made during the supplemental damages period. In fact, Dow actually reduced or deferred some production of its ELITE products during that period in favor of increasing the

production of non-infringing, high-margin HDPE products that did not require the use of unavailable octene.

The district court also committed legal error and thereby abused its discretion when it adopted Dow's inflated profit margin based on Dow's *projected* cost *estimates* in the face of undisputed evidence of Dow's higher *actual* ethylene costs. When the accuracy of Dow's expert's calculations was called into question, it was incumbent upon Dow to revise its proofs to employ its own actual cost data, which it failed to do.

III. ARGUMENT

A. *Nautilus* Requires this Court to Vacate the Supplemental Damages Award Because It Was Based on Indefinite Claims

1. Judge Farnan's Jury Instruction and the Dow Panel Majority's Decision Were Rendered Using a Standard Now Repudiated by the Unanimous Supreme Court

As discussed in detail in Section A.3. below, this Court has jurisdiction to decide anew the indefiniteness issue in light of *Nautilus* under the intervening law exception. Moreover, it is clear that *Nautilus* changed the applicable test for determining the indefiniteness of patent claims. The *Nautilus* Court expressly eschewed the lenient "amenable to construction" (*i.e.*, possible to "ascribe *some* meaning" to the claims) and "insolubly ambiguous" (*i.e.*, no "narrowing construction" available) formulations that had been used by this Court. 134 S. Ct. at 2130 & n.9 (emphasis added). In their place, the Supreme Court unanimously

held the proper analysis was a strict one as to whether a patent's "claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, *with reasonable certainty*, those skilled in the art about the scope of the invention." *Id*. at 2124 (emphasis added). Moreover, "the definiteness inquiry trains on the understanding of a skilled artisan *at the time of the patent application*, not that of a court viewing matters *post hoc*." *Id*. at 2130 (emphasis added).

Dow contends that *Nautilus* did not change the legal standard in this case. Dow Br. at 33-39. NOVA disagrees.

At the outset, Dow does not deny that Judge Farnan's jury instruction employed the erroneous indefiniteness standard of *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001), that was expressly repudiated in *Nautilus*. *See* A12702 ("If the meaning of the claim is discernible, it is definite, even though the task may be formidable and even if the conclusion may be one over which reasonable persons will disagree."). Dow argues that this Court reviews indefiniteness under a *de novo* standard and was not bound to accept the district court's statement of the law. Dow Br. at 38 n.12. But this Court did not reject and, in fact, tacitly approved Judge Farnan's jury instruction in footnote 8 of the panel majority's opinion.

The panel majority's repeated citation of *Exxon* in its opinion makes clear that the *Exxon* standard was applied in its analysis of indefiniteness. Dow now

attempts to characterize these multiple citations to the *Exxon* standard as harmless "passing references" devoid of substantive import. Dow Br. at 37. As to the first *Exxon* citation, Dow crops the Court's language to lessen the impact of the panel majority's *Exxon* citations. After disposing of NOVA's arguments concerning the availability of other known choices of measurement techniques and measurement units that could have been employed, the panel majority stated:

> And in any event, the test for indefiniteness is not whether the scope of the patent claims is easy to determine, but whether "the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree...." *Exxon*, 265 F.3d at 1375.

Dow Chem. Co. v. Nova Chems. Corp. (Canada), 458 Fed. App'x 910, 920 (Fed. Cir.) ("*Dow I*"), *cert. denied*, 133 S. Ct. 544 (2012). This language quoted from *Exxon* is simply another way of saying that it is sufficient that "some meaning" could be ascribed to a claim by a person of ordinary skill in the art, thereby invoking the lenient "amenable to construction" test rejected by the *Nautilus* Court.

Dow attempts to backpedal by arguing that "even if that portion of *Exxon* is no longer good law, it is irrelevant here because this Court rejected Nova's argument due to lack of evidence." Dow Br. at 37-38. However, as discussed in Section A.2 below, the intrinsic evidence did not specify either the location on the strain hardening curve where slope was to be measured or the units for that measurement, and the extrinsic evidence in fact reveals multiple locations and

units had been used, thus creating a zone of uncertainty that renders the patent claims indefinite under *Nautilus*. Dow also attempts to spin the "reasonable persons will disagree" language to simply refer to a dispute between parties and experts over a *Markman* claim construction. Dow Br. at 38 n.10. The quote, however, is clearly directed to the *Exxon* test for indefiniteness, which is necessarily directed to persons of ordinary skill in the art.

The *Dow* panel majority again cited *Exxon* in holding "[t]o be indefinite, a claim term must be such that 'no narrowing construction can properly be adopted' to interpret the claim." 458 Fed. App'x at 917. Dow now contends that the panel majority did not resort to any "narrowing construction." Dow Br. at 38. In fact, it did, by limiting the location on the strain hardening curve used to determine its slope according to the "maximum slope" method as opposed to any of the other four methods that had been used internally at Dow. Likewise, even as to English units, the panel majority limited the units to pounds per inch, as opposed to other English units disclosed in the Dow patents. As discussed in Section III.A.2. below, however, no informed and confident choice can be possible among the contending methods and units because the claims, when read in light of the specification and prosecution history, fail to objectively apprise those of ordinary skill in the art as to the scope of the Dow's claims.

Dow downplays the significance of the "narrowing construction" language of *Exxon* in footnote 9 of *Nautilus* by arguing that the Supreme Court was only focusing on the "insolubly ambiguous" language of *Exxon*. Dow Br. at 38 n.11. Yet, the two phrases are closely related, as it is precisely a narrowing construction that this Court and other courts have employed in the past to avoid finding a claim "insolubly ambiguous." *See, e.g.*, *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005)*; Exxon*, 265 F.3d at 1375; *Every Penny Counts, Inc. v. Wells Fargo Bank, N. A.*, 4 F. Supp.3d 1286, 1291 (M.D. Fla. 2014).

Recently, in *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014), this Court acknowledged that *Nautilus* rejected the "insolubly ambiguous" and "amenable to construction" approaches and reiterated that "it is not enough, as some of the language in our prior cases may have suggested, to identify "*some standard* for measuring the scope of the phrase." *Id*. at 1370-71 (quoting *Datamize*, 417 F.3d at 1342). The Court found insufficient guidance in the written description of the asserted patents for a "purely subjective" claim phrase and refused to use a single example in a lengthy patent specification "to serve as the exclusive definition of a facially subjective claim term." *Id*. at 1371, 1373; *see also Cioffi v. Google Inc.*, 2014 U.S. Dist. LEXIS 123760, at *61 (E.D. Tex. Aug. 28, 2014) (rejecting plaintiff's "narrowing construction" under *Exxon* "because neither the specification nor the prosecution history sets forth any

standard for measuring the scope of that term"); *Loyalty Conversion Sys. Corp. v. Am. Airlines, Inc.*, 2014 U.S. Dist. LEXIS 122181, at *20 (E.D. Tex. Sept. 2, 2014) (claim susceptible to two conflicting interpretations held not to inform those skilled in the art with reasonable certainty).

The panel majority's decision did not analyze the patent claims under the *Nautilus* "reasonable certainty" standard. This is understandable, since the Supreme Court had not as yet enunciated its new test for indefiniteness. Nonetheless, the now-discarded *Exxon* standard that it employed allowed selection, among multiple possible slopes and units, diametrically opposed to the strict *Nautilus* standard that does not permit claim scope to be something about which reasonable minds can differ and instead requires the patent "be precise enough to afford clear notice of what is claimed, thereby appris[ing] the public of what is still open to them." 134 S. Ct. at 2129 (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996) and quoting *McClain v. Ortmayer*, 141 U.S. 419, 424 (1891)) (internal quote marks omitted); *see also Interval Licensing*, 766 F.3d at 1371 ("The claims, when read in light of the specification and the prosecution history, must provide objective boundaries for those of skill in the art."). Consequently, as discussed in detail in the following subsections, Dow's claims are indefinite as a matter of law under the new strict "reasonable certainty" standard.

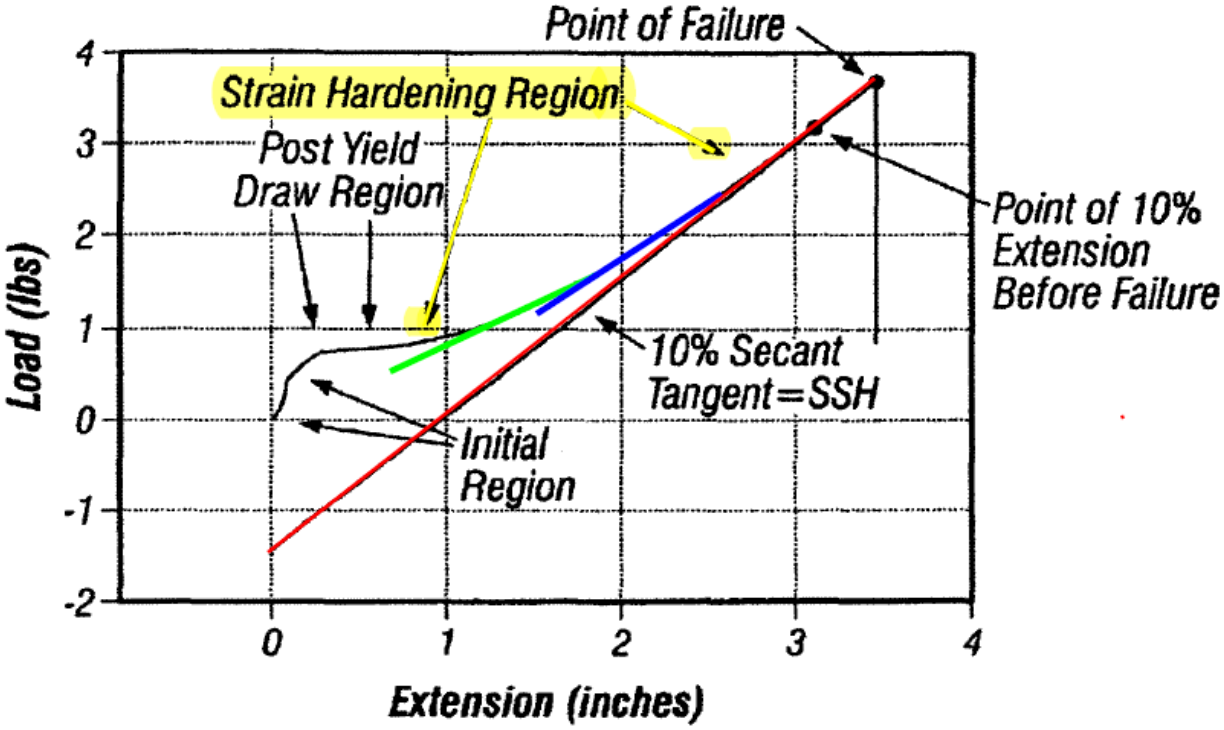
2. Dow's Claims Are Indefinite as a Matter of Law Under the Intervening *Nautilus* Test

a. The Omission of Figure 1 Prevented Persons of Ordinary Skill in the Art from Learning the Scope of the Strain Hardening Limitation (SHC)

Dow contends that "the patents in suit merely state that Figure 1 was intended to depict 'the various stages of the stress/strain curve,' but they do not necessarily suggest that Figure 1 would depict the specific point along the curve at which the slope should be measured." Dow Br. at 40 (citing *Dow I*, 458 Fed. App'x at 918 n.11). The Dow patent specifications, however, are much more precise, stating that Figure 1 would show "the various stages of the stress/strain curve *used to calculate the slope of strain hardening*," *i.e.*, those specific portions of the entire stress/strain curve which the inventors have determined should be used when calculating SHC. (A307 at col. 6, lns. 40-43 (emphasis added).) In addition, they state that "[t]he slope of strain hardening is calculated from the resulting curve by drawing a line parallel *to the strain hardening region* of the resulting stress/strain curve" (*Id.* at lns. 26-28 (emphasis added).) Unfortunately, neither this Court nor any person of ordinary skill in the art can know with reasonable certainty what Figure 1 would or would not have disclosed because it is ***missing***. Dow's patent specifications should have shown the parallel line and the location where it meets the strain hardening curve to enable those skilled in the art

to ascertain the scope of the claimed inventions since such "curves do not have a single slope." *Dow I*, 458 Fed. App'x at 919.

Moreover, the obvious ambiguity in Dow's (and the panel majority's) position is shown by Figure 2 in Dow's related, co-pending '398 patent, which has similar SHC claim limitations. (A6618 (Fig. 2 (green and blue colors added to show illustrative examples of other parallel lines/slopes); A6626 at col. 10:64 - A6627 at col. 11:4.) Unlike the patents-in-suit, this patent contains a Figure 2 showing "the various regions of a typical tensile curve ... and *the particular region* used to determine the slope of strain hardening [(SSH)]." (A6622 at col. 2:45-49 (emphasis added).)



The panel majority did not address this figure in its opinion under the *Exxon* standard. However, as can be seen, the strain hardening region encompassed by the two yellow arrows comprises a substantial portion of the entire stress/strain curve and the slope of that region is highly variable. Rather than teaching Dow's expert's unsubstantiated "maximum" slope location, the figure instead discloses the use of the 10% secant tangent location to determine slope, one of the four locations that Dow had used internally at the time. Figure 2 also specifies the units used (pounds per inch). Moreover, it "depict[s] the specific point along the curve at which the slope should be measured" (the 10% Secant Tangent). This is further evidence that (1) there was no standard convention establishing where on the curve to measure the slope of strain hardening; (2) the slope can be realistically measured in more than one way; and (3) the patents-in-suit are silent as to the method and units, when this information could have been easily provided by the missing figure. Thus, because Dow withheld the promised figure from the patents-in-suit, no reasonable certainty in fact can exist as to how the slope of strain hardening is to be measured.

Dow also relies upon the panel majority's finding that NOVA's own witness was familiar with stress/strain curves. Dow Br. at 40. Of course, one skilled in the art could physically locate and calculate the "maximum slope" on a stress/strain curve if the artisan knew that such a "maximum slope" approach was called for by

the patents-in-suit. That same individual could also determine the slope of the strain hardening for the SHC coefficient on the very same stress/strain curve by any of the other four methods of record, including the 10% secant tangent method. But that begs the question whether Dow's expert's "maximum" slope location approach was the location *dictated* by the patents, as discussed below. One thing is certain: the "maximum slope" approach is never disclosed in the patents-in-suit or their prosecution histories. Nor is it found in the prior art for SHC. *Dow I*, 458 Fed. App'x at 918 (SHC was a "new Dow construct, not previously known in the art.").

b. Persons of Ordinary Skill in the Art Would Not Know the Location Along the Curve at Which To Measure the Newly-Created Slope of Strain Hardening Coefficient

The *Dow* panel majority recognized that the "strain hardening region" of a stress/strain curve generated for the claimed polymer would "reveal some curvature (when graphed)" and such "curves do not have a single slope." 458 Fed. App'x at 919. Indeed, as noted above, Figure 2 in Dow's '398 patent shows that the strain hardening region is curved and has multiple slopes. That is the very reason why guidance is required as to where to measure the slope of strain hardening.

Dow's expert, Dr. Hsiao, conclusorily testified that "one of ordinary skill in the art would know that the slope of the hardening curve would have to be

measured at its maximum value, which reflects the best tensile performance of the material." *Dow I*, 458 Fed. App'x at 919. Yet "best" tensile performance is itself a subjective determination that depends upon the customer's desired tensile properties for the final product and, in fact, varies from product to product (A2384-85; A3351-54). *Cf. Interval Licensing*, 766 F.3d at 1371, 1374 (finding claim phrase "unobtrusive manner" that is "highly subjective" and that "depends 'on the unpredictable vagaries of any one person's opinion'" to fail to provide reasonable certainty under *Nautilus*) (quoting *Datamize*, 417 F.3d at 1350).

Dow submitted no evidence whatsoever to substantiate Dr. Hsiao's litigation-induced "maximum slope" location approach. Dr. Hsiao, however, freely admitted that "the only thing [the jury] can rely on is [his] word that that's what a person of ordinary skill in the art would have done[.]" (A2518.) He also admitted that he was not made privy to various other internal Dow approaches for determining the slope of strain hardening, and that he never interviewed anyone who had actually practiced the invention at the time. (A2565.)

Dr. Hsiao likewise conceded that his opinions were not supported by "a single reference that used the term maximum slope as the way to calculate slope of strain hardening" or by "a single document showing that a person skilled in the art actually would have used maximum slope[.]" (A2517.) Nor were his opinions supported by any reference showing where the slope of strain hardening was to be

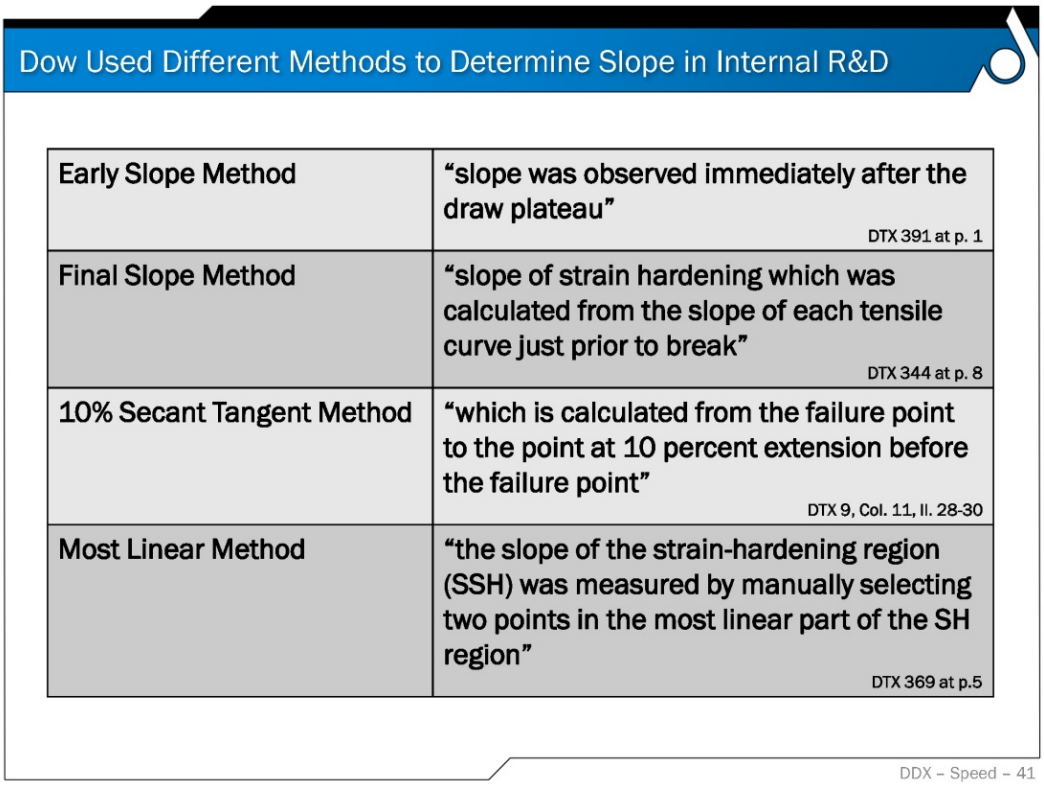
measured in and around 1993, the time of the invention (A2565). Dr. Hsiao, in fact, admitted that "[t]here are no documents that [the jury] can rely on to support [his] testimony that a person of ordinary skill would have used the maximum slope[.]" (A2518.)

Dr. Lai, one of the Dow co-inventors of the patents-in-suit, similarly admitted that his research reports made no reference to the "maximum slope" approach and was unable to point to any communications with any other Dow scientists referring to the use of a maximum slope to measure the slope of strain hardening. (A1403-05.) It is one thing for an expert to opine on what one of ordinary skill in the art at the time of the invention knew with reasonable certainty; it is entirely another thing to give weight to extrinsic testimony that an expert (or inventor) has himself admitted cannot be substantiated in any way at the time that the invention was made and that is also at odds with evidence of Dow's own work at the time. *Honeywell Int'l, Inc. v. International Trade Comm'n*, 341 F.3d 1332 (Fed. Cir. 2003) (expert testimony on indefiniteness is insufficient where intrinsic evidence failed to provide "guidance as to what one of ordinary skill in the art would interpret the claim to require."); *see also Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993) ("When an expert opinion is not supported by sufficient facts to validate it in the eyes of the law, or when

indisputable record facts contradict or otherwise render the opinion unreasonable, it cannot support a jury's verdict.").

The patents-in-suit were the very first Dow patents to use the Dow-coined "SHC" parameter. No one skilled in the art at that time had any way of knowing what the inventors actually intended because Figure 1 was left out of the patents. If "maximum" slope was intended, then the patents could have easily said so.

On the other hand, Dow actually used internally four other methods to determine SHC:



(A6829; *see also* A3348-49; A6627, col. 11:8-11; A6662; A6704; A6769; A6831, cells 6-B, 10-D, 14-B.)

At pages 45-46 of its brief, Dow contends that these four methods are in fact "simply a different way of determining maximum slope." Dow, however, provides no citation whatsoever for this bald assertion, which makes no sense. Indeed, Dr. Hsiao testified that, while different, his maximum slope method will always be higher than these other methods. (A2564; A2566-70; A2579-82.) For example, the only way for the "early slope method" to be the same as the other three methods is if the "curve" is a straight line (*i.e.*, single slope) immediately after the drawing plateau. This Court has already recognized that this is not the case. *Dow I*, 458 Fed. App'x at 919 ("curves do not have a single slope").

Dow next tries to dispute NOVA's contention that Dow used a different technique from "maximum slope" location to generate SHC data in a PTO declaration filed to overcome a prior art rejection and that, had Dow actually used the "maximum slope" method, Dow's test results would have instead yielded SHC values for prior art resins that met and exceeded the claimed threshold of 1.3. Dow Br. at 42. Although Dow contends that NOVA's expert, Mr. Fuller, admitted that he changed Dr. Hsiao's method, it was established on redirect that Mr. Fuller had scaled everything appropriately in order to replicate the technique that Dr. Hsiao used to generate data for Dow's PTO declaration. (A3596-98.) Dr. Hsiao did not challenge this testimony.

Dow also maintains that there is no evidence that anyone ever used the "early slope method." Dow Br. at 47. One example where Dow used this method, however, can be seen in DTX- 391 (Dow internal strain hardening coefficient test data), where the "slope was observed immediately after the draw plateau," again confirming that different materials can exhibit very different stress/strain curves. (A6831 at p.1, cell 10-D, 14-B.)

Given that multiple other approaches were known and used by Dow, combined with the omission of the promised Figure 1, it cannot be said that the inventors informed those in the field with "reasonable certainty" to specifically use the admittedly undisclosed "maximum" slope location approach. *See Interval Licensing*, 766 F.3d at 1370-71, 1374 (merely identifying "some standard" for measuring the scope of a highly subjective claim phrase held insufficient to provide one of ordinary skill in the art with reasonable certainty about the scope of the claim) (quoting *Datamize*, 417 F.3d at 1351).

The reality is that the scope of Dow's claims is indeterminable, given that several different approaches are available as to where the parallel line is drawn and what units are selected. For this reason, no informed and confident choice is possible out of the contending methods. By failing to give clear notice to the public about the proper scope of its claims, Dow's reliance on the "maximum slope" method is nothing more than a *post hoc* attempt to ascribe some meaning to

hopelessly unclear claim limitations, the very evil rejected by the Supreme Court in *Nautilus*. 134 S. Ct. at 2130; *see also Interval Licensing*, 766 F.3d at 1373.

c. Persons of Ordinary Skill in the Art Would Not Be Able To Determine the Units in Which the Slope of Strain Hardening Is Measured

Dow relies upon extrinsic evidence in the form of a user manual for an Instron Tensile Tester to claim a disclosure of units for load and elongation in pounds and inches. Dow Br. at 48. The patents-in-suit disclose neither the units nor the manual. Further, the undisclosed manual does not resolve the question whether such units should be converted to metric units before calculating SHC. Nor does Dow dispute that the Instron Tensile Tester had a setting to permit the operator to report the output measurement in English, metric, or SI units. (A2685-86; *see also* A3489-90.)

Dow also does not deny that the record reveals a lack of a standard convention in the field, as evidenced, *inter alia*, by Dow's internal work – never considered by Dr. Hsiao (A2565) – that employed metric units such as megapascals ("MPa") and kilograms per square inch ("ksi") versus strain. *See, e.g.*, A1477; A1539-42; A3355; A6649; A6674; A6816. Dow's later '866 patent uses the identical SHC parameter yet, as Dow concedes, subsequently "*specifically* converts" the English units generated by the Instron Tensile Tester "to metric units [MPa] for purposes of reporting the tensile measurements (including SSH). Dow

Br. at 51 (emphasis is original); *see also* A2612-15; A6867 at col. 50:Table 4 ("Slope SH Mpa"). Moreover, Dow's own infringement tests were measured by Dow in metric units, which yielded non-infringing SHC values, and were only converted after-the-fact by Dow's expert to "lb/in" to yield values ≥1.3. (A2590-93; A2679-80; A3496-500; A3518-21; A3592-93; A6827-28.)

The *Dow* panel majority found the Instron Tensile Tester manual "consistent" with the information in Table 3 of the patents-in-suit. 458 Fed. App'x at 920. Table 3, however, reported the tensile properties of the ***final film***, not the ***Component A*** recited in the claims. (A241 at col. 14, lns. 6-7.) In contrast, Table 1 of the patents is the only table relevant to SHC and component A, and it refers ***only*** to ***metric*** units. (A238.)

Moreover, even Table 3 does not mandate what *specific* English units should be used in measuring the slope of strain hardening. There is simply no way to divine with reasonable certainty if pounds per inch are required (as Dow maintains), if the stress units of pounds per square inch (psi) are required (as appear in Table 3), or if some other type of English or metric units are required, creating a hopeless zone of uncertainty about the scope of Dow's claim limitations.

The *Dow* panel majority also held under the *Exxon* standard that "Nova has not presented any evidence that shows an equation, for a proprietary coefficient indeed, may not combine variables measured in different measurement systems."

458 Fed. App'x at 920. NOVA, however, relied upon evidence in the earlier appeal that it would have been both uncommon and highly irregular to mix English units for one term with metric units for another term in a single equation. (A3499-500; A3576-77; NOVA 2010-1526 Blue Brief at 31.)

In the end, it does not matter whether units are sometimes mixed. The question under *Nautilus* is whether, given the metric units present in the SHC equation, the metric units in Table 1, the missing Figure, and the lack of a standard convention for reporting the new Dow slope of strain hardening units in the field, one can say with reasonable certainty that specific English units (lb/in, not psi) were necessarily intended. The zone of uncertainty that has arisen concerning the scope of Dow's patent claims could have been easily avoided had Dow specified the units of SHC in its patent specification or included this essential information in the missing Figure 1, as it did in its related and co-pending '398 patent. Under the circumstances, it is Dow, and not NOVA or the public at large, that should suffer the consequences of such uncertainty.

3. This Court Has Jurisdiction and the Duty To Dispose of the Indefiniteness Issue Under the Intervening Law Exception

Dow contends that this Court lacks jurisdiction to reevaluate indefiniteness because the prior appeal involved a Rule 54(b) final judgment that was affirmed. Dow Br. at 30-33. Dow's argument fails for two reasons.

First, Dow confuses a judgment which is final for purposes of appeal with a final judgment that ends the litigation.

As discussed in *Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 721 F.3d 1330 (Fed. Cir. 2013), *cert. denied*, 134 S. Ct. 2295 (2014), to be sufficiently final so as to prevent the application of intervening law to the pending suit, a litigation must be entirely concluded. *Id.* at 1341 (citing *Mendenhall v. Barber-Greene Co.*, 26 F.3d 1573, 1580 (1994). As long as the litigation is still ongoing in some meaningful respect, even the decision of this Court in a prior appeal can be affected by intervening developments.

In the present case, both the district court and the parties were aware that an affirmance by this Court in the prior appeal would not end the litigation. Unless NOVA prevailed in the prior appeal, a supplemental trial would be needed for (a) NOVA's pre-judgment sales that took place in 2010 but which were not included in the original damages trial and (b) NOVA's post-judgment sales that occurred after entry of judgment. Discovery and trial for supplemental damages were stayed by the district court pending resolution of the prior appeal along with the issues of willfulness and NOVA's antitrust counterclaim, which previously had been bifurcated for trial. (A15096.) Consequently, it cannot seriously be argued that the litigation had entirely concluded after the prior appeal.

It is precisely because there was an antitrust counterclaim, a willfulness claim, and supplemental damages to be determined that the district court's prior judgment and orders were interlocutory. Moreover, Rule 54(b) certification is a recognized exception that permits an immediate interlocutory appeal that would not otherwise be possible under 28 U.S.C. § 1291 (and, for the Federal Circuit, 28 U.S.C. § 1295). *See Curtiss-Wright Corp. v General Electric Co.*, 446 U.S. 1, 5 (1980).

The *Fresenius* Court expressly noted that, in *John Simmons Co. v. Grier Bros. Co.*, 258 U.S. 82, 88 (1922), "even though there had been an appellate decision *entirely resolving* the patent infringement claims, because there had not yet been a final judgment on the unfair competition claims, the Supreme Court's intervening decision was binding as to the infringement claims." 721 F.3d at 1343 (emphasis added); *see also Marconi Wireless Tel. Co. v. United States*, 320 U.S. 1, 47 (1943) ("Hence the court did not lack power at any time prior to entry of its final judgment at the close of the accounting to reconsider any portion of its decision *and reopen any part of the case*.") (emphasis added). Similarly, in the case at bar, there had not yet been a final judgment on NOVA's antitrust claims (or any ruling on willfulness or supplemental damages). Thus, the Supreme Court's intervening decision in *Nautilus* should be similarly binding as to the infringement claims.

Dow attempts to distinguish the cases cited in NOVA's brief on the ground that they involved an initial interlocutory appeal followed by a second appeal or an initial judgment that was vacated and remanded for further proceedings, whereas NOVA appealed a Rule 54(b) final judgment. The cases, however, do not indicate that the statutory authority for the prior appeal has any bearing on the question. Indeed, the *Fresenius* Court rejected the defendant's attempts "to distinguish *Mendenhall* on the grounds that the first *Mendenhall* appeal was taken as an interlocutory appeal under section 1292(c)(2), whereas the first appeal here was taken under section 1295, which provides for appeals from 'final' judgments." 721 F.3d at 1344. For Dow's part, it cites no case to the contrary. Indeed, none of the cases cited at pages 30-31 of Dow's brief involve the question of giving retroactive effect to intervening, controlling Supreme Court law in a pending case.

Second, to the extent Dow's argument regarding Rule 54(b) is an attempt to preclude consideration of indefiniteness as a matter of collateral estoppel, it fails because the intervening law exception applies regardless whether Dow relies on the law of the case doctrine or the collateral estoppel effect of a final judgment. The Supreme Court has held that "collateral estoppel must be used with its limitations carefully in mind so as to avoid injustice" and "must be confined to situations where the matter raised in the second suit is identical in all respects with that decided in the first proceeding and where the controlling facts and *applicable*

legal rules remain unchanged." *Internal Revenue v. Sunnen*, 333 U.S. 591, 599-600 (1948) (emphasis added). Thus, even if the Rule 54(b) judgment had been final in all respects, it would not preclude NOVA from challenging the supplemental damages judgment based on the intervening decision in *Nautilus*. *See Bobby v. Bies*, 556 U.S. 825, 836 (2009) ("[E]ven if the core requirements for issue preclusion had been met, an exception to the doctrine's application would be warranted due to this Court's intervening decision."); 18 Moore's Federal Practice - Civil § 132.02[2][f][1] ("Even when an issue has been actually litigated and determined by a valid and final judgment, … relitigation of the issue in a subsequent action between the parties is generally not precluded if there has been an intervening change in the governing law.").

Dow's argument that indefiniteness "was not raised or decided in the course of the supplemental-damages proceedings" (Dow Br. at 30-31) is irrelevant. *Nautilus* "must be given full retroactive effect in all cases still open on direct review," *Harper v. Virginia Dept. of Taxation*, 509 U.S. 86, 97 (1993), and there could be no waiver because *Nautilus* was not decided until after the supplemental damages proceedings had concluded, *see John Simmons Co.*, 258 U.S. at 91 (no waiver of right to benefit from intervening decision where plaintiffs "accepted an adverse decision as to a part of their suit, not open to further appeal at their

instance, and proceeded in the orderly mode to pursue their suit as to the rest" until the intervening change in law).

B. The District Court Clearly Erred in Finding that Dow Had Satisfied the "Capacity" Prong of Panduit

Dow acts as if the supplemental damages period was nothing more than a natural extension of the original damages period that requires equivalent treatment. The reality, however, is that circumstances were very different for Dow in the 2010-2011 time period. Unlike in the pre-2010 period covered by the jury trial when Dow had excess production capacity, Dow concedes that its plants were running "flat out" for much of the 2010-2011 supplemental damages period (Dow Br. at 59) and does not dispute its expert's admission that Dow had zero "excess Elite capacity" for its Fort Saskatchewan plant and only 42 million pounds of "excess Elite capacity" at its Plaquemine facility (and that only in late 2011). (A12348-50.) Moreover, an unforeseen octene shortage developed in 2010, limiting the volume of products that could be made that required the use of octene ─ which included Dow's patented ELITE products.

Faced with these facts, Dow adopted an entirely new damages theory from what it had advanced in the first trial, namely, that it would have been the incumbent supplier to all of NOVA's customers in 2009 "but for" NOVA's infringement, that it would have taken appropriate steps to secure larger volumes of octene, and that it could have ceased producing low-margin HDPE on short

notice to free up production capacity for high-margin ELITE. As discussed below, these "incumbency" and "potential capacity" theories are legally unsupported and the facts that Dow relies upon in their support are clearly erroneous.

1. Dow's Incumbency Argument Is Unsupported by Law

The sole case cited by the district court in alleged support of its adoption of Dow's incumbency theory is inapposite. *Grain Processing v. Am. Maize-Products Co.*, 185 F.3d 1341 (Fed. Cir. 1999), was not a supplemental damages case and did not address the issue of incumbency in a post-trial supplemental accounting setting. In fact, *no lost profits were awarded* in that case, let alone on an "incumbency" theory. *Id.* at 1356.

Dow maintains that, "but for" NOVA's infringement, it would have been the incumbent, that it would have had sufficient potential capacity, and it would therefore have captured 72% of all of NOVA's SURPASS sales in the 2010-2011 period. Dow Br. at 54-57. But if Dow wants to rely on *Grain Processing*'s hypothetical reconstruction of the market, then the relevant start date would be before March 2002 – prior to NOVA's entry in the market for the patented product. Under this theory, Dow's lost profits in the 2010-2011 time period would be entirely speculative on the given record. There is no way Dow could have foreseen its lack of production capacity in 2010-11 or the 2010 octene shortage eight years

in advance. It apparently did not foresee the impact of the octene shortage even in its fall 2009 planning meeting for 2010. (A12290; A14005.)

Instead, Dow wants the end of 2009 to be the relevant start date so it can rely on "potential capacity" and preclude consideration of real world events that happened in 2010-2011. But to do so, it has to acknowledge actual market reality prior to 2010, namely, that NOVA was the incumbent selling SURPASS products. Indeed, Dow's position is at odds with the position it takes elsewhere at page 69 of its brief, namely, that the reasonable royalty hypothetical negotiation takes place at the beginning of the supplemental damages period. *See Paice LLC v. Toyota Motor Corp.*, 504 F.3d 1293, 1317 (Fed. Cir. 2007) (Rader, J., concurring) ("[P]re-suit and post-judgment acts of infringement are distinct, and may warrant different royalty rates given the change in the parties' legal relationship and other factors."). It is also rebutted by the admission from Dow's own expert, Mr. Hoffman, who conceded that Dow "sure wasn't" the incumbent and that "there were no actual Dow sales they would have been walking away from." (A12378.)

Dow's incumbency theory has never been adopted by this or any other court. The only cases cited by Dow besides *Grain Processing* are *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1379-80 (Fed. Cir. 2013), and *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1125 (Fed. Cir.

2003). Dow Br. at 54-55. Neither case was a supplemental damages case and neither one addressed the issue of incumbency.

Dow cites the district court's observation that NOVA's approach would give it the benefit of substantially reduced damages due to the happenstance that the jury trial took place during, and not after, the infringement. A23; Dow Br. at 57. But both Dow and the district court ignored Dow's prior concession that the jury's $57.5 million lost profits award in 2010 included compensation for lost "customer relations in that market segment." (A12739.) In other words, Dow has already been compensated not only for the profits it lost in the 2002-2009 time period, but also for the incumbency effect of not having been locked in as the supplier for NOVA's customers during that period. Dow should not be permitted to recover again for NOVA being the incumbent prior to 2010 for which Dow has already been fully compensated. *Minco, Inc. v. Combustion Engineering, Inc.*, 95 F.3d 1109, 1121 (Fed. Cir. 1996).

2. Dow's Hypothetical "Potential" Capacity Theory Is Legally Erroneous

Dow misconstrues the argument at pages 57-59 of NOVA's opening brief as being one that allegedly asserts that "Dow needed to show that it had idle capacity to meet increased demand for its ELITE product." Dow Br. at 57. Rather, NOVA contended that it was error for the district court to accept Dow's entirely theoretical and speculative preference to sell high-margin ELITE at the expense of other

products, which is belied by the particular market conditions in existence at the time and the real-life decisions that Dow actually made during the supplemental damages period.

Dow's criticism of the cases cited by NOVA was that they were merely two decades-old unpublished district court decisions that have not been relied upon by the appellate courts. Dow Br. at 57. Dow itself cites no relevant decisions of ***any*** vintage to support its hypothesis, and provides no substantive criticism of any aspect of the directly pertinent analysis in *Polaroid Corp. v. Eastman Kodak Co.*, 1990 WL 324105 (D. Mass. Oct. 12, 1990), *amended*, 1991 WL 4087 (D. Mass. Jan. 11, 1991).

Significantly, the *Polaroid* court specifically rejected the contention that the patentee in that case had adequately proved lost profits by showing sales that it "theoretically could have taken steps to produce." It held that such a "could have" argument "renders the [Panduit] manufacturing capability requirement meaningless" because "[a] patentee can concoct a scenario to achieve the necessary result." *Id*. at *40. Likewise, Dow fails to explain why it was inappropriate for the *Polaroid* court to look at concrete factual considerations about what "Polaroid reasonably and realistically could have done and what they would have done" as distinct from what might have been theoretically possible. *Id.* at *41-42, *44-45.

It is one thing to assert that potential capacity exists when it is consistent with the available facts. It is quite another to give paramount weight to bald assertions that Dow would have planned differently when its own actions contradict those assertions, as discussed below.

3. The District Court's Factual Findings, Contradicted by the Record, Are Clearly Erroneous

Dow raises a litany of scattershot arguments in an attempt to support the district court's findings. Most are unavailing on their face, were already adequately addressed at pages 25-33 and 57-60 of NOVA's opening brief, and need not be repeated here. Some of the concessions in Dow's brief, however, bear specific mention, and NOVA's rebuttal to certain of Dow's positions may be useful to the Court.

a. Dow Made Less ELITE and More HDPE

Dow concedes that "changed circumstances" due to an octene shortage caused Dow to shift to making *less* ELITE and *more* HDPE at various times during the supplemental damages period. Dow Br. at 60. Dow downplays this problem by claiming that the shifts were temporary, lasting weeks, not years. But the supplemental damages period in question only lasted 22 months, and the octene shortage necessarily affected a substantial portion of production during 2010 and early 2011.

Dow alleges that it would not have turned down a high-margin ELITE sale in order to make a low-margin HDPE sale because the former "would be more profitable." (A12216.) Dow, however, does not dispute the evidence cited at page 30 of NOVA's opening brief regarding the importance of selling HDPE to Dow's "high profit" food and beverage industry customers. In fact, one of Dow's witnesses admitted that HDPE for food and beverage products had a "higher margin" and so Dow "would like to sell those first." (A12104.) Dow clearly had a financial motivation to make HDPE for certain of its customers and its theory that it would necessarily have switched to produce ELITE rather than HDPE is clearly erroneous.

b. Dow Could Not Acquire More Octene in 2010

Dow admits that "it would have been unable to secure additional octene *in the real-world conditions* that prevailed in 2010." Dow Br. at 61. Dow maintains, however, that that is irrelevant in its hypothetical "but for" construct because it would have simply planned in advance to acquire the necessary octene needed to support additional ELITE production. Dow, however, could not have predicted that an octene shortage was imminent and so would not have planned to contract for and stockpile additional amounts of octene in 2008-2009 to avoid octene supply disruptions in 2010-11. Instead, Dow actually elected to reduce the size of its octene contract near the end of 2009. (A12290.)

Dow contends that this is an impermissible new argument on appeal. Yet, Dow's ability to acquire the necessary octene needed to support additional ELITE production was one of the central issues argued below. (A12020, A12038-39, A15278-80.) Moreover, NOVA specifically argued below that Mr. Hoffman's "waterfall" theory did not reflect Dow's "actual practices" or take Dow's "actual planning considerations" into account, or other real world considerations such as NOVA's actual customers and their locations and grade volumes. (A15335-37; A15280-81.)

Dow also concedes that some Dow customers would not accept the substitution of a hexene-based DOWLEX for an octene-based DOWLEX. Dow Br. at 61-62. Thus, while Dow might have had the theoretical ability to free up octene for ELITE by switching customers to hexene resins, this was not a realistic option for many customers. For example, Dow does not dispute that it stopped offering an octene-based LLDPE and forced a hexene-based product on Paragon, which "set Paragon way back for the year and clearly frustrated [its] ability to make a profit." (A12386-87; A13140 ¶ 2.) While Dow's expert opined that the reason Paragon stopped buying from Dow was because of the availability of NOVA's infringing product (A12387-88), there is nothing in the record to back up his assertion.

c. Dow Deferred Production of ELITE Products and Had Limitations on How Much HDPE It Could Free Up in Certain Months

Aside from its flawed incumbency theory, Dow's brief does not dispute that, when faced with a clear opportunity to sell more ELITE, Dow "postponed production" of a new ELITE grade requested by AEP until the end of July 2011 due to "[t]ight capacity at [Dow's] Plaquemine" production facility. (A13190; A12439-40.)

Moreover, Dow's brief does not dispute that Mr. Hoffman also failed to address production planning on a monthly basis, as Dow actually does (*see*, *e.g.*, A12227-28; A13978; A12476), or that for five months in the relevant time period Dow had insufficient HDPE production that could be freed up to make room for enough ELITE to match Dow's pro-rata market share of NOVA's SURPASS sales (A12476-78; A14057).

C. The District Court Committed Legal Error and Thereby Abused Its Discretion in Adopting Dow's Proposed Profit Margin By Allowing Dow To Use Estimated Ethylene Costs That Admittedly Overstated Dow's Margin on ELITE

Dow contends that the district court did not commit legal error by determining Dow's hypothetical profit margin on the basis of *estimated* (instead of actual) cost figures because prior Federal Circuit cases had affirmed lost profit awards based on estimated costs. Dow Br. at 64-65. However, neither *Graves v. Kemsco Group, Inc.*, 864 F.2d 754, 756 (Fed. Cir. 1988), nor *Paper Converting*

Machine Co. v. Magna-Graphics Corp., 745 F.2d 11, 22 (Fed. Cir. 1984), held that it was proper to use such cost estimates when (i) the actual raw material standard costs were readily known to and in the possession of the patentee, (ii) such actual costs were affirmatively introduced and relied upon by the alleged infringer at trial, and (iii) such actual costs were shown to materially vary from and exceed the patentee's projected cost estimates so as to significantly overstate its lost profits. Moreover, Dow ignores the authorities cited in NOVA's brief that "the amount of detailed testimony and documentation regarding computations of the patentee's lost profits will vary . . . with the extent to which that information is challenged or contradicted by the infringer," *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 141 (Fed. Cir. 1986), and courts have rejected lost profits awards when the patentee's expert's calculations significantly overstated lost profits, *Joy Technologies, Inc. v. Flakt, Inc.*, 954 F. Supp. 796, 806 (D. Del. 1996), or rested on faulty assumptions and inaccurate estimates, *Oiness v. Walgreen Co.*, 88 F.3d 1025, 1033 (Fed. Cir. 1996).

Dow does not dispute that the single largest component of its incremental costs of goods to produce additional ELITE product was Dow's costs for ethylene raw material. (A12479.) Dow also does not dispute that Mr. Hoffman admitted that "Dow's Standard Costs on its profits and loss statement include actual ethylene costs whereas the estimated quarterly [product] costs that [he] relied on

do not." (A12376-77.) He conceded "[t]hat would be ideal, yes" for Dow's incremental costs of goods to be based on Dow's actual ethylene costs (A12371-72).

Dow erroneously asserts that NOVA's expert, Mr. Tanger, testified that the "Standard Costs – Trade" figures were 4-7 cents higher per pound than the costs Hoffman used, Dow Br. at 20, 66, when Mr. Tanger actually testified that increased product costs in the "Standard Costs – Trade" figures were "due primarily to" an increase of 4-***10*** cents in the ethylene component of the product. (A12558 (emphasis added); *see also* A14063.) The consequence of Mr. Hoffman's error using estimated and not actual ethylene costs was that he overstated the ELITE profit component in Dow's lost profits contentions by $11.3 million. (A12479-80; A12491-98; A14061-64.) This is roughly one-third of the total amount of supplemental damages awarded in this case.

Dow attempts to justify Mr. Hoffman's reliance on the quarterly product cost *estimates* ("PCEs") in his determination of Dow's profit margin because they included only incremental costs and no fixed costs (A12340). Dow Br. at 65-66. In this regard, Mr. Hoffman was critical of the "Standard Cost – Trade" figures in Dow's P&L Statement that NOVA's expert relied on because it allegedly "includes some fixed components that are simply not proper to use," such as "manufacturing variances from upstream business units at Dow." (A12338; A12340.)

While Dow asserts that Mr. Tanger admitted that Dow's actual higher ethylene costs "cannot account for the increase[]" in total costs between Dow's PCE figures and the "Standard Cost – Trade" figures, Dow Br. at 20, 66, Mr. Tanger, however, admitted no such thing. When presented with an unsupported hypothetical in Dow's questions, Mr. Tanger only agreed that actual higher ethylene costs could not account for *all* of the four and ten cent cost variance he found at the Fort Saskatchewan facility during the years at issue. (A12572.) While Mr. Tanger did not know what "other than ethylene cost" might be included, he expressly disagreed with Dow's contention that the difference between estimated and actual costs was due to fixed costs like "manufacturing variances from upstream." (A12573.) Moreover, he also expressly disagreed that Dow's assumption that the P&L Statement's inclusion of fixed costs would support Mr. Hoffman's improper reliance on estimated costs. (A12575:3-12; *see also* A12568:24 – A12573:9.)

Dow now admits that, if the district court abused its discretion in relying on Mr. Hoffman's analysis, "[a] remand thus would be necessary so that the district court could redetermine Dow's profit margin and recalculate the supplemental lost-profits award." Dow Br. at 67 n.23. However, by Mr. Hoffman's own admission, Dow's "Standard Cost – Trade" figures allegedly included "a million dollars" of fixed costs (A12340), or only 8.8% percent of the $11.3 million overstatement in

lost profits. When the accuracy of Mr. Hoffman's calculations were called into question, it was incumbent upon Dow to revise its proofs at trial to employ its own actual standard cost data, or to substantiate what it believed the proper corrective offset to Mr. Tanger's calculations should be, yet it tactically elected not to avail itself of either opportunity. This Court should therefore reject Dow's request for a remand to redetermine Dow's profit margin and not give it a second chance to correct its misguided litigation strategy. Instead, the award of lost profits should be vacated as a matter of law and the case should be remanded for the recalculation of reasonable royalties at the 2.11% rate found by the district court. *See Oiness*, 88 F.3d at 1031-33 (reversing award of future lost profits based on speculation).

Finally, NOVA notes that there is nothing in the record that supports Dow's assertion that "Dow's official estimates are so reliable that *Nova's own expert* relied on them in reaching his profit-margin calculation in the 2010 trial." Dow Br. at 66 (emphasis in original). While NOVA's expert did use Dow's PCEs in the 2010 trial, he never testified that they were "reliable." Rather, they were used simply because they were the only information about Dow's product costs that had been made available to NOVA at that time. (A12576-80.) Dow did not produce documentation of Dow's actual ethylene costs in response to NOVA's discovery requests in the earlier phase of the case (A12578) and, consequently, NOVA had

no way of knowing in 2010 that Dow's actual ethylene costs were significantly higher than its estimated ethylene costs.

DOW'S CROSS-APPEAL

I. COUNTERSTATEMENT OF THE CROSS-APPEAL ISSUE

1. Whether the district court abused its discretion in denying Dow's request for enhancement of post-judgment supplemental damages given that (a) Dow failed to show that NOVA's post-judgment conduct was objectively reckless as a matter of law; (b) since the Federal Circuit's decision did not issue until after Dow's patents had expired, there were no new facts regarding NOVA's conduct during the appeal that subsequently called the correctness of the district court's summary judgment ruling into question; and (c) the district court held that a permanent injunction was not in the public interest and noted a willingness to stay any such injunction pending appeal.

II. COUNTERSTATEMENT OF FACTS RELATING TO WILLFULNESS AND ENHANCED DAMAGES

On February 6, 2008, the district court entered an order based on the parties' stipulation that "[d]iscovery and trial of willfulness will be bifurcated and take place after trial on the patent infringement, validity, and enforceability issues." (A15000-02.)

During *Markman* proceedings, NOVA presented evidence and arguments that the term "slope of strain hardening coefficient [SHC] of greater than or equal

to 1.3" is unconstruable, and thus indefinite. (A15650:6-15683:3.) In particular, NOVA relied on the objective fact that units for the claimed "1.3" SHC value are not disclosed anywhere in the specification or file history of either asserted patent. (A15016-17.) SHC was a "new Dow construct, not previously known in the art." *Dow I*, 458 Fed. App'x at 918. NOVA further relied, *inter alia*, on the absence in the intrinsic record of any disclosure regarding determination of SHC that specified where on the curved "stress/strain" plot the required parallel line is to be drawn, including the absence of the promised FIG. 1. *(*A15017.) If Judge Farnan had adopted NOVA's argument that the claims were unconstruable in light of the intrinsic record, both patents-in-suit would have been declared invalid. Relying on *extrinsic* evidence, Dow argued that the units for SHC nevertheless could be ascertained by a person of ordinary skill in the art. (A15053.)

On June 25, 2009, Judge Farnan issued a *Markman* Order and accompanying Memorandum Opinion. (A478-520; A476-77.) Judge Farnan "decline[d] to find the claims indefinite as a matter of law" but found that

> the *Court also cannot, at this stage, eliminate the possibility that the claims will ultimately be found indefinite.* Indeed, the patent's failure to explicitly set forth the units for the slope of strain hardening coefficient and include a figure exemplifying the manner for computing the slope of strain hardening is, in the Court's view, *troubling*. And *NOVA has presented a wide range of compelling evidence and arguments that, in light of this, one of skill in the art would be unable to determine the proper scope of this claim limitation.* As just one example, NOVA has elicited testimony from numerous Dow engineers who, after reviewing the

> patents-in-suit, expressed an inability to calculate the slope of strain hardening. A named inventor on the patents-in-suit was even unable to explain how to carry out this calculation after reviewing the relevant portions of the specification. In these circumstances, *a trier of fact would, in the Court's view, be entitled to conclude that the claims are indefinite.*

(A497-98 (emphases added) (footnotes and citations omitted).)

NOVA also moved to dismiss on the ground that Dow lacked standing to sue because Dow failed to prove that it was the owner of the patent-in-suits when the lawsuit was filed on October 21, 2005 given Dow's inability to produce any schedule to the 2002 Contribution Agreement in existence as of the filing date of the complaint showing whether or not the patents-in-suit were transferred to DGTI.

After the jury trial, Dow moved for a permanent injunction, which was denied on July 30, 2010. (A5034-35.) According to the district court, this denial was due, in part, to the "substantial issues for appeal":

> In making this determination, the Court is persuaded that monetary damages, including lost profits, are sufficient to remedy the primary injuries sustained by Dow. In addition, the Court notes that the patents-in-suit expire in October 2011, slightly more than a year's time. *Given the substantial issues for appeal, including* the question of standing that exists in this action, the Court is not persuaded that entry of a permanent injunction will serve the parties *or the public interest*.

(A5035 (emphasis added) (footnotes omitted).) The district court also noted that NOVA had asked in the alternative for a stay of the permanent injunction pending appeal, which it said it would likely grant if a permanent injunction were entered.

(*Id.*) In addition, the district court was "persuaded that numerous consumers of Nova's product would be injured through the loss of productivity that will follow if a new polymer product is required to be inserted into their production facilities." (A5036.)

In July 2010, Judge Farnan retired from the bench, and this case was reassigned to Judge Stark. Judge Stark ordered that the issue of willfulness remain stayed pending appeal. (A15096.)

While the case was on appeal, NOVA took steps so as not to exploit the lack of a permanent injunction in this case. It enacted a remedial policy to refrain from selling allegedly infringing SURPASS products to new accounts. (A12414; A15474 (internal Dow document recognizing that "Nova has stopped taking new business for [FPs016C resin] in US due to the patent suit . . . .") While NOVA's total sales may have increased as compared to the pre-judgment period, NOVA actually lost customers and market share during the post-judgment period whereas Dow increased its market share. *Compare* A15476 *with* A15477; *compare* A15416 (2008 market share) *with* A15531 (2010 market share).

On October 15, 2011, Dow's patent expired. On January 24, 2012, a split Federal Circuit panel affirmed the jury's judgment for Dow. *Dow I*, 458 Fed. App'x at 921. Judge Reyna dissented, finding that Dow had not proved its

standing to bring and maintain the litigation, and therefore did not reach the issues of indefiniteness and noninfringement. *Id.* at 922.

On June 5, 2012, NOVA filed a motion for summary judgment of no willful infringement or, in the alternative, no post-suit willful infringement. (A15102; A15112.) Dow contested whether its failure to seek a preliminary injunction would bar it from obtaining enhanced damages based on NOVA's post-filing conduct. It did not argue that NOVA's *post-judgment* conduct during the 16-month period after the district court denied Dow's request for a permanent injunction expired should be analyzed separately or be considered as somehow different in kind from NOVA's *post-filing* but *pre-judgment* conduct. Indeed, in spite of NOVA's request for judgment of no post-suit willful infringement, Dow's opposition failed to mention NOVA's post-judgment conduct at all, let alone argue that it was objectively unreasonable for NOVA to continue to sell the accused product after judgment had been entered in the case. (A15115-38.)

Judge Stark granted NOVA's motion for summary judgment of no willful infringement on August 20, 2012. (A99.) Judge Stark found that "Nova's position that the patent in suit was indefinite was and is reasonable." (A14180:21-22.) The fact that "the Federal Circuit found that the patents are not indefinite shows that Nova's contention was not meritorious, but it in no way shows that it was unreasonable or objectively reckless." (A14181:10-14.) In particular, he stated:

> The Court finds nothing in Judge Farnan's post-trial action or in the Federal Circuit's opinion that indicate that those jurists believe that the indefiniteness contention was objectively reckless. To the contrary, among other things, Judge Farnan indicated in denying Dow's request for a permanent injunction, after all the evidence was in, of course, that substantial issues, plural, remained for appeal which in the Court's view likely included indefiniteness. Additionally, based on my review in connection with this proceeding, I also do not find a basis for concluding that the indefiniteness contention is unreasonable.

(A14181:21 – A14182:7.)

Dow never sought to amend its complaint to plead willfulness on the part of NOVA for post-judgment sales or to request enhanced damages on account of such alleged willfulness. Dow likewise never mentioned enhancement of damages in response to NOVA's contention interrogatories filed in the supplemental damages phase, instead stating that it would provide its damages contentions "in accordance with the Scheduling Order in this case at the time agreed upon for disclosure of expert reports." (A15312-13.) At the April 12, 2013 Pre-Trial Conference, Dow's counsel admitted that it did not provide NOVA with an expert report addressing enhancing the supplemental damages award. (A88 at 59:17-20.) This issue was included for the first time in Dow's draft pre-trial order, and Dow's counsel likewise admitted that NOVA otherwise had no knowledge of Dow's intention to seek enhanced damages for alleged post-judgment willfulness "between the time [the district court] ruled on the motions for summary judgment and the pretrial order." (A88 at 59:12-16.)

In its post-trial brief, Dow also conceded that, "[g]iven the Court's ruling of August 20, 2012 on willful infringement (D.I. 674 [A99]), Dow is not seeking enhanced damages for infringing sales **prior to the verdict and the Court's denial of NOVA's post-trial JMOL motions."** (A13109 (emphasis in original).)

The district court declined to grant Dow's request for enhanced damages in its March 28, 2014 memorandum opinion:

> Dow requests enhanced damages for NOVA's willful post-judgment infringement during the sixteen months between when the Court denied Dow's request for a permanent injunction and the expiration of the patents-in-suit. Dow argues that the Court may enhance a supplemental damages award upon a finding that the adjudicated infringer's continued infringement in the face of an adverse jury verdict and judgment was willful. The Court, however, agrees with NOVA that the grant of NOVA's motion for summary judgment of no willfulness effectively decided this issue in NOVA's favor. (D.I. 674)
>
> The Court is not persuaded it should revisit the question. Dow's reliance on *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365 (Fed. Cir. 2013), is unavailing. *SynQor* shows that a Court may award enhanced damages even in the absence of a prior finding of willful infringement. Here, rather than no finding at all regarding willfulness, there is a finding of ***no*** willful infringement.

A26-27 (emphasis in original).)

III. SUMMARY OF THE CROSS-APPEAL ARGUMENT

The district court did not err in declining to find willfulness and did not abuse its discretion in declining to grant Dow's request for enhanced damages because Dow failed to prove by clear and convincing evidence that NOVA's post-

judgment conduct was "objectively reckless" as a matter of law. Since the Federal Circuit's decision was not handed down until after the Dow patents had expired, there were no new facts regarding NOVA's conduct during the appeal that subsequently could have called into question the correctness of the district court's summary judgment ruling. This is particularly so given that the district court held that a permanent injunction was not in the public interest and had noted a willingness to stay such an injunction pending appeal.

IV. CROSS-APPEAL ARGUMENT

A. Standard of Review

A decision declining to enhance damages is reviewed for an abuse of discretion. *Juicy Whip, Inc. v. Orange Bang, Inc.*, 382 F.3d 1367, 1370 (Fed. Cir. 2004).

To establish willful infringement, "a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." *In re Seagate Technology, LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (*en banc)*. If the "threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk . . . was either known or so obvious that it should have been known to the accused infringer." *Id.* The objective determination of recklessness is subject to *de novo* review. *Bard Peripheral Vascular, Inc. v. W.L.*

Gore & Assocs., Inc., 682 F.3d 1003, 1007 (Fed. Cir. 2012). The "ultimate question of willfulness based on an assessment of the second prong of *Seagate*" is a question of fact subject to clearly erroneous review. *Id.* at 1006*; see also Cohesive Techs., Inc. v. Waters Corp.*, 543 F.3d 1351, 1374 (Fed. Cir. 2008) ("'The court's finding [on] willful infringement is one of fact, subject to the clearly erroneous standard.'") (quoting *Stryker Corp. v. Intermedics Orthopedics, Inc.*, 96 F.3d 1409, 1413 (Fed. Cir. 1996).

B. Dow Has Failed To Show that NOVA's Post-Judgment Conduct Was Objectively Reckless As A Matter of Law

Dow has failed to prove by clear and convincing evidence that NOVA's post-judgment conduct was "objectively reckless" as a matter of law. *In re Seagate Tech.*, 497 F.3d at 1371. As discussed below, Dow has not met its burden of proving that NOVA acted unreasonably, let alone recklessly, under *Seagate*.

To the contrary, NOVA had a reasonable basis to believe that one or more of its defenses would succeed on appeal throughout the supplemental damages period. As recognized by Judge Farnan when he denied Dow's request for a permanent injunction, NOVA had "substantial issues for appeal." (A5035.) One of those issues, standing, was the basis for Judge Reyna's dissent in the prior appeal. While Judge Farnan was not willing to reverse the jury on the issue of indefiniteness, he had earlier noted during the Markman proceeding that the absence of Figure 1 in the patents-in-suit was "troubling" and that "NOVA has presented a wide range of

compelling evidence and arguments that, in light of this, one of skill in the art would be unable to determine the proper scope of this claim limitation." (A498.) Judge Stark independently found that there was no "basis for concluding" that NOVA's "indefiniteness contention is unreasonable" (A14182:5-7), and the Supreme Court's decision in *Nautilus* lends further support to that conclusion. Even Dow admitted in its response to NOVA's petition for *certiorari* that NOVA's indefiniteness challenge was "reasonable." Brief for Respondent at 31, *Nova Chem. Corp. v. Dow Chem. Co.*, 133 S. Ct. 544 (2012) (No. 12-243).

Since Dow's patents expired prior to this Court's decision in the prior appeal, the supplemental damages period was over before the "substantial issues for appeal" were resolved. Consequently, there were no new facts regarding NOVA's conduct during the appeal that subsequently could have called the correctness of the district court's summary judgment ruling into question.

The fact that the district court refused to grant a permanent injunction in this case is also significant for several reasons. Because the district court expressly found that issuing a permanent injunction would not be in the public interest (A5035), it understood and expected that NOVA would continue to sell the allegedly infringing products pending the resolution of the prior appeal. Indeed, the district court was persuaded that NOVA's customers would be injured through a loss of productivity if they had to qualify a different supplier's resins. (A5036.)

Under the present circumstances, where a permanent injunction was denied and the Court noted a likely stay in the alternative, the willfulness inquiry is improper. *Amado Corp. v. Microsoft,* 517 F.3d 1353, 1362 (Fed. Cir. 2008) ("[W]illfulness, as such, is not the inquiry when the infringement is permitted by a court-ordered stay.").

The reasonableness of NOVA's actions is also reflected in its remedial policy to refrain from selling infringing SURPASS products to new customers. (A12414; A15474 (internal Dow document recognizing that "Nova has stopped taking new business for [FPs016C resin] in US due to the patent suit . . . .") That NOVA's total sales increased is not relevant as times were good for all in the market but NOVA actually lost customers and market share during the post-judgment period whereas Dow, who was operating "flat out," increased its market share. *Compare* A15476 *with* A15477; *compare* A15416 (2008 market share) *with* A15531 (2010 market share).

In short, the record taken as a whole does not provide clear and convincing evidence that NOVA's post-judgment conduct was "objectively reckless" as a matter of law. Since "[a] finding of willful infringement is a prerequisite to the award of enhanced damages," *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 858 (Fed. Cir. 2010), the district court's refusal to award enhanced damages cannot be considered an abuse of discretion, particularly in the absence of any finding of

egregious conduct on the part of NOVA. *See also Read Corp. v. Portec, Inc.*, 970 F.2d 816, 830-831 (Fed. Cir. 1992) ("Absent willful infringement, however, there is no basis in this case for enhanced damages."). Moreover, even "a finding of willful infringement merely authorizes, but does not mandate, an award of increased damages." *Modine Mfg. Co. v. Allen Group, Inc.*, 917 F.2d 538, 543 (Fed. Cir. 1990).

The cases relied upon by Dow in its brief are distinguishable. None involved willful infringement allegations in a comparable situation where the patents would shortly expire and the court had indicated a willingness to stay an injunction pending appeal. For example, in *Synqor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1384-85 (Fed. Cir. 2013), enhancement was awarded on account of violations of a court-issued injunction (which had been stayed only as to limited customers not involved with the violations in question), conduct not involved in the present appeal. Other cases such as *Affinity Labs. Of Texas, LLC v. BMW North America, LLC*, 783 F. Supp.2d 891 (E.D. Tex. 2011), *aff'd*, 2014 WL 3892903 (Fed. Cir. Aug. 11, 2014), were only concerned with calculating an ongoing royalty in lieu of an injunction as a form of equitable relief flowing from 35 U.S.C. § 283. Having awarded a post-trial premium of 33% to the Georgia Pacific reasonable royalty rate, the *Affinity Labs.* court did not grant any separate and additional enhancement under 35 U.S.C. § 284. 783 F. Supp.2d at 905.

Accordingly, this Court should affirm the district court's finding of no willful infringement, find that Dow is not entitled to any punitive damages, and deny Dow's cross-appeal.

V. CONCLUSION

For the foregoing reasons, NOVA respectfully requests that this Court reverse the July 30, 2010 validity judgment, hold the asserted claims of the patents-in-suit invalid under *Nautilus*, vacate the April 13, 2014 supplemental damages award, and remand for further proceedings. Alternatively, NOVA requests that the Court vacate the supplemental award of lost profits and remand for a recalculation of reasonable royalty damages. Dow's cross-appeal seeking enhanced damages should also be denied.

Respectfully submitted,

December 19, 2014

/s/ Darrel C. Karl

Donald R. Dunner
Darrel C. Karl
Ronald A. Bleeker
Mark J. Feldstein
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.
901 New York Avenue, N.W.
Washington, D.C. 20001-4413
(202) 408-4000

Attorneys for Appellants
NOVA Chemical Corporation and
NOVA Chemicals Inc.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing **CORRECTED REPLY AND RESPONSE BRIEF FOR DEFENDANTS-APPELLANTS NOVA CHEMICALS CORPORATION (CANADA) AND NOVA CHEMICALS INC. (DELAWARE)** was filed via operation of the Court's CM/ECF system. Copies of the brief were served upon registered counsel via electronic means on this 22nd day of January, 2015.

Harry J. Roper
JENNER & BLOCK LLP
353 North Clark St.
Chicago, IL 60654
(312)222-9350
hroper@jenner.com

/s/ Kay Wylie
Kay Wylie

CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 28.1(e)(2)(A)(i). The reply brief contains 12,121 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii).

By: /s/ Darrel C. Karl
Darrel C. Karl
Finnegan, Henderson, Farabow,
Garrett & Dunner, L.L.P.
Attorney for Appellant