UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF ILLINOIS EASTERN DIVISION

SUNOCO PARTNERS MARKETING & TERMINALS L.P.,)
Plaintiff,)
v.) No. 15 C 8178
U.S. VENTURE, INC., U.S. OIL, and TECHNICS, INC.,)) Judge Rebecca R. Pallmeyer)
Defendants.)

MEMORANDUM OPINION AND ORDER

Plaintiff Sunoco Partners Marketing and Terminals L.P. ("Sunoco") is the holder of five patents covering a system and method for blending butane into gasoline immediately before the mixture is distributed to the tanker trucks that supply retail gas stations. Sunoco sued Defendant U.S. Venture, Inc. and its subsidiary, U.S. Oil Co. (together, "Venture"), for infringing Sunoco's patents at six of Venture's fuel terminals. (Am. and Supp. Compl. for Patent Infringement [161] ("Sunoco's Am. Compl."), 4.) Venture filed numerous counterclaims in response, seeking declaratory judgments of non-infringement, invalidity, and unenforceability based on the inventors' allegedly inequitable conduct before the U.S. Patent and Trade Office ("PTO") during the patents' prosecution. (Venture's Answer, Aff. Defenses, and Countercls. to Pl.'s Am. Compl. [174] ("Venture's Am. Answer"), 52–89.) In a previous opinion, this court granted partial summary judgment in favor of Sunoco on several of its infringement claims. *Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, Inc.*, No. 15 C 8178, 2017 WL 4283946, at *1 (N.D. III. Sept. 27, 2017) ("Sunoco SJ Opinion I").

The parties have now filed additional, opposing motions for summary judgment. Venture seeks summary judgment of non-infringement, a declaration of invalidity of certain claims in Sunoco's patents, and a ruling barring an award of lost profits damages. (Venture's SJ Mot. [363], 1–2.) Sunoco's cross-motion for summary judgment does not seek further rulings on the question

of infringement, but does ask the court to dismiss certain of Venture's counterclaims before trial. To this end, Sunoco moves for an order declaring that (1) three references identified by Venture are not prior art under 35 U.S.C. § 102; and (2) Sunoco's patents are not unenforceable due to inequitable conduct. (Sunoco's SJ Mot. [354], 1.) For the reasons stated below, Sunoco's motion is granted and Venture's motion is granted in part and denied in part.

BACKGROUND

Sunoco is the holder of five patents on systems that blend butane and gasoline: U.S. Patent No. 6,679,302 (the "'302 Patent"); No. 7,032,629 (the "'629 Patent"); No. 7,631,671 (the "'671 Patent"); No. 9,494,948 (the "'948 Patent"); and Patent 9,606,548 (the "'548 Patent"). The court has already described the invention in detail in its claim construction opinion, *see Sunoco Partners Marketing & Terminals L.P. v. U.S. Venture, Inc.*, No. 15 C 8178, 2017 WL 1550188, at *1–3 (N.D. III. Apr. 28, 2017) ("*Sunoco Markman Opinion*"), and first summary judgment opinion, *see Sunoco SJ Opinion I*, 2017 WL 4283946, at *1–7. The court presumes the reader's familiarity with those opinions and provides only a brief summary of the relevant facts here.

The court's previous summary judgment opinion explained that

[c]ommercial purveyors of gasoline—those that sell gasoline by the tankload to consumer-facing retail gas stations—add butane because it is more volatile than gasoline, allowing cars to start consistently in colder weather. Because adding lower-priced butane to gasoline improves profit margins, commercial sellers are motivated to blend as much butane as possible into gasoline before selling it to retail stations.

That goal, however, is complicated by United States Environmental Protection Agency ("EPA") regulations. As noted, adding butane to gasoline increases the volatility of the blended gasoline, but gasoline with higher volatility contributes to smog, a particular concern in warmer climates and during summer months. Gasoline Reid Vapor Pressure, EPA.GOV, https://www.epa.gov/gasoline-standards/gasoline-reid-vapor-pressure (last accessed Oct. 6, 2017). The EPA therefore imposes limits on the allowable volatility of gasoline, measured by "Reid Vapor Pressure" or RVP, based on the month and the state where the gasoline is sold. Limits range from an RVP of 7.8 pounds per square inch to 15. . . .

The patented systems allow the patent holder to blend butane into gasoline at the last point of distribution before the gas is taken by tanker trucks to retail gas

stations; called "terminals" or "tank farms," these facilities receive gasoline from refineries and store it in large tanks for distribution. (See '302 Patent col. 4 II. 38–60.) In an exemplary embodiment, the system blends butane into gasoline immediately before it is dispensed into a tanker truck: butane and gasoline are drawn from a tank of each, blended to the desired RVP in a blending unit, and dispensed to the truck. (*E.g.*, '302 Patent col. 3 II. 14–27.)

Sunoco SJ Opinion I, 2017 WL 4283946, at *1 (internal citations to record omitted).

Variations on these systems, as described in Sunoco's later patents, relate to "in-line processes for blending butane into a gasoline stream, that allow butane to be blended into a gasoline stream at any point along a petroleum pipeline." ('948 Patent, col. 1 II. 22-25; '548 Patent, col. 1 II. 22-25.) The invention described in these patents "combin[es] the advantages of in-line vapor pressure monitoring both upstream and downstream of a butane blending operation," thereby allowing users "to blend butane with petroleum products at practically any point along a petroleum pipeline, regardless of variations in the flow rate of gasoline through the pipeline, the time of year in which the gasoline is delivered, or the ultimate destination to which the gasoline is delivered." ('948 Patent, col. 3 II. 18-26; '548 Patent, col. 3 II. 18-26.)

Steven Vanderbur and Larry Mattingly are named as the inventors on all five patents at issue in this case. For an unidentified period before February 2001, both Vanderbur and Mattingly worked with a company called Texon Terminals to install and operate gasoline and butane blending equipment. (Sunoco's 2016 Statement of Material Facts [132] (hereafter "Sunoco's 2016 SOF"), at ¶ 11.) On February 9, 2001, Mattingly and Vanderbur filed the provisional application that resulted in each of the five patents. (Venture's 2017 Statement of Material Facts [371] (hereafter "Venture's SOF"), at ¶ 3; '302 Patent.) Mattingly and Vanderbur subsequently assigned the patents to Texon, and Sunoco became the patents' sole owner when it purchased Texon's butane blending business in 2010. *Sunoco SJ Opinion I*, 2017 WL 4283946, at *2.

In or around 2012, Defendant Venture retained former-Defendant Technics to install a butane blending system at three of Venture's terminals located in Green Bay, Madison, and

Milwaukee, Wisconsin. *Id.* Venture also owns at least three other butane blending systems—one located at a second facility in Milwaukee, the other two in Fort Worth, Texas, and Bettendorf, lowa, respectively—that it developed and installed on its own, after the Technics systems were installed. *Id.*

Sunoco sued both Venture and Technics in September 2015, claiming that all six of these systems infringe the butane-blending patents Sunoco acquired from Texon. *Id.* Venture's counterclaims seek declaratory judgments that its systems do not infringe any of Sunoco's patents; that each of the patents is invalid; and that each of the patents is unenforceable due to the purported inequitable conduct of Sunoco and/or prior owners of the patents. (See Venture's Answer and Counterclaims [174].) Sunoco entered into a settlement agreement with Technics in June 2016, whereby Sunoco agreed not to sue Technics for infringing activities that took place before the date of the settlement agreement. *Id.*

After construing certain terms in the patents, this court granted partial summary judgment to Sunoco on its claims that Venture infringed certain claims in the '302 and '629 patents. *Sunoco SJ Opinion I*, 2017 WL 4283946. Sunoco has now filed a second motion for summary judgment [354] on two issues raised in Venture's counterclaims: (1) whether certain references qualify as "prior art" under 35 U.S.C. § 102, and (2) whether all five of Sunoco's patents are unenforceable due to alleged inequitable conduct during prosecution. Venture, meanwhile, seeks summary judgment [363] in its favor on certain of its anticipation and non-infringement counterclaims. Venture also seeks summary judgment on the issue of whether Sunoco is entitled to damages for lost profits. The parties' motions do not overlap, so the court considers their motions—and their additional evidence supporting those motions—in turn.

DISCUSSION

To prevail on a motion for summary judgment, the moving party must show that "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of

law." FED. R. CIV. P. 56(a). In ruling on a motion for summary judgment, the court views the evidence in the light most favorable to the nonmoving party and draws all reasonable inferences in that party's favor. *Sweatt v. Union Pac. R. Co.*, 796 F.3d 701, 707 (7th Cir. 2015). A genuine dispute of material fact exists when "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Id.* (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). The court must also take into account whether a party faces a heightened burden of proof when reaching this determination: in this case, Venture has the burden of establishing invalidity and inequitable conduct by clear and convincing evidence. *See Hutchins v. Zoll Medical Corp.*, 492 F.3d 1377, 1380 (Fed. Cir. 2007) (citing *Anderson*, 477 U.S. at 255).

I. Venture's Motion

A. Invalidity

Venture seeks summary judgment of invalidity against numerous claims in Sunoco's patents based upon two pieces of prior art. First, Venture claims that the inventors sold a patented system to Equilon Enterprise LLC more than one year before they filed for the patents. (Brief in Supp. of Venture's SJ Mor. [370] ("Venture's SJ Br."), 1.) This alleged prior sale, Venture argues, invalidates the majority of the claims in the '302, '629, '948, and '548 Patents under 35 U.S.C. § 102(b).¹ (*Id.* at 2.) Second, Venture claims that select portions of the '302 and '629 Patents

Sunoco argues that Venture waived any argument as to the invalidity of the '948 and '548 Patents because it "merely incorporated by reference" its contentions against the other three patents. (Sunoco's Opposition to Venture's SJ Mot. [386] ("Sunoco's Resp. Br."), 2 n.2.) This accusation exemplifies the pattern on the part of both sides of claiming victory on nearly every issue based on doctrines of waiver, disclaimer, or preclusion. *See, e.g., Sunoco SJ Opinion I,* 2017 WL 4283946, at *8–9; (Venture's SJ Br. 11, 18; Memo. in Supp. of Sunoco's SJ Mot. [358] ("Sunoco's SJ Br."), 3–6, 10.) In some instances, the parties have gone so far as to argue that their opponent has waived its ability to accuse the other side of waiver. (*See, e.g.,* Sunoco's Resp. Br. 13 n.21.) Sunoco and Venture have filed so many cross-referencing motions and pieces of evidence that it is nearly impossible to sort out whether an argument was waived. As a result, the court has deemed it prudent to simply ignore their allegations of waiver whenever possible. Nearly all of them appear to be based on ambiguous witness testimony, misunderstandings, or non-prejudicial omissions. (*See* Venture's Resp. to Sunoco's SOAF [409], Resp. to ¶¶ 5–7 (denying that Sunoco is prejudiced by Venture's act of incorporating its contentions against the

are invalid for anticipation based on another system that Texon installed at a Kerr-McGee fuel terminal in the mid-1990s. (*Id.* at 1, 10–12.)

Patents are presumed valid. See 35 U.S.C. § 282(a). This presumption can only be overcome by clear and convincing evidence. Eli Lilly & Co. v. Barr Laboratories, Inc., 251 F.3d 955, 962 (Fed. Cir. 2001). "Thus, a moving party seeking to invalidate a patent at summary judgment must submit such clear and convincing evidence of invalidity so that no reasonable jury could find otherwise." Id.

i. The Equilon Sale

Under 35 U.S.C. § 102(b), a patent is invalid if the invention was on sale in the United States more than one year prior to the patent's application date.² The on-sale bar arises when the invention is (1) "the subject of a commercial offer for sale" before the critical date, and (2) "ready for patenting." *Pfaff v. Wells Electronics, Inc.*, 525 U.S. 55, 67 (1998). In addition, the device sold must "fully anticipate[] the claimed invention" or render it obvious. *Allen Engineering Corp. v. Bartell Industries, Inc.*, 299 F.3d 1336, 1352 (Fed. Cir. 2002). To meet the first prong of the *Pfaff* test, courts look to general principles of contract law. *Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc.*, 726 F.3d 1370, 1375 (Fed. Cir. 2013). An invention is "ready for patenting" if it has been reduced to practice (i.e., made and working as intended) or "depicted in drawings or described in writings of sufficient nature to enable a person of ordinary skill in the art to practice the invention" prior to the critical date. *Id.*

Courts have long held that sales made "primarily for the purposes of experimentation" are not considered commercial sales and thus do not trigger the on-sale bar. *Allen*, 299 F.3d at 1352;

^{&#}x27;958 and '548 Patents by reference because both parties' experts addressed those patents anyway).)

The patents-in-suit have an original priority date of February 9, 2001, so the pre-America Invents Act version of Section 102 applies.

see also Pfaff, 525 U.S. at 65–66 (citing City of Elizabeth v. American Nicholson Pavement Co., 97 U.S. 126, 137 (1887)). Permissible experimentation includes efforts to perfect the claimed features of the invention as well as features "inherent to" the invention—such as whether it will work as intended in its intended environment. Electromotive Div. of General Motors Corp. v. Transp. Systems Div. of General Electric Corp., 417 F.3d 1203, 1211 (Fed. Cir. 2005) (citing EZ Dock, 276 F.3d at 1352–53). To help courts determine whether a sale is experimental, the Federal Circuit has outlined a number of objective factors, including:

(1) the necessity for public testing; (2) the amount of control over the experiment retained by the inventor; (3) the nature of the invention; (4) the length of the test period; (5) whether payment was made; (6) whether there was a secrecy obligation; (7) whether records of the experiment were kept; (8) who conducted the experiment; (9) the degree of commercial exploitation during testing; (10) whether the invention reasonably requires evaluation under actual conditions of use; (11) whether testing was systematically performed; (12) whether the inventor continually monitored the invention during testing; and (13) the nature of the contacts made with potential customers.

Id. at 1213. Certain of these factors are generally considered dispositive—particularly inventor control and customer awareness of the experimentation. *Id.* at 1214–15.

The inventors filed the provisional application underlying all five of Sunoco's patents on February 9, 2001. (L.R. 56.1 Statement of Material Facts in Supp. of Venture's SJ Mot. [371] ("Venture's SOF"), ¶ 3; '302 Patent.) This places the critical date for Section 102(b)'s purposes at February 9, 2000. On February 7, 2000—two days before the critical date—MCE Blending, a company run by the inventors, entered into a contract to sell and install an automated butane blending system at Equilon's Detroit terminal. (Venture's SOF ¶ 3.) In the contract, "MCE agree[d] to sell and Equilon agree[d] to purchase the Equipment [for automated butane blending] along with a license to use certain technology and software owned by MCE pertaining to the computerized blending of Butane and gasoline stocks, in consideration for the purchase and sale of Butane." (Equilon Contract § 1.01, Ex. 1 to Dodd. Decl. in Supp. of Venture's SJ Mot. [372-1] ("Dodd. Decl.").) The latter provision regarding the sale of butane involved an agreement by

Equilon to purchase a minimum of 500,000 barrels of butane from MCE at set prices over roughly five years. (*Id.* at §§ 2.02–2.03, 3.02.)

Prior to entering into this contract, the inventors had worked with Equilon to install a manual tank blending system at the same Detroit terminal sometime in the mid-1990s. (Sunoco's Resp. to Venture's SOF and Additional Statement of Material Facts [387] ("Sunoco's SOAF"), Resp. to ¶ 3.) The inventors claim that they first conceived of the patented invention sometime in or before 1999, and it is not disputed that the system addressed in the February 7, 2000 contract was the first automated butane blending system the inventors made or sold. (*See id.* at Resp. to ¶¶ 3–4; Venture's SOF ¶ 4.) It is also undisputed that the inventors "reduced their invention to practice in or around September 2000 at Equilon's terminal in Detroit" while fulfilling their duties under the contract. (Sunoco's Resp. to Interrog. No. 3, Ex. 3 to Dodd. Decl. [372-3]; Sunoco's SOAF Resp. to ¶ 4.)

According to Venture, the Equilon sale meets all the requirements of the on-sale bar. Venture insists that the sale was commercial in nature "because any experimentation was intended to be done—and was actually done—prior to installation at Equilon's tank farm in Detroit and did not otherwise involve Equilon." (Venture's SJ Br. 2.) Venture further points to the portion of the contract regarding MCE's sale of a substantial amount of butane as further evidence that the transaction was primarily commercial. (*Id.* at 5.) Sunoco disagrees, asserting that "the Contract unambiguously reflects that the system design process was incomplete and still ongoing" at the time of the sale, and that the inventors' primary purpose in executing the sale was "to experiment at an actual tank farm and determine whether their idea was capable of performing its intended purpose in its intended environment." (Sunoco's Opposition to Venture's SJ Mot. [386] ("Sunoco's Resp. Br."), 4 (internal citations omitted).)

The court is satisfied that Sunoco has demonstrated the requisite experimental intent to

defeat application of the on-sale bar.³ Accordingly, the court can deny summary judgment on this basis alone, even though the parties also dispute whether the invention was ready for patenting and whether the Equilon system anticipates the patented invention. (*See id.* at 10; Venture's SJ Br. 6–10.)

As stated, the inventors had not yet reduced the system to practice before executing the contract. While this is not dispositive evidence of experimentation, it does support the conclusion that reduction to practice did not occur until a timeframe in which experimentation may occur. *Cf. Allen*, 299 F.3d at 1354 ("[O]nce an invention is reduced to practice, there can be no experimental use") (quoting *EZ Dock*, 276 F.3d at 1356–57 (Linn, J., concurring)). Both inventors have testified that they did not know if their concept of a PLC-controlled blending system would work at the time and that they desired to "f[i]nd a customer that would give us the opportunity to try it." (5/10/16 Mattingly Dep. 21:20–22:6, 29:10–18, Ex. 39 to Andrew M. Gross Decl. in Supp of Mot. for Misc. Relief [278-33] ("Gross Decl."); see also 5/25/16 Vanderbur Dep. 127:19–23, Ex. 30 to Gross Decl. [278-26].) Larry Mattingly explained that he and Vanderbur approached Equilon because of their preexisting relationship with tank blending systems (5/10/16 Mattingly Dep. 31:6–22)—the essence of MCE's proposal being "to install the equipment and to sell it to them *if the*

As a brief aside, the court feels compelled to address Venture's misleading statements regarding the parties' respective burdens of proof. Venture claims that "[t]he burden is on Sunoco to produce 'convincing evidence' of experimental use to counter the application of the on-sale bar." (Venture's SJ Br. 2 (emphasis in Venture's brief) (quoting Lisle Corp. v. A.J. Mfg. Co., 398 F.3d 1306, 1316 (Fed. Cir. 2005).) This is not a correct statement of the law, nor is it an accurate quotation of Lisle Corp. In that case, the Federal Circuit rejected the appellant's argument that the district court erred by not requiring the patentee to produce "convincing evidence" of experimental use. Id. at 1316. The court explained that the "burden does not shift at any time to the patent owner," and that, as always, the patentee's sole responsibility is to "produce sufficient rebuttal evidence" to prevent the challenger from meeting its own burden of establishing the on-sale bar by clear and convincing evidence. Id. (emphasis added). "'Convincing' evidence can meet that need." Id. The Federal Circuit concluded by clarifying that its potentially confusing use of the word "convincing" in this context "did not set forth a new legal standard . . . nor did it impose a burden of production comparable to the clear and convincing evidence required to invalidate a patent." Id. (citing TP Laboratories, Inc. v. Professional Positioners, Inc., 724 F.2d 965, 971 (Fed. Cir. 1984)).

equipment worked." (Id. at 82:12-20 (emphasis added).) Steven Vanderbur stated plainly: "Equilon was the test case for our automated butane blending system." (5/25/16 Vanderbur Dep. 29:6–7.)

Venture argues that "[t]he inventors' self-serving testimony" on the issue of experimentation is not sufficient to prevent summary judgment. (Venture's SJ Br. 4 (citing Petrolite Corp. v. Baker Hughes Inc., 96 F.3d 1423, 1427 (Fed. Cir. 1996).). Indeed, the inventors' subjective intent is of minimal importance, see Petrolite, 96 F.3d at 1427, but the objective evidence also weighs heavily in Sunoco's favor. The contract discusses several rounds of testing to be conducted by MCE: pre-installation testing at an unspecified (presumably off-site) location and post-installation testing at Equilon's terminal. (Equilon Contract § 1.10(a) (pre-installation) and § 1.10(b) (post-installation).) If the proposed system failed to meet MCE's expectations (tellingly, Equilon's expectations appear to be irrelevant), MCE had the right to unilaterally terminate the agreement, and the obligation to remove any then-installed equipment from Equilon's terminal at its own expense. (Id.) MCE maintained full ownership and title over the system until both rounds of testing were completed to MCE's satisfaction and MCE was able to train Equilon's employees in the safe and proper use of the system. (Id. at § 1.04 ("At such time, MCE shall execute a bill of sale . . . to effectuate the conveyance of ownership of the Equipment to Equilon.").) As noted earlier, it is undisputed that MCE's installation, testing, and training was not completed until September 2000—well after the critical date. (See Sunoco's SOAF Resp. to ¶ 4; 5/10/16 Mattingly Dep. 174:4–25 (stating that Mattingly spent three to five days conducting on-site testing in Detroit in September 2000).)

Notably, the contract did not require Equilon to pay MCE anything in exchange for the system in the normal course of events. MCE was to bear all expected costs of the system's design and installation, up to \$450,000. (*Id.* at § 1.02.) In the event the system cost more than expected, the parties agreed to reach "a mutually agreeable arrangement for funding any [excess]

cost[.]" (*Id*.) Equilon was required to bear the costs relating to any additional requirements it imposed on the project, but, again, only if those costs surpassed the \$450,000 threshold. (*Id*.) Even then, however, MCE bore all the risk: if the parties failed to reach a mutually agreeable funding arrangement for excess costs, either side had the right to terminate the contract, but MCE would still be required to remove all previously-installed "at its own cost and expense." (*Id*.)

These provisions touch upon many of the Federal Circuit's enumerated factors, and strongly signal the presence of the two most important objective factors: inventor control and customer awareness. *Electromotive*, 417 F.3d at 1214–15. Further contractual provisions simply underline the point. MCE was responsible for maintaining insurance for itself and Equilon during the system's development and installation. (Equilon Contract § 1.09.) MCE also promised to indemnify Equilon for any claims arising from MCE's work on the project. (*Id.* at § 1.12.) Both parties were under a strict duty of confidentiality for five years. (*Id.* at § 3.01, Schedule 3.01.) Finally, MCE warranted that the system would "be fit for the purpose of blending [b]utane into gasoline products in compliance with all applicable laws" upon transfer of title—which, again, would occur only after several rounds of testing to determine whether it was capable of operating as intended. (*Id.* at § 1.05.)

Venture disagrees with this assessment of the contract and claims that only one round of off-site testing was contemplated in the contract. (Venture's SJ Br. 3–5.) This argument is as irrelevant as it is inaccurate. Venture presents evidence, in the form of an e-mail from Mattingly to Equilon employee Joe Ahern, to show that MCE conducted pre-installation testing with another company called Wheatland Systems in Kansas. (E-mail from Larry Mattingly to Joe Ahern of 4/19/00, Ex. 4 to Dodd Decl. [372-4].) Venture believes it is important that Equilon was not involved with this round of testing, claiming without any legal support that "the [experimental sale] doctrine has no application as matter of law because the inventors never intended to conduct any experimentation with Equilon or at Equilon's terminal in Detroit." (Venture's SJ Br. 3.) This same

e-mail, however, explicitly states that said testing was not completed to MCE's satisfaction until April 14, 2000—two months after the critical date. (Id.) It also provides ample evidence of the inventor's experimental intent and Equilon's awareness of that intent as it related to the exact system Equilon was due to receive.⁴ Even if this were the only testing involved with the system's design and installation, it would reflect the inventors' need to experiment with their invention to determine whether it would work as intended as of the moment they offered the system to Equilon. The experimental sale doctrine would be worthless if successful experiments occurring after the critical date retroactively invalidated sales made for the purposes of experimentation before the critical date. See Robotic Vision Systems, Inc. v. View Engineering, Inc., 112 F.3d 1163, 1167 (Fed. Cir. 1997) ("[S]ubsequent completion of an invention after the critical date does not relate back to the date of an earlier alleged offer of sale."); see also In re Ceccarelli, 401 Fed. Appx. 553, 554-55 (Fed. Cir. 2010) (holding that an experimental sale cannot be recategorized as a commercial sale by a subsequent reduction to practice even if that reduction to practice occurred before the critical date). For this same reason, the court rejects Venture's attempts to divide the invention into component parts that may have been tested in one location, but not another. (See Venture's SJ Br. 6.) It does not matter if the inventors tested their system's ability to communicate with the Grabner vapor pressure analyzer only at Wheatland and not at Equilon's terminal.⁵ All of MCE's testing occurred after the critical date, and all of the testing was aimed at determining whether the automated butane blending system was capable of performing as intended. See Electromotive, 417 F.3d at 1211.

As additional evidence of the inventors' experimental intent, Sunoco points out that Wheatland Systems was also under a confidentiality agreement for the pre-installation testing it conducted for the inventors. (Sunoco's SOAF Resp. to ¶ 3.)

In any event, the evidence shows that the inventors *did* test those elements in both locations. (See Equilon Contract § 1.10(b), Schedule 1.10.)

Further, the contract explicitly states that pre-installation testing with Wheatland was not the only experimentation involved with the Equilon sale. Section § 1.10(b) of the contract states that MCE would conduct post-installation testing at Equilon's Detroit terminal. Venture, for its part, attempts to minimize this post-installation testing as mere "[c]onfirming" and "verifying," not actual "experimentation." (Venture's SJ Br. 5.) These other terms do indeed appear among a long checklist of MCE's anticipated post-installation tests (see Equilon Contract Schedule 1.10), but Venture cites no authority for the notion that these terms are obviously distinguishable from permissible experimentation. Nor does Venture make any effort to show how the various "confirmations" and "verifications" listed would not be integral to MCE's efforts to build a working automated butane blending system for the first time. (See id. (stating that MCE's on-site testing would include, for example, "[v]erify[ing] that the system is injecting the proper amount of butane" and "[v]erify[ing] that date-dependent blend parameters and controls change appropriately").) Venture attempts to bolster its claim by again citing to the April 2000 e-mail to argue that, though the contract mentioned post-installation testing, Mattingly admitted that no further experimentation was required after the Wheatland tests. (E-mail from Larry Mattingly to Joe Ahern of 4/19/00.) Again, however, Venture misreads the relevant evidence. In his e-mail to Equilon's Ahern, Mattingly said that he was satisfied that the pre-installation testing at Wheatland "me[t] the minimum standards" described in Section 1.10(a) and informed Ahern that he was ready to progress with the installation rather than cancelling the contract. (Id.) The e-mail said nothing about the quite separate requirements of Section 1.10(b) and the post-installation testing that needed to occur before MCE would be willing to transfer ownership of the system to Equilon. Contrary to Venture's assertions, the e-mail does not "indicate[] that no experimentation was needed at Equilon." (Venture's SJ Br. 5.) Overall, the contract and the tests outlined on the attached checklist describe the exact the sort of experimentation needed "to bring [an] invention to perfection, or to ascertain whether it will answer the purpose intended," Elizabeth, 97 U.S. at 137—namely, the automated blending of butane with gasoline at a point immediately prior to distribution.

As a final effort to paint the Equilon sale as a commercial, rather than experimental, endeavor, Venture argues that the contractual provisions relating to the sale of 500,000 barrels of butane makes the sale primarily commercial as a matter of law. (Venture's SJ Br. 5-6.) Venture cites to numerous cases for the proposition that "commercial transactions of this volume cannot give rise to 'experimental use." (Id. (stating that 500,000 barrels equals 21 million gallons: "enough butane to fill over one million cars even if no gasoline were added").) This is an attractive argument, but Venture misses the mark on a critical point: butane is not the invention. See Helsinn Healthcare S.A. v. Teva Pharm. USA, Inc., 855 F.3d 1356, 1366 (Fed. Cir. 2017) (". . . the offer or contract for sale must unambiguously place the invention on sale, as defined by the patent's claims") (emphasis in original). All the cases Venture cites involve high-volume sales of the invention itself. See, e.g., Merck & Cie v. Watson Labs., Inc., 822 F.3d 1347, 1355 (Fed. Cir. 2016) (stating that an offer to sell 62,500,000 doses of a dietary supplement could not be considered experimental); Atlanta Attachment Co. v. Leggett & Platt, Inc., 516 F.3d 1361, 1366 (Fed. Cir. 2008) ("An offer to mass produce production models [i.e., the invention] does not square with experimentation[.]"). MCE sold just one blending system before the critical date. It would not sell another until May 20, 2002—after the patent application's filing date. This next sale, to a company called Buckeye Terminals, LLC, in Hartsdale, Indiana, does not contain any of the detailed testing, revocation, or transfer of title conditions from the Equilon contract, and, most notably, calls for the customer to pay MCE for the equipment and installation instead of handing it over for free. 6 (See generally Buckeye Construction Contract, Ex. I to Krill Decl. in Supp. of Sunoco's Resp. to Venture's SJ Mot. [327-3] ("Krill Decl.").)

A May 28, 2002 proposal issued in connection with the Buckeye system explicitly refers to the Equilon system as "the 'prototype' system" upon which the Buckeye system would

The experimental nature of MCE's sale of the blending system to Equilon survives scrutiny even if the court rephrases Venture's objection as being that the volume of butane somehow "overwhelms" the rest of the agreement. The Equilon contract has two distinct sections: the installation of the butane blending system, and the butane supply agreement. The contract also provides the parties with numerous opportunities to cancel the *entire agreement* depending on the outcome of the installation. (See Equilon Contract §§ 1.02, 1.04, 1.10.) No such provisions appear in the butane supply section. The apparent effect of this asymmetry is to render the butane supply portions of the agreement conditional on the successful design and installation of inventors' experimental system. (See Sunoco's Resp. Br. 6 ("Equilon would purchase butane if, and only if, the post-critical date testing was successful.").) Looking to the agreement as a whole, it is clear that MCE used the offer to supply butane as a means of enticing Equilon to permit MCE to use one of Equilon's terminals as a testing ground for a new blending system—something entirely consistent with a primarily experimental intent. (Equilon Contract § 1.01 (stating that the purchase and sale of butane is the consideration for the design and installation of the experimental blending system).)

The Federal Circuit has consistently recognized that multi-stage contracts which anticipate future business, such as this one, may nevertheless be driven by an experimental purpose. In *Monon Corp. v. Stoughton Trailers, Inc.*, 239 F.3d 1253 (Fed. Cir. 2001), the Federal Circuit reversed the district court's grant of summary judgment of invalidity where a transportation company purchased one prototype trailer from a patentee "with the intention of purchasing an additional 300 once the trailer's durability had been proven in actual, normal use[.]" *Id.* at 1256. The district court had viewed the sale as a "marketing ploy" to secure future sales to that same customer, but the Federal Circuit disagreed, concluding that the evidence disputed the district

be based. (5/28/02 Buckeye Proposal § 2.1, Ex. J to Krill Decl. [327-3].)

court's characterization even though the customer was ultimately required to pay for using the trailer during the trial period. *Id.* at 1260–61. The Federal Circuit ruled similarly in *Honeywell International, Inc. v. Universal Avionics Systems Corp.*, 488 F.3d 982 (Fed. Cir. 2007)—a dispute over a patented "terrain warning system" for use in airplanes. *Id.* at 987. There, the court upheld the district court's finding of experimental use despite evidence that Honeywell proposed future commercial sales of its invention conditioned on successful experimentation. *Id.* at 996–97. These conditional offers, the court held, did not defeat a finding of experimental intent:

These human factor and cockpit integration tests were a part of Honeywell's program to determine that the invention worked for its intended purpose. If, and only if, these tests were successful, Honeywell proposed commercial terms for the supply of 100 new systems to replace the GPWS systems. If the tests were not successful, Honeywell proposed to supply its GPWS systems instead. Beyond these experimental programs, Honeywell did not offer its inventive system to any other customer until well after the critical date. The record also shows, often in the form of internal corporate communications, that Honeywell did not refer to the new system as ready for sale. Thus, the record consistently shows that Honeywell's negotiations and proposals before the critical date evinced a purpose of experimentation[.]

Id. (emphasis added). Of course, "[e]ven free distribution of a prototype may raise the on-sale bar if is done to solicit a sale," Intel Corp. v. U.S. Intern. Trade Com'n, 946 F.2d 821, 830 (Fed. Cir. 1991), but the evidence is clear that MCE did not seek to make any future sales of its invention to Equilon after the testing period. The butane supply agreement does not obviously negate the objective evidence of experimental intent with respect to the automated butane blending system. Its inclusion in the Equilon contract does make the inquiry more challenging than if the parties entered into two separate contracts, but a commercial motivation with respect to the auxiliary goods or services which accompany an experimental sale do not necessarily taint the transaction as a whole. See TP Laboratories, Inc. v. Professional Positioners, Inc., 724 F.2d 965, 968–73 (Fed. Cir. 1984) (concluding that an orthodontic device was not on-sale when the orthodontist tested it on three patients before the critical date, did not charge the patients for the device, but did "follow its regular practice of setting a fixed total fee for professional services, which included

necessary appliances"); *Barry v. Medtronic, Inc.*, 230 F. Supp. 3d 630, 656–67 (E.D. Tex. 2017) (upholding the jury's finding that no commercial sale occurred for experimental surgeries when the patients were billed for hospital overhead and the staffs' typical wages but not "for the inventive concept of the surgery"). As has been long established, even benefits arising from the use or sale of the invention itself are permissible so long as they are "incidental to the primary purpose of experimentation." *EZ Dock*, 276 F.3d at 1357 (Linn, J., concurring); *see also Elizabeth*, 97 U.S. at 135 ("Whilst the supposed machine is in such experimental use, the public may be incidentally deriving a benefit from it").

Venture's motion for summary judgment of invalidity based on the Equilon sale is denied.

ii. The Kerr-McGee Prior Art System

Next, Venture claims that the "inventors sold and installed a [butane] blending system at Kerr-McGee's facility in Nashville in the mid-1990s that invalidates many claims"—specifically, claims 1-3, 12-13, and 36-40 of the '302 Patent; and claims 1-2, 5-6, and 10-14 of the '629 Patent. (Venture's SJ Br. 1; Venture's SJ Mot. 1.) Venture argues that the Kerr-McGee system is prior art under 35 U.S.C. § 102(b) (publicly used or on-sale) and § 102(g) (invented by another without abandonment, suppression, or concealment) because it was sold and publicly used as early as 1994 and was not confidential. (Venture's SJ Br. 10–11.) Venture does not elaborate on how the Kerr-McGee system meets the requirements of Sections 102(b) or (g), but Sunoco largely concedes the point. (See id.; Sunoco's SJ Resp. 1, 13. But see Sunoco's SOAF Resp. to ¶¶ 23, 24 (stating that Texon only sold "components for a system," and generally denying Venture's claims for lack of knowledge).) Instead, Sunoco focuses on whether the Kerr-McGee system actually anticipates the claims in question. Sunoco argues that summary judgment is inappropriate with respect to most of the claims mentioned because Sunoco is no longer asserting those claims against Venture. (Sunoco's SJ Resp. 1 n.1.) As for the dependent claims that Venture discusses in detail, Sunoco argues that summary judgment is inappropriate because the

undisputed evidence shows that the Kerr-McGee system was a "manual blending system" in which "a human operator generated the blend ratio" rather than the "process control unit" required by the patents' claims. (*Id.* at 1.)

Before ruling on this issue, however, the court pauses to address Sunoco's jurisdictional arguments. On September 11, 2017, in the middle of briefing for the parties' previous summary judgment motions, Sunoco filed an amended notice of its asserted claims which dramatically reduced the number of claims at issue in this case. (See Sunoco's Notice of Currently Asserted Claims [251] ("Sunoco's Claim Notice"), 1 (reducing Sunoco's asserted claims from 116 to just 33).) Of the nineteen claims Venture asserts are anticipated by the Kerr-McGee system, only dependent claims 2 and 3 in the '302 Patent and 2 and 12 in the '629 Patent are still asserted against Venture. (Sunoco's SJ Resp. 1, 13.) Venture's present summary judgment motion nevertheless seeks to invalidate many of the no-longer-asserted claims. Sunoco argues that the court must dismiss all of Venture's counterclaims against non-asserted patent claims for lack of jurisdiction because "there is no longer a live case or controversy regarding them." (See id. at 1 n.1; Sunoco's Claim Notice 6–8.)

The court agrees with Sunoco, but only in part. "It is well-established that, in patent cases, the existence of a case or controversy must be evaluated on a claim-by-claim basis." *Streck, Inc. v. Research & Diagnostic Systems, Inc.*, 665 F.3d 1269, 1281 (Fed. Cir. 2012) (internal citation and quotation marks omitted). A party seeking a declaratory judgment bears the burden of establishing that jurisdiction exists "at all stages of review." *Id.* at 1282 (quoting *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, 127 (2007)). Accordingly, "a counterclaimant must show a continuing case or controversy with respect to withdrawn or otherwise unasserted claims." *Id.* at 1283. The court also recognizes the clear precedent set by the Federal Circuit in *Honeywell*, however, which held that an actual case or controversy still exists when a counterclaimant seeks to invalidate independent claims that were withdrawn by the patentee, but the patentee continues

to assert the dependent claims which rely on those independent claims. 488 F.3d at 995-96 ("[I]nfringement of a dependent claim also entails infringement of its associated independent claim."); see also Sunoco SJ Opinion I, 2017 WL 4283946, at *2 n.3 (citing Honeywell and stating that Sunoco's decision to withdraw the independent claims would not have a material effect on the case). That is the situation here. The remaining claims are all dependent claims, and Venture specifically identifies the withdrawn independent claims as appropriate for continued jurisdiction because of their relationship to the asserted dependent claims. And although Sunoco argues for a broader dismissal order in its brief opposing summary judgment (see Sunoco's SJ Br. 13, n.21), it, too, recognized the relevancy of the underlying independent claims in its notice of asserted claims: specifically, '302 Patent claim 1, and '629 Patent claims 1, 10, and 11.7 (Sunoco's Claim Notice 3.) Conversely, although Venture halfheartedly argues for the inclusion of all the previously-asserted claims, the only ones discussed in any detail in Venture's brief supporting summary judgment are the dependent claims still asserted against Venture and their related independent claims. Based on the applicable case law, the court concludes that an actual case or controversy exists for claims 1–3 of the '302 Patent, and claims 1, 2, 10–12 of the '629 Patent. Venture's invalidity counterclaims with respect to the remaining claims in the '302 and '629 Patent are dismissed for lack of jurisdiction.

a. The Independent Claims

The parties again start their arguments by discussing issues of waiver. Venture believes that summary judgment of invalidity is appropriate with respect to several of the independent claims in the two patents ('302 Patent claim 1; '629 Patent claims 1 and 10) because "Sunoco's technical expert (Norman Goddard) does not dispute that these claims are anticipated."

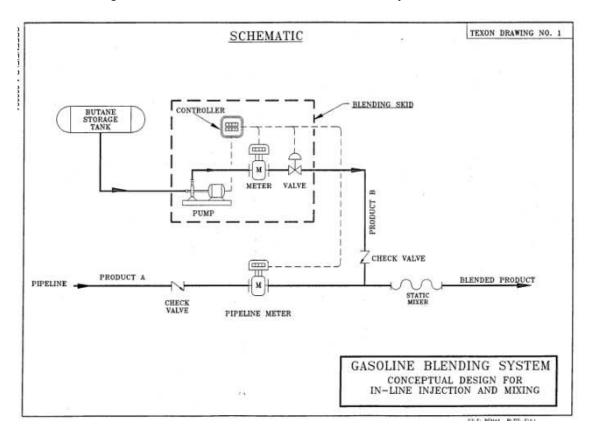
Claim 11 in the '629 Patent is also a dependent claim, but because it rests in the middle of a chain linking non-asserted independent claim 10 to asserted dependent claim 12, it must be considered as well. (See '629 Patent col. 13 I. 64–col. 14 I. 15.)

(Venture's SJ Br. 11.) Although it is true that Goddard's validity report does not address these claims, Sunoco explains that this is because they are among the claims that Sunoco no longer asserts against Venture. (See Sunoco's Notice of Currently Asserted Claims [251], 3–4.) Further, Goddard's report specifically stated that he was addressing only asserted claims, and that he "reserve[d] the right to provide an opinion as to the validity of any other claim . . . should such request be made of me in the future." (Goddard Rebuttal Report on Validity, Ex. 26 to Gross Decl. [278-22], ¶¶ 3–7.) Evidently anticipating such a response, Venture argues that, because these independent claims are the basis for asserted dependent claims, Goddard should have included them in his validity report "if [he] truly disputed [them]." (Venture's SJ Br. 11.)

The court declines to hold Goddard's failure to address the independent claims in his rebuttal report against Sunoco. As previously stated, this court has little interest in sifting through the parties' never-ending stream of arguments based on questionable waivers or defaults, and is disinclined to grant summary judgment on this basis alone. In addition, the record shows that Goddard *did* address whether the independent claims were anticipated during his deposition (*see* Sunoco's Resp. Br. 13 n.21), so the court may look to the substance of his testimony (and the other evidence cited in Sunoco's statement of additional material facts) to evaluate the merits of each side's argument.

In light of this evidence, the court is satisfied that summary judgment of invalidity is warranted with respect to the aforementioned independent claims of the '302 and '649 Patents. It is clear to the court that no genuine dispute of material fact still exists as to whether the Kerr-McGee system anticipates the independent claims—it does. Claim 1 of the '302 Patent is representative of the disputed independent claims, and reads in relevant part: "A system for blending butane and gasoline at a tank farm comprising: a) a tank of gasoline; b) a tank of butane; c) a blending unit . . . ; d) a dispensing unit . . . ; and e) a rack, wherein the dispensing unit is

located . . . [.]"⁸ Of these limitations, the parties only dispute whether the Kerr-McGee system included a "tank of gasoline." A schematic of the Kerr-McGee system is shown below:



(Kerr-McGee Operating & Procedures Manual § 5, Ex. 34 to Dodd Decl. [368-7].) As shown in the schematic, the butane originated in a "butane storage tank" and the gasoline (labeled "Product A") started in a "pipeline." The parties agree that the Kerr-McGee system also sourced its gasoline from a barge docked somewhere near the terminal. (Sunoco's SOAF Resp. to ¶¶ 25–29.) Venture claims that the barge and the required "tank of gasoline" amount to the same thing. (See Venture's SOF ¶¶ 28–29; Rys Report on Invalidity ¶ 133, Ex. 10 to Dodd Decl. [372-9].) Indeed, inventor Vanderbur stated as much at his deposition when he described the barge as containing

The other independent claims in the '302 and '629 Patents replace the word "butane" with "volatility modifying agent" (i.e., the broader category of substances that includes butane), but all require a "tank of gasoline." See, e.g., '629 Patent col. 13 I. 64–col. 14 I. 6 (claim 10).

several compartments—or "[a] tank of some type"—filled with gasoline that would then be pumped into the Kerr-McGee system. (76/20/17 Vanderbur Dep. 374:18–25, Ex. 17 to Dodd Decl. [372-13].) Sunoco's own expert, Goddard, testified similarly when asked whether the barge had a tank on it: "Okay. The barge is—actually is a tank. They're just metal boxes with covers on them. Well, you know, sealed covers so you don't have . . . VOCs [i.e., volatile compounds] coming out the top of it, and then you have a tug pushing it around." (9/27/17 Goddard Dep. 296:16–297:2, Ex. 21 to Gross Decl. [278-20].) Sunoco concedes that Vanderbur and Goddard made these statements, but denies that either man ever admitted that "a barge with a tank" (of gasoline) was the same as a "tank of gasoline." Sunoco points to Goddard's statement that "you can classify a barge as a transportation system for moving gasoline" as evidence of his true thoughts on barge-sourced gasoline (*id.* at 297:5–7), but there is no reason that a barge cannot simultaneously be both a container (or "tank") and a vehicle for transport.9

Sunoco also cites to the '302 Patent's specification in an effort to exclude barges with tanks from the claimed language:

The term "tank farm" is meant to encompass any facility that contains a number of large storage tanks for petroleum products, from which petroleum tanker trucks are filled. Such facilities typically contain multiple storage tanks that separately contain various types and grades of gasoline, including reformulated gasoline as that term is typically used in the gasoline business, and the various grades of reformulated gasoline. . . .

The tanks often hold in excess of 500,000 gallons of petroleum product, and are surrounded by berms to capture any petroleum spills. Such facilities typically receive their petroleum products from petroleum pipelines that consolidate refined petroleum products from a number of refinery trunk lines, although tank farms can also be supplied only from one refinery, or from a coastal or freshwater port that receives refined petroleum products by boat. As used herein, the term "tank farm" only includes tank farms that distribute petroleum products to petroleum tanker trucks.

The court recognizes that Goddard asked for the opportunity to weigh in on the validity of unaddressed claims, but the court is unable to envision any additional evidence beyond that already presented, or any serious argument that Sunoco could advance, that could create a genuine dispute of material fact on this issue.

'302 Patent col. 4 I. 58–col. 5 I. 15. Sunoco appears to believe this language establishes that "barges with tanks" do not fall within the scope of a "tank of gasoline" at tank farm. The court does not so interpret this language, or any other specification, in this way. The specification itself mentions that tank farms may be supplied from a "port that receives refined petroleum products by boat." *Id.* Venture's view also comports with the parties' agreed construction of "tank farm" as "[a]ny facility that contains a number of large storage tanks for petroleum products received from a refinery and distributed to tanker trucks." *Sunoco Markman Opinion*, 2017 WL 1550188, at *20. If a barge docks directly at a tank farm and supplies gasoline to the farm's blending system from its onboard tanks, then that simply cuts out the middle step of transferring the gasoline from the port to the tank farm to be held in yet another holding tank. Common sense would lead any reasonable juror to conclude that a tank of gasoline is a tank of gasoline, whether afloat or on dry land. Venture's motion for summary judgment of invalidity of '302 Patent claim 1 and '629 Patent claims 1 and 10 is granted.

b. The Dependent Claims

Venture claims the "Kerr-McGee system also anticipates the dependent claims of the '302 and '629 patents that recite generating a 'blend ratio' based on a 'desired vapor pressure' and the claims that require a 'process control unit' to do so." (Venture's SJ Br. 12.) As stated above, the remaining dependent claims at issue are '302 Patent claims 2–3 and '629 Patent claims 2, 11–12. Claim 2 in both patents, as well as claim 11 in the '629 Patent, are all roughly identical ¹⁰ and add an additional component to the aforementioned blending system described in the independent claims (gas tank, butane tank, blending unit, dispensing unit, rack): a "process control unit" that "generates a ratio input signal that controls the ratio of butane and gasoline blended by the blending unit." The other two claims, '302 Patent claim 3 and '629 Patent claim

Again, the only difference between the claims is that some cover "butane" while others cover a "volatility modifying agent." *Compare* '629 Patent claim 2 *with* claim 11.

12, are themselves dependent on claims that require a process control unit to generate a ratio input signal, "wherein the ratio input signal is derived from a calculation of the ratio of butane and gasoline that will yield a desired vapor pressure."

It is undisputed that in the Kerr-McGee system, a human operator was responsible for taking samples of the unblended gasoline using a portable analyzer, using the vapor pressure reading to look up the appropriate blend ratio in a table of calculations, and then entering that blend ratio into an operator interface. (Sunoco's SOAF Resp. to ¶¶ 31–33.) The interface then sent a signal to a programmable logic controller (or "PLC", labeled as the "controller" on the Kerr-McGee schematic), which controlled the valves in the blending unit to mix the correct amount of butane and gasoline. (*Id.* at ¶¶ 33–34.) The parties' sole area of disagreement is over the extent to which the PLC "generates" the ratio input signal. Sunoco argues that the human element of the Kerr-McGee system is enough to deny summary judgment: "a human operator manually determined the blend ratio and manually inputted the blend ratio into a blend controller . . . which adjusted a valve to achieve that blend ratio. Hence, the human operator—not a 'process control unit'—generated the blend ratio." (Sunoco's Resp. Br. 13.) Venture, meanwhile, argues that the claims "do[] not require that the process control unit calculate or create the desired blend ratio; the claim merely requires that it "generates a ratio input signal." (Venture's SJ Br. 14 (emphasis in original).)

Venture's creative underlining aside, this court is not convinced that the case is so clear-cut. The word "generates" modifies the entire phrase "ratio input signal," not just "signal." As Sunoco points out, generate means "to bring into existence." (Sunoco's Resp. Br. 14 (quoting Merriam-Webster's Collegiate Dictionary (10th ed., 1997).) This suggests that the process control unit must "bring into existence" the entire ratio input signal, not just a signal containing ratio information received from an external source. See also '302 Patent claim 3 (similarly stating that the radio input signal itself must be "derived from a calculation of the ratio of butane and

gasoline"). This battle over content versus transmission is extremely narrow, but important. To illustrate, imagine a hypothetical patent for software that "generates an e-mail." This act has two components: writing the e-mail and sending the e-mail. Applied to this context, Venture's argument would be that software that merely *sends* an e-mail written by human hands is one that "generates an e-mail." Sunoco's argument is that the patent as a whole clearly requires the software to both write *and* send the e-mail.

While a reasonable jury might conclude that it is enough that the Kerr-McGee system's PLC generated a "signal" that contained a blend ratio determined and entered by a human, Sunoco's contrary interpretation is just as, if not more, reasonable. The patents' specification, for example, describes a preferred embodiment of the invention in which:

[A] process control unit [] dictates and controls the ratio at which butane and gasoline are blended based upon the prescribed vapor pressure. The process control unit receives measurements of the vapor pressure of the butane and gasoline, and from those measurements calculates the ratio at which the butane and gasoline should be blended to achieve the prescribed vapor pressure. Based upon those calculations, the process control unit emits a ratio input signal that controls the ratio of butane and gasoline blended by the blending unit.

'302 Patent col. 6 II. 12–21. In addition, Venture's efforts to paint Sunoco's witnesses as having conceded the point are misplaced: although they all admitted that the Kerr-McGee system's PLC generated the signal, they uniformly denied that the PLC generated the calculation as well. (See, e.g., Benavides Decl. ¶ 10, Ex. 32 to Gross Decl. [278-28] ("The [PLC] signaled a butane control valve to open or close and thereby adjusted the flow rate of the butane stream to the manually preset blend ratio.") (emphasis added).) Finally, this court's earlier Markman opinion bolsters Sunoco's position that the claimed process control unit must be responsible for generating the ratio input signal from scratch. In constructing the term "blending unit" as used in claim 1 of the '302 Patent, the court held that the blending unit did not have to be "capable of performing the calculation to create a blend ratio" because other claims—the ones at issue here—specifically "reference[d] an automatically calculated blend ratio" made by a process control unit. Sunoco

Markman Opinion, 2017 WL 1550188, at *13. This court also addressed the potential for a human operator directly:

Many parts of the specification and the claims themselves appear to contemplate the patented system operating without a processing unit; Sunoco urges that this must mean that the blending unit is doing the controlling. The alternative, however, is not a self-regulating blending unit that contradicts the express definition in the specification, but a human operator. Though this would not be the ideal version of the invention, it would be a functional version of Claim 1 that is consistent with the specification.

Id. at *15. Although the court did not need to elaborate on the claims reciting a process control unit in its claim construction opinion, the inverse of this passage is also likely true: the variants of Sunoco's invention that do feature a process control unit do not allow for human-created blend ratios or "ratio input signals."

As Venture has failed to show that there are no genuine disputes of material fact with respect to these claims, summary judgment is denied.

B. Non-Infringement

Venture next seeks summary judgment of non-infringement on certain claims in the '302, '629, '671, and '948 patents. A determination of patent infringement involves a two-step inquiry. "The court must first interpret the claims to determine their scope and meaning. It must then compare the properly construed claims to the allegedly infringing device." *Dynacore Holdings Corp. v. U.S. Phillips Corp.*, 363 F.3d 1263, 1273 (Fed. Cir. 2004) (citation omitted). The first step of this inquiry is a legal determination. The second step is primarily factual, though to support a verdict of infringement the accused device must satisfy every limitation in the asserted claims, either literally or under the doctrine of equivalents. *Freedman Seating Co. v. American Seating Co.*, 420 F.3d 1350, 1356 (Fed. Cir. 2005). "[A]Ithough equivalence is a factual matter normally reserved for a factfinder, the trial court should grant summary judgment in any case where no reasonable factfinder could find equivalence." *TechSearch, LLC v. Intel Corp.*, 286 F.3d 1360, 1371 (Fed. Cir. 2002).

i. '302 patent claim 17; '629 patent claims 17 and 31; '948 patent claims 1 and 7

U.S. Venture first argues that its systems do not "transmit" or "provide" a signal or instruction to a programmable logic controller (PLC), and therefore do not infringe claim 17 of the '302 patent, claims 17 and 31 of the '629 patent, or claims 1 and 7 of the '948 patent. (Venture's SJ Brief 14.) Each of the relevant claims in the '302 and '629 patents requires the step of "transmitting" either a "signal" or "instruction" to a "programmable logic control" or "programmable logic controller." The relevant claims in the '948 patent require a "processor programmed to . . . provide a control signal to [a] programmable logic controller[.]" U.S. Venture does not deny that its systems include the requisite processors, signals or instructions, and programmable logic controllers. Instead, the company argues that its signals and/or instructions originate (or are programmed to originate) "within" the programmable logic control(ler) itself, and therefore are not "transmitted or provided to the PLC." (*Id.*)

The Federal Circuit considered a similar argument in *NTP*, *Inc. v. Research in Motion*, *Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005), *abrogated on other grounds*, *Iris Corp. v. Japan Airlines Corp.*, 769 F.3d 1359, 1361 n.1 (Fed. Cir. 2014). The patents at issue in that case "relate[d] to systems for integrating existing electronic mail systems . . . with radio frequency ('RF') wireless communication networks, to enable a mobile user to receive email over a wireless network." *NTP*, 418 F.3d at 1287. Certain claims in the patents required, *inter alia*, that an "RF receiver . . . transfer[] the originated information to the at least one of the plurality of destination processors." *Id.* at 1310. The defendant argued that the RF receiver and destination processor would have to be "separately housed" in order for "information" to be "transferred" from one to the

Although not relevant to the disputed issue here, the "signal" in claim 17 of the '302 patent must "correspond[] to the vapor pressure of the blend[.]" In claims 17 and 31 of the '629 patent, the "instruction" must be "for adjusting the butane stream to the calculated blend rate for blending with the gasoline stream[.]"

other. *Id.* The court rejected this argument because neither the patent specifications nor the plain and ordinary meaning of the claim language required it. "[A] 'transfer' of information can equally occur between two entities that are physically housed together," the court explained. *Id.*

Sunoco does not suggest that U.S. Ventures' signals and/or instructions originate "outside" the company's programmable logic controllers. Instead, Sunoco argues that *NTP* forecloses U.S. Venture's argument that this is what the claims require. The court agrees. Neither party requested a claim construction on the relevant terms, which suggests that they themselves believe that the plain and ordinary meaning should apply. And the plain and ordinary meanings of the relevant terms—"processor," "transmit," "provide," "signal," "instruction," "to," and "programmable logic controller"—do not require that signals or instructions being transmitted from a processor to a programmable logic controller originate "outside" the programmable logic controller. A reasonable jury could find that signals or instructions originating from a processor "within" a programmable logic controller are "transmitted to" that controller, so U.S. Venture's motion for summary judgment of non-infringement is denied with regard to claim 17 of the '302 patent, claims 17 and 31 of the '629 patent, and claims 1 and 7 of the '948 patent.

ii. '671 patent claim 1

U.S. Venture also argues that its systems do not infringe claim 1 of the '671 patent. (Venture's SJ Brief 15.) That claim recites, in relevant part:

- 1. A method for in-line blending of gasoline and butane comprising:
 - a) providing a continuously flowing gasoline stream that comprises:
 - i) a plurality of batches of different gasoline types . . . ;
 - b) providing an allowable vapor pressure;
 - c) providing a butane stream that comprises a butane vapor pressure;
 - d) periodically determining said gasoline vapor pressure;
 - e) periodically determining said gasoline flow rate;
 - f) calculating a blend ratio based upon said butane vapor pressure, said gasoline vapor pressure, and said allowable vapor pressure; and
 - g) blending said butane stream and said gasoline stream at a blending unit at said blend ratio to provide a blended gasoline stream having a blended vapor pressure less than or equal to said allowable vapor pressure.

('671 Patent, col. 15 II. 56-67.) The parties agree that U.S. Venture's Green Bay, Madison South, Fort Worth, Bettendorf, and Houston systems are connected to a gasoline pipeline and blend butane into gasoline received from the pipeline. (Venture's Resp. to Sunoco's SOAF ¶ 9.) The parties also agree that these systems are capable of being operated by at least four different pieces of "source code," three of which U.S. Venture obtained from Technics (referred to in this round of briefs as Technics' "Original," "First Pass Only," and "Not First Pass" code, respectively), and one of which U.S. Venture wrote itself. (See U.S. Venture's 2017 SOF [197], at ¶13; Venture's Mot. 15-17; Sunoco's Mot. 16-18.) U.S. Venture now argues that the systems using the "Original," "Not First Pass," and U.S. Venture versions of the source code did not "periodically determine[] . . . gasoline vapor pressure," as step (d) of claim 1 requires, and that the systems using the "Original" and "First Pass Only" versions of the source code did not "provid[e] a continuously flowing stream of gasoline," as step (a) requires. (Venture's Mot. 15-18.)

U.S. Venture first suggests that there is no evidence that systems using the "Original" Technics source code *periodically* determined gasoline vapor pressure, because Sunoco's technical expert (Norman Goddard) purportedly implied in his expert report that those systems "would measure the vapor pressure of the unblended gasoline <u>only one time</u>." (Venture's Mot. 15 (emphasis in original).) But that is not actually what Goddard said in his report. According to Goddard, systems operating with the "Original" Technics code "sampled the vapor pressure of unblended gasoline at the start of each batch of gasoline that is blended with butane." (Goddard Rep. [278-4], at ¶ 583, 106.) U.S. Venture does not suggest that the word "periodically" in claim 1 should be construed according to anything other than its plain and ordinary meaning, and a reasonable jury could conclude that a system that determines gasoline vapor pressure "at the start of each batch" satisfies step (d) because it is a system that determines gasoline vapor

pressure "periodically." 12

U.S. Venture next argues that there is no evidence that its systems using the "Original" or "First Pass Only" source code infringe because Goddard's report states that "after the gasoline flow stopped for one batch, the blending process ended, and it would start over again by sampling the unblended gasoline at the start of the new batch." (Venture's Mot. 16; Goddard Rep. ¶ 583.) Because these systems "stop" the "gasoline flow" between batches, U.S. Venture reasons, they do not "provid[e] a continuously flowing gasoline stream," as step (a) requires. Although at first glance this argument appears to have some merit, the court concludes that it too is off base. U.S. Venture's literal interpretation of the claim language "continuously flowing" would render certain dependent claims in the '671 patent nonsensical. Claim 13, for example, which is dependent on claim 1, adds the steps of "recording a start time when a recorded batch *begins to flow* past said blending unit," and "recording an end time when said recorded batch *finishes flowing* past said butane blending unit." ('671 Patent, col. 17 II. 1-5 (emphasis added).) These references to the beginning and end of the flow only make sense if the phrase "continuously flowing" in step (a) means continuously flowing *during the blending process*.

U.S. Venture is on stronger ground, however, when it argues that its systems using the "Not First Pass" and U.S. Venture versions of the source code do not perform step (d). As Sunoco concedes, these systems do not measure the vapor pressure of gasoline *before* blending it with butane. (See Sunoco's Resp. to Venture's SOF ¶ 52.) Although the text of step (d) does not expressly distinguish between blended and unblended gasoline, it is clear from dependent claim 2 (which recites the same steps as claim 1, plus the additional step of "measuring vapor pressure of the blended gasoline stream") that step (d) refers to determining the vapor pressure of

Indeed, this is exactly how Goddard interprets the word. (See Goddard Report \P 578.)

unblended gasoline. Construing step (d) to encompass measurements of the vapor pressure of blended gasoline would make claim 2 entirely redundant.

Sunoco argues that these systems infringe under the doctrine of equivalents, even if they do not literally infringe. The doctrine of equivalents can support a verdict of infringement where there are "differences between the claimed invention and the accused product," but those differences are "insubstantial." *Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1347 (Fed. Cir. 2013). A party alleging infringement under the doctrine of equivalents can usually prevail by "show[ing], for each claim limitation, that the accused product 'performs substantially the same function in substantially the same way with substantially the same result as each claim limitation of the patented product." *Id.* (quoting *Crown Packaging Tech., Inc. v. Rexam Beverage Can Co.*, 559 F.3d 1308, 1312 (Fed. Cir. 2009)).

Sunoco's argument under the doctrine of equivalents rests on Goddard's expert report. According to Goddard, the *function* of measuring the vapor pressure of blended and unblended gasoline alike "is to obtain a vapor pressure measurement to be used in determining a calculated blend ratio to yield a desired vapor pressure of the blend." (Goddard Rep. ¶¶ 847-48.) The *way* in which the measurements of blended and unblended gasoline vapor pressure are used, Goddard continues, are "as parameters in the blend ratio calculation." (*Id.*) And "the *result*" in both cases "is a calculated blend ratio that will yield a desired vapor pressure of the blended gasoline." (*Id.*)

As U.S. Venture points out, however, the doctrine of equivalents may not be used to "vitiate" a claim limitation "by rendering it meaningless." *American Calcar, Inc. v. American Honda Motor Co., Inc.*, 651 F.3d 1318, 1339 (Fed. Cir. 2011). In this case, finding that measuring blended gasoline's vapor pressure is equivalent to measuring unblended gasoline's vapor pressure would render claim 2 of the '671 patent entirely meaningless. The court therefore rejects Sunoco's equivalence argument as a matter of law.

U.S. Venture's motion for summary judgment of non-infringement on claim 1 of the '671 patent is granted with regard to systems using the "Not First Pass" and U.S. Venture source code, but is otherwise denied.

iii. '302 patent claim 16

Finally, U.S. Venture argues that none of its systems infringe method claim 16 of the '302 patent because they do not "transmit[]... the butane vapor pressure to the processing unit," as step (c) of that claim requires. (Venture's SJ Mot. 18.) As with its discussion of the '671 patent, U.S. Venture divides its arguments about this claim according to the various source codes used by its systems, and the court will follow suit.

The company first suggests that there is "no evidence" that any of its own employees actually used the "Original" Technics source code to measure the vapor pressure of butane. But there is clearly a genuine factual dispute about this question. Gary Chambers, a former regional terminal manager at Defendants' facilities in Green Bay, Wisconsin, has submitted a declaration stating that the system Defendants purchased from Technics "contained a sensor for determining and receiving the RVP for the butane stream," and that although he and others "used a constant value for butane RVP," they did so because "we experienced little, if any, fluctuation in its measured value." (Chambers Decl. [367], at ¶ 11.) A reasonable jury could infer from Chambers' reference to minimal fluctuation in the "measured value" of butane RVP that Defendants' own employees or agents used Technics' Original source code to measure butane vapor pressure.

Even if this were not the case, U.S. Venture is incorrect to assume that it cannot be held liable for Technics' infringing use of the "Original" source code. U.S. Venture contends this is true "because Sunoco has licensed Technics' past infringing activity under the covenant not to sue in their settlement agreement." (*Id.* at 19.) But this court has already determined that Sunoco's agreement not to sue Technics for its past infringing sales did not exhaust Sunoco's rights in the patents at issue. *See Sunoco SJ Opinion I*, 2017 WL 4283946. That agreement did not

retroactively authorize Technics' infringing sales, thereby triggering the exhaustion doctrine, because it did not license *future* infringing conduct, as the plaintiff did in *TransCore*, *LP v*. *Electronic Transaction Consultants Corp.*, 563 F.3d 1271, 1276 (Fed. Cir. 2009). Rather, Sunoco covenanted "not to sue Technics regarding Technics' Exploitation of the Accused system occurring prior to" June 17, 2016. (Settlement Agreement § 1.4, 2.1 [372-20].) The agreement is explicit that it "does not confer in any way a license to the Asserted Patents to Technics or to any Third Parties, including Technics' customers." (*Id.* at § 2.1.) U.S. Venture's conclusory assertion that the agreement is an "express license" that precludes *any* party's liability for Technics' past infringing conduct is belied by the text of the agreement itself.

U.S. Venture next argues that systems using the later versions of Technics' source code did not infringe claim 16 because they used only an "assumed" butane vapor pressure rather than "an actual butane vapor pressure." (Venture's SJ Mot. 20.) It is not entirely clear what U.S. Venture means by "actual" butane vapor pressure, but the court presumes the company is referring to a figure derived from measuring a sample of the butane stream. Claim 16 does not expressly require the determination of such an "actual" butane vapor pressure. Indeed, the court notes that this construction makes little sense in light of claim 15, which recites steps for determining butane vapor pressure by "drawing a sample of butane from the butane stream" and "measuring the vapor pressure of the sample of butane." U.S. Venture's construction would make claim 15 redundant, so the court rejects it.

Finally, the company argues that there is insufficient evidence that anyone used any of the later versions of the source code to "transmit[]" even an "assumed" butane vapor pressure to a processing unit at Defendants' facilities. Gary Chambers testified that Defendants' systems in Green Bay were programmed—by someone—to include a "constant" value for butane vapor pressure, but he also admitted that he did not know if the system "actually used" this constant value when it calculated blend ratios. (Chambers Dep. [368-5], at 122-24.) Goddard's

infringement report, however, states that it did. According to Goddard, systems using later versions of Technics' software "transmit[ted] an assumed butane vapor pressure and the measured gasoline pressure to the PLC, and then calculated a blend ratio based on those values." (Goddard Rep. ¶ 369.) Regarding U.S. Venture's software, Goddard states that "although a butane vapor pressure was not directly used in U.S. Venture's blending algorithm for calculating the blend percentages . . . the algorithm still uses assumptions about the value of the butane vapor pressure." (*Id.* at ¶ 353.) It does so by "using scaling parameters" that "are based on an assumption of the vapor pressure of the butane stream." (*Id.* at ¶ 349.) A reasonable jury could find from this evidence that Defendants' systems used an assumed butane pressure in their butane blending systems, and that this use is the equivalent of a "transmission" of an assumed butane vapor pressure. The court therefore denies Defendants' motion for summary judgment on claim 16 of the '302 patent

C. Lost Profit Damages

Finally, Venture requests summary judgment that Sunoco is not entitled to lost profit damages for any of Venture's conduct that is found to be infringing. To recover lost profits, the patentee must show a reasonable probability that, but for the infringing activity, it would have made the sales that were made by the infringer. See Presidio Components, Inc. v. Am. Tech. Ceramics Corp., 875 F.3d 1369, 1380 (Fed. Cir. 2017); see also, e.g., Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1372 (Fed. Cir. 1991) ("Evidence that shows a reasonable probability that the patent owner would have made the infringing sales made by the infringer will suffice."). One way to prove but-for causation is to rely on the Panduit test, which requires the patentee to show "(1) demand for the patented product; (2) an absence of acceptable, noninfringing substitutes; (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of profit that would have been made." Presidio, 875 F.3d at 1380 (citing Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1156 (6th Cir. 1978)); see also, e.g.,

Mentor Graphics Corp. v. EVE-USA, Inc., 851 F.3d 1275, 1285 (Fed. Cir. 2017) (same); Standard Havens, 953 F.2d at 1372-73 (same).

Venture argues that Sunoco cannot recover lost profit damages because it cannot meet its burden of proof on the second *Panduit* factor: the absence of acceptable, non-infringing alternatives. (Venture's SJ Br. at 23.)¹³ In assessing the second *Panduit* factor, a fact-finder "considers demand for particular limitations or features of the claimed invention." *Mentor Graphics*, 851 F.3d at 1285. "To prove the absence of acceptable, non-infringing alternatives, the patentee may prove either that the potential alternative was not acceptable to potential customers or was not available at the time." *Presidio*, 875 F.3d at 1380. If buyers "are motivated to purchase because of particular features available only from the patented product, products without such features—even if otherwise competing in the marketplace—would not be acceptable noninfringing substitutes." *Mentor Graphics*, 851 F.3d at 1286 (quoting *Standard Havens*, 953 F.2d at 1373).

Venture proffers evidence of only one potential substitute for Sunoco's patented technology: Venture's own Modified System, which "require[s] the human operator to manually enter the blend percentage of butane, rather than have it automatically calculated by the PLC[.]" (Venture's SJ Br. at 22; see also 1/12/2018 Morrill Decl. ¶ 3.) The parties agree that Venture is the hypothetical customer for purposes of the *Panduit* test. (Venture's SJ Br. at 25; Sunoco's Resp. Br. at 23.) Venture emphasizes that after it stopped using the accused systems, it adopted the Modified System rather than exit the market or "enter into an agreement with Sunoco." (Venture's SJ Br. at 24.) Venture also states that it continues to use the Modified System. (*Id.*) These actions, Venture contends, demonstrate that Venture would have considered the Modified System to be an acceptable substitute for Sunoco's patented technology during the period of

Venture does not challenge Sunoco's ability to satisfy the other *Panduit* factors. (See Venture's SJ Br. at 21-25.)

alleged infringement. (*Id.* at 22-25.) Venture further argues that it would have implemented the Modified System during that time period even assuming it "does not have all the benefits of the patented system." (*Id.* at 25.) As a result, Venture concludes, Sunoco cannot recover lost profits. (*Id.* (citing *Mentor Graphics*, 851 F.3d at 1286 (recognizing that a "patentee cannot establish entitlement to lost profits for [a] particular sale" "if the customer would have bought the infringing product without the patented feature").)

In response, Sunoco argues that the evidence belies Venture's assertion that it would have considered the Modified System to be an acceptable alternative. First, Venture used the accused systems for approximately five years and switched to the Modified System only after this litigation commenced—and only after Venture's attorneys advised Venture to do so. (See 6/6/17 Lamirande Dep. at 30:25-31:9.) Additionally, according to Sunoco, Venture's own documents and deposition testimony demonstrate its longstanding preference for automated, rather than manual, blending technology. Lamirande, for example, testified during his deposition that in 2008, Venture "really wanted to find an automated solution." (7/6/2016 Lamirande Dep. at 75:4-7.) An internal Venture document from 2011 discussed Venture's desire for an automated system that can "continuously adjust[] the blend percentage." (Executive Summary at US-0001970)). Venture's director of business development testified during his deposition that Venture would be able to "blend additional volume" with an automated system and that such a system was best from a safety, efficiency, and regulatory perspective. (Koel Dep. at 41:2-12, 42:14-18.) Conversely, Venture's technical expert testified during his deposition that human error associated with manual adjustment could jeopardize Venture's ability to maximize profits or could result in production of gasoline that fails regulatory standards. (Rys Dep. at 261:12-262:10.) And according to Venture's damages expert, Venture expects it might blend some ten percent fewer butane gallons using the Modified System as compared to the accused systems. (8/29/2017 Malackowski Report at 6-7.)

Viewing this evidence in the light most favorable to Sunoco and drawing all reasonable inferences in its favor, the court concludes that a reasonable jury could find for Sunoco on the second Panduit factor. More specifically, a reasonable jury could find that Venture was "motivated to purchase" and develop the accused blending systems "because of particular features"—here, automated blending capabilities—"available only from the patented" technology. Mentor Graphics, 851 F.3d at 1286 (quoting Standard Havens, 953 F.2d at 1373). On this basis, a reasonable jury could further find that Venture would not have considered the Modified System, which lacks those features, to be an acceptable substitute for the patented technology. See id. The court also notes that "[t]he 'acceptable substitute' element . . . must be viewed of limited influence where the [accused] infringer knowingly made and sold the patented product for years while ignoring the 'substitute.'" Panduit, 575 F.2d at 1162 n.9; see also, e.g., Stryker Corp. v. Intermedics Orthopedics, Inc., 96 F.3d 1409, 1418 n.3 (Fed. Cir. 1996); United States Gypsum Co. v. Lafarge N. Am. Inc., 670 F. Supp. 2d 737, 742-43 (N.D. III. 2009). Because Venture (a) used the accused systems for approximately five years; (b) acknowledges that "[t]he concept of an operator manually entering a blend ratio into a PLC" has been "known since the early 1990s" (Venture SJ Br. at 24 (citing the Kerr-McGee system)); and (c) contends that it could have created the Modified System in just a few hours even in 2012 (id. at 24), a reasonable jury could find that Venture "ignore[d] the 'substitute.'" *Panduit*, 575 F.2d at 1162 n.9.

For all of these reasons, the court finds that there are genuinely disputed issues of material fact regarding the acceptability of non-infringing alternatives to Sunoco's patented technology. Accordingly, the court denies Venture's motion for summary judgment on Sunoco's claim for lost profits. See Anderson, 477 U.S. at 248.¹⁴

Venture also argues that the Modified System was available throughout the damages period. (See, e.g., Venture's Mot. at 23-24; 1/12/2018 Morrill Decl. ¶¶ 4-5.) Sunoco disputes this contention in its Local Rule 56.1(b) statement but does not press this argument in its opposition to Venture's motion for summary judgment. (Compare Sunoco's SOAF Resp.

II. Sunoco's Motion

Plaintiff Sunoco seeks summary judgment on two issues: (a) that certain references that U.S. Venture identified in its Final Supplemental Unenforceability and Invalidity Contentions do not qualify as "prior art" for purposes of Venture's invalidity defenses; and (b) that Sunoco did not engage in inequitable conduct during the prosecution of its patents.

A. Alleged Prior Art References

As the court has already explained, 35 U.S.C. § 102 identifies the circumstances in which a patent can be invalidated based on "prior art" references. "[P]rior knowledge or use [of an invention] by others may invalidate a patent [on the same invention] . . . if the prior knowledge or use was accessible to the public." *Woodland Tr. v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998); 35 U.S.C. § 102(a). A patent also can be invalidated where the invention it describes was "on sale in this country" more than one year before the filing date of the patent, or was previously "reduce[d] to practice" by another inventor who did not "abandon[], suppress[], or conceal[] it." *Z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1352 (Fed. Cir. 2004); 35 U.S.C. § 102(b), (g)(2).

In its Final Supplemental Unenforceability and Invalidity Contentions, U.S. Venture identified numerous alleged "prior art" references that it claims are sufficient to invalidate the patents at issue in this case. Sunoco now moves for summary judgment with regard to three of these references, arguing that none of them qualify as "prior art" under section 102. The court considers the three references in turn. Because patents are presumed valid, see 35 U.S.C. § 282,

to ¶¶ 76, 78 with Sunoco's Resp. Br. at 22-26.) Even assuming, without deciding, that the Modified System was available during the period of alleged infringement, Venture is not entitled to summary judgment on Sunoco's claim for lost profits. Sunoco can satisfy its burden on the second *Panduit* factor by proving "either that the potential alternative was not acceptable to potential customers or was not available at the time." *Presidio*, 875 F.3d at 1380 (emphasis added). As already discussed, reasonable minds could conclude that the Modified System was not acceptable to Venture.

the relevant question for the court is whether a reasonable jury could conclude that the evidence in the record clearly and convincingly shows that the references were publicly known and/or used; were "on sale" at least one year before Sunoco filed for its patents; or were previously reduced to practice without being abandoned, suppressed, or concealed. See Zenith Electronics Corp. v. PDI Communication Systems, Inc., 522 F.3d 1348, 1362 (Fed. Cir. 2008) ("[A]ccused infringers are not free to flout the requirement of proving invalidity by clear and convincing evidence by asserting a 'practicing prior art' defense to literal infringement under the less stringent preponderance of the evidence standard.") (quoting Tate Access Floors, Inc. v. Interface Architectural Resources, Inc., 279 F.3d 1357, 1367 (Fed. Cir. 2002)).

i. The TransMontaigne System

The first reference on which Sunoco seeks summary judgment is the "[g]asoline blending system owned and operated by TransMontaigne Terminaling, Inc." (Venture's Invalidity Contentions [288-1], at 2.) According to U.S. Venture, "TransMontaigne developed, built, and began using a system for blending gasoline and butane at its tank farm in North Little Rock, Arkansas in 1997." (Sunoco's SOF ¶ 1.) This system qualifies as "prior art" under 35 U.S.C. § 102, U.S. Venture argues, because TransMontaigne (1) reduced it to practice without concealing it; (2) used it in a way that was "publicly available"; and (3) used it in a way that was "commercial." (*Id.*)

"In order to establish an actual reduction to practice," the party asserting invalidity must prove that the prior inventor "constructed an embodiment or performed a process that met all the limitations," and "determined that the invention would work for its intended practice." *Z4 Techs.*, 507 F.3d at 1352. Sunoco argues that there is no evidence that the alleged prior-art system was ever actually constructed. One of the documents U.S. Venture cited in its Invalidity Contentions, Sunoco notes, is an "authorization for expenditure" form that refers to "a contemplated system rather than an actual system." (Sunoco's SOF ¶ 11.) This form describes a butane blending

system only in the future tense. (*Id.*) Another document cited by U.S. Venture is titled "Butane Blending Description" and is marked "DRAFT." (*Id.* at ¶ 12.) Like various other documents relating to TransMontaigne, this document is not dated and does not indicate whether the system it describes was actually built. (*Id.* at ¶¶ 12-15.)

U.S. Venture admits that these documents "do not indicate whether any system was actually built," but, as the company points out, these documents are not the only evidence supporting its contention that the TransMontaigne system was, in fact, "reduced to practice." (Venture's Resp. to Sunoco's SOF [398], at ¶ 13.) TransMontaigne's former President and COO, Larry Clynch, attests that construction of a "butane blending system" at TransMontaigne's facility in North Little Rock "began in approximately June 1997 and finished in approximately September 1997." (Clynch Decl. [392], at ¶¶ 10-11.) "Butane blending using the system began very shortly after construction was completed," Clynch asserts, "in September or October 1997," when over 300 people attended "a grand opening at the terminal." (Id. at ¶¶ 11, 18.) Attendees of the grand opening "were allowed to roam around the terminal except for designated hazardous areas," Clynch says, and "would have been able to observe the gasoline tanks, the butane tanks, the butane blending skid where the blending occurred, and the truck loading racks." (Id. at ¶ 18.)

Clynch's declaration is not, on its own, clear and convincing evidence that the TransMontaigne system was built, let alone that the system was publicly used or known. The Federal Circuit requires "[c]orroboration . . . of any witness whose testimony alone is asserted to invalidate a patent." *Finnigan Corp. v. Int'l Trade Comm'n*, 180 F.3d 1354, 1368 (Fed. Cir. 1999). This requirement is premised on "doubt that testimonial evidence alone in the special context of proving patent invalidity can meet the clear and convincing evidentiary standard to invalidate a patent." *Id. See also Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1172-73 (Fed. Cir. 2006) (insufficient corroboration of reduction to practice, where only relevant evidence besides inventor's own testimony was unauthenticated handwritten notes purportedly belonging to

inventor's employee). U.S. Venture provides documentary evidence that corroborates *some* of Clynch's testimony. It is clear from the document labeled "Construction Book," for example, that *some* form of construction relating to butane blending was underway at TransMontaigne's North Little Rock facility in the summer and fall of 1997. (*see* TPSL 793-883, Ex. 38 to Dodd Decl. [395].) But it is not clear from these documents exactly what was constructed, or whether it was ever finished. And there is no evidence whatsoever that corroborates Clynch's assertions about a "grand opening" where the facility's butane blending system would have been available to the public—an event for which there would likely be ample corroborative evidence.

Notably, U.S. Venture also admits that EPA regulations "require parties who blend butane and gasoline to submit reports detailing the volumes of butane blended with the gasoline," and that the EPA has informed U.S. Venture that the agency is not in possession of any such reports that relate to the TransMontaigne facility in North Little Rock. (Venture's Resp. to Sunoco's SOF ¶¶ 28-29.) As far as the court can tell, U.S. Venture has not offered any explanation why the agency has no record of these reports.

This is a problem for U.S. Venture—particularly when it is considered alongside the absence of corroborating evidence to support key parts of Clynch's declaration. Under a "preponderance of the evidence" standard, Clynch's testimony would probably be enough to avoid summary judgment. But not under the "clear and convincing" standard. No reasonable jury could find the evidence that the TransMontaigne system is prior art to be clear and convincing. As a result, the court grants Sunoco's motion for summary judgment with respect to that system.

ii. The Williams Des Moines "Phase II" System

Sunoco next seeks summary judgment that "Phase II" of the "[g]asoline-butane blending system owned and operated by Williams Pipe Line Company" in Des Moines, Iowa, is not prior art. According to U.S. Venture, "at least as early as April 1990 . . . Williams Pipe Line Company ('Williams') designed, built, and publicly used a system and method for blending gasoline and

butane at a tank farm/terminal" located near Des Moines. (Venture's Resp. to Sunoco's SOF ¶ 32.) In support of this contention, Venture relies on a memorandum on Williams stationary, dated April 18, 1990, describing "costs associated with the proposed butane blending system at our Des Moines station." (Venture's SOAF ¶ 11; MAG-00275-76, Ex. P to Decl. of Michael Krill [288].) According to the memo, "Phase II" of this proposed system was to involve the installation of "on-line analysis equipment" that "will monitor and adjust butane injection rates continuously." (MAG-00275.)

In a previous round of briefing in this case, U.S. Venture itself conceded that Phase II of the Williams system "is not 'public use' prior art under 35 U.S.C. §§ 102(a) or (b), because there is no record evidence that it was implemented." (Memo. in Opp. to Sunoco's Mot. for Summ. J. [320], at 10.) The company now argues that Phase II is prior art because it was "known" by Williams in 1990. (Def.'s Resp. Br. 8.) But this knowledge must have been "accessible to the public" for it to qualify as prior art. *Woodland*, 148 F.3d at 1370. The only evidence U.S. Venture cites showing that "knowledge" of Phase II was "accessible to the public" is a brief passage in the deposition of Larry Mattingly, who confirmed that "during the 1990s" he "heard that Williams was working on a system that used an online Grabner analyzer." (Mattingly Dep. [395-4], at 430.) Without corroboration, this is not enough to meet the applicable standard of clear and convincing evidence. Therefore, Sunoco's motion for summary judgment is granted with respect to the Williams Des Moines "Phase II" system.

iii. The Altoona System

The final reference at issue is the "[g]asoline-butane blending system offered for sale by Linco Electromagnetic, et al. for a terminal in Altoona." According to U.S. Venture, this system "was offered for sale for blending gasoline with butane . . . as early as 1995." (Venture's Resp. to Sunoco's SOF ¶ 36.) In support of this contention, the company cites two documents authored by Benny Benavides, a consultant on issues relating to the refining and pipeline industry. (Exs.

52-53 to Dodd Decl.; Benavides Dep. [278-27], at 8.) Both documents are labeled "Fax Transmittal" and contain the subject heading "Butane Blending-Altoona Terminal." (*Id.*) One document is dated June 9, 1995, and the other is dated June 26, 1995. (*Id.*) The June 9 document, which Benavides addressed to David Ponder of "Linco-Electromatic, Inc.," refers to a "recent discussion concerning a proposal from Linco to design and construct a butane blending and control system." (Ex. 52 to Dodd Decl.) The June 26 document is addressed to Larry Mattingly at "Mid-Continent Energy Co." and refers to "Linco's alternative proposal dated June 23," which Benavides describes as "considerably more expensive than what is being proposed by Gate City Equipment Co." (*Id.*) Neither Linco's proposal(s) nor Gate City's proposal is in the record. But U.S. Venture infers from the two documents authored by Benavides that Linco and Gate City "submitted competing offers to sell a system for blending gasoline and butane in 1995 for a tank farm in Altoona," thereby triggering the "on-sale bar" in 35 U.S.C. § 102(b). (Venture's SOAF ¶ 13.)

As this court has already explained, the on-sale bar applies "when an invention is both the subject of a commercial offer for sale and ready for patenting" before the challenged patent's application date. *EZ Dock v. Schafer Sys., Inc.*, 276 F.3d 1347, 1351 (Fed. Cir. 2002) (citing *Pfaff*, 525 U.S. at 67). "Only an offer which rises to the level of a commercial offer for sale, one which the other party could make into a binding contract by simple acceptance (assuming consideration), constitutes an offer for sale under § 102(b)." *Group One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1948 (Fed. Cir. 2001). "To meet the first, commercial offer, prong, the offer must be sufficiently definite that another party could make a binding contract by simple acceptance, assuming consideration." *Atlanta Attachment Co. v. Leggett & Platt, Inc.*, 516 F.3d 1361, 1365 (Fed. Cir. 2008). To "determine such definiteness," the court must "review the language of the proposal in accordance with the principles of general contract law." *Id.*

No reasonable jury could find, in this record, clear and convincing evidence of an offer to be bound. The alleged offers are not in the record, so neither a jury nor the court could "review the[ir] language" to determine the intent of the alleged offerors, *id*. Benavides' references to certain *portions* and/or *characteristics* of those alleged offers are insufficient to establish the alleged offerors' intent to be bound under a clear and convincing evidence standard.

Even if the two documents in the record were sufficient, the on-sale bar still would not apply, because the offers were made by someone other than the patentee, and there is no evidence that these offers publicly disclosed the invention. See ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 866 (Fed. Cir. 2010) ("The 'on sale' provision of 35 U.S.C. § 102(b) is directed at precluding an inventor from commercializing his invention for over a year before he files his application. Sales or offers made by others and disclosing the claimed the invention implicate the 'public use' provision of 35 U.S.C. § 102(b)."); Medtronic Inc. v. Edwards Lifesciences Corp., No. SACV1200327JVS, 2013 WL 12113417, at *22 (C.D. Cal. Sept. 17, 2013) (on-sale bar not applicable where alleged offer was made by a third party in a way that did not publicly disclose the invention).

Sunoco's motion for summary judgment is granted with regard to the Altoona system.

iv. Relevancy to Obviousness

The TransMontaigne, Williams Phase II, and Altoona systems are the focus of another argument, as well. Not content with a determination that these systems do not constitute "prior art" for purposes of 35 U.S.C. § 102, Sunoco also asks the court to declare that those systems are not relevant at all. Sunoco argues, in short, that evidence of systems that were not reduced to practice cannot be relevant to an obviousness analysis under 35 U.S.C. § 103. The court disagrees. See I/P Engine, Inc. v. AOL Inc., 576 Fed. App'x 982, 988-89 (Fed. Cir. 2014) (evidence of system that was not "fully functional" could still be relevant to obviousness).

B. Inequitable Conduct

Sunoco also seeks summary judgment on U.S. Venture's counterclaim that Sunoco engaged in inequitable conduct during the prosecution of the patents-in-suit. Venture claims that all five patents are unenforceable due to numerous alleged false statements or omissions made by the inventors and their patent attorneys to the PTO. This alleged inequitable conduct includes:

(a) the failure to disclose the Equilon sale; (b) the failure to disclose seven other blending systems as prior art (including the TransMontaigne, Williams Phase II, and Altoona systems addressed in the previous section); (c) false statements in declarations made in support of the '671, '948, and '548 Patents; and (d) the failure to disclose Venture's invalidity and inequitable conduct contentions against the three original patents when Sunoco applied for its two final patents after this litigation began. (Venture's Am. Answer 57–88.) Unless otherwise stated, Venture asserts that these alleged lies and omissions occurred during the prosecution of all five patents; but, in any case, Venture argues that the instances of patent-specific inequitable conduct render the rest of Sunoco's family of patents unenforceable as well. (See, e.g., id. at 75–88.)

"Inequitable conduct is an equitable defense to patent infringement that, if proved, bars enforcement of a patent." *Regeneron Pharmaceuticals, Inc. v. Merus N.V.*, 864 F.3d 1343, 1350 (Fed. Cir. 2017) (quoting *Therasense, Inc. v. Becton, Dickinson and Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011)). A finding of inequitable conduct has broad consequences: unlike validity defenses, which are claim-specific, inequitable conduct renders an entire patent unenforceable, and can even apply to other patents in the same family. *Therasense*, 649 F.3d at 1288 (calling the remedy for inequitable conduct "the 'atomic bomb' of patent law.") Not surprisingly, inequitable conduct allegations are frequently leveled by accused patent infringers "on the slenderest grounds." *Id.* at 1289.

As a result, parties seeking to invoke the defense of inequitable conduct face a heavy burden: "the accused infringer must prove that the applicant misrepresented or omitted material information with the specific intent to deceive the PTO." *Id.* at 1287 (citing *Star Scientific Inc. v. RJ Reynolds Tobacco Co.*, 537 F.3d 1357, 1365 (Fed. Cir. 2008)). Both elements—materiality and intent to deceive—require clear and convincing evidence. *Id.*; *see also Optium Corp. v. Emcore Corp.*, 603 F.3d 1313, 1320 (Fed. Cir. 2010). In *Therasense, Inc. v. Becton, Dickinson and Co.*, 649 F.3d 1276 (Fed. Cir. 2011), the Federal Circuit emphasized that "intent and materiality are separate requirements." *Id.* at 1290. District courts may not use a "sliding scale" to compensate for an insufficient showing on either element. *Id.* Similarly, courts "may not infer intent solely from materiality.... Proving that the applicant knew of a reference, should have known of its materiality, and decided not to submit it to the PTO does not prove specific intent to deceive." *Id.* (citing *Star*, 537 F.3d at 1366). Even if an accused infringer meets this burden of proof, the district court must "weigh the equities to determine whether the applicant's conduct before the PTO warrants rendering the entire patent unenforceable." *Id.* at 1287; *see also Star*, 537 F.3d at 1365–66 ("[I]t is also inequitable to strike down an entire patent where the patentee only committed minor missteps or acted with minimal culpability or in good faith.")

The standard for evaluating the materiality of withheld information is "but-for materiality." *Regeneron*, 864 F.3d at 1350 (citing *Therasense*, 649 F.3d at 1291). "A prior art reference is but-for material if the PTO would not have allowed a claim had it been aware of the prior art." *Id.* References or information that are merely cumulative to the information already before the patent examiner, however, are not considered but-for material. *Id.* (citing *Digital Control Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1319 (Fed. Cir. 2006)).

The intent prong of the *Therasense* test, as stated, requires the *specific intent* to deceive the PTO. *Therasense*, 649 F.3d at 1290; *Larson Mfg. Co. of S. Dak. v. Aluminart Prods. Inc.*, 559 F.3d 1317, 1327 (Fed. Cir. 2009) ("[I]nequitable conduct requires not intent to withhold, but rather intent to deceive."). Negligence, even gross negligence, on the part of the patent applicant is not sufficient to prove deceptive intent. *Therasense*, 649 F.3d at 1290. Instead, "the accused

infringer must prove by clear and convincing evidence that the applicant knew of the reference, knew that it was material, and made a deliberate decision to withhold it." *Id.* Given the rarity of direct evidence, specific intent may be inferred from circumstantial evidence—such as evidence that the applicant repeatedly misrepresented facts contrary to known information. *See Regeneron*, 864 F.3d at 1351. But the specific intent to deceive must be "the single most reasonable inference able to be drawn from the evidence." *Therasense*, 649 F.3d at 1290 (quoting *Star*, 537 F.3d at 1366.) The existence of multiple reasonable inferences precludes a finding of deceptive intent. *Id.* at 1290–91.

As a preliminary matter, Sunoco objects to all of Venture's inequitable conduct counterclaims as "conclusory" and lacking any "factual basis for a finding of deceptive intent." (Sunoco's SJ Br. 14-15 (quoting Optium, 603 F.3d at 1321).) This court generally agrees with Sunoco's assessment. Venture has taken a shotgun-style approach to its accusations in the apparent hope that quantity will compensate for a lack of quality. Venture devotes scant resources into explaining how any omission was material or affirmative statement was false, and even less to establishing that there was any intent to deceive. In a pattern that will become clear as the court discusses all of Venture's claims, Venture appears to believe that anything it disagrees with is a "lie." Nearly all of Venture's allegations include patently unsupported claims such as "[c]learly Sunoco made this false statement with the intent to deceive the examiner . . .[,]" (see, e.g., Venture's SOAF ¶ 31), and treat legitimate grounds for differences of opinion as evidence of deceit. (See id. at ¶ 34; see also Sunoco's Resp. to Venture's SOAF [417], Resp. to ¶¶ 19–40 (repeatedly stating that Venture's "statements entirely consist of improper legal arguments, legal conclusions, opinions, speculation, and conjecture, rather than a statement of facts supported by evidence.").) Venture relies heavily on the maxim that a court may infer intent from circumstantial evidence. In nearly every instance, however, Venture ignores numerous more-reasonable inferences, preferring to engage in what Sunoco calls "defamatory false

speculation." (Sunoco's Resp. to Venture's SOAF, Resp. to ¶ 31.) Venture's counterclaims are a prime example of why the Federal Circuit has established such a high burden of proof for inequitable conduct. Nevertheless, the court will address each of Venture's counterclaims in turn.

i. Non-disclosure of the Equilon Sale

The court grants Sunoco's motion for summary judgment of no inequitable contact in relation to the Equilon Sale because, setting the question of materiality aside, no reasonable jury could find that Venture can satisfy its burden of proof on the specific intent requirement. Venture argues that the inventors and their patent attorneys knew of the potential for the Equilon Sale to invalidate the '302, '629, and '671 patents. (Venture's Resp. Br. at 22.) Venture also argues that even if they thought the sale was "experimental"—a position reflected, for example, in the Goddard report (see Venture's SOAF ¶ 21)—the "prudent practice" would have been to disclose it to the PTO. (Venture's Resp. Br. at 22.) Because they did not, Venture contends, the inventors and attorneys engaged in inequitable conduct. (*Id.*) In support of its position, Venture cites the Equilon Contract in its entirety; deposition testimony suggesting that Carolyn Campbell, an attorney for the inventors, likely drafted the contract; and Goddard's expert opinions regarding the Equilon Sale. (Venture's SOAF ¶¶ 21, 37.)

At most, this evidence supports the unremarkable proposition that the inventors knew, and that Campbell likely knew, about the Equilon sale. The evidence does not, however, bear directly on whether Campbell or the inventors knew the sale was material "and made a deliberate decision to withhold it." *Therasense*, 649 F.3d at 1290. Furthermore, Sunoco has proffered other evidence tending to undermine this inference. It points to deposition testimony from Campbell's colleague that Campbell "does not know patents" and that her legal expertise is in contracts. (Sunoco's Resp. to Venture's SOAF ¶ 37 (quoting 6/22/2017 Sullivan Dep., Ex. 10 to Krill Decl. [360-6], at 64:25-65:20, 71:4-25).) Additionally, Sunoco emphasizes that, when asked during his deposition why he did not disclose the Equilon Contract to the PTO, Mattingly testified that he did not know

without looking at the patent, but that "we didn't design the system or construct it to see that it would work until September when we started the system up." (5/10/16 Mattingly Dep., Ex. 39 to Gross Decl. [278-33], at 316:5–16.) Finally, as previously discussed, Sunoco has demonstrated experimental intent sufficient to defeat summary judgment of invalidity due to the on-sale bar. Weighing the circumstantial evidence that both Venture and Sunoco have provided, no reasonable jury could conclude that Campbell's or the inventors' specific intent to deceive is "the single most reasonable inference able to be drawn[.]" *Therasense*, 649 F.3d at 1290.

Venture next argues that Sunoco engaged in inequitable conduct while prosecuting the '948 and '548 patents because—although Sunoco disclosed the Equilon Sale to the PTO during prosecution—Sunoco "did not submit other documents necessary to understand the technical aspects of the system." (Venture's Resp. Br. at 23.) Sunoco, however, has provided direct evidence that it "specifically invited the Examiner to request more information should the Examiner find it material." (Sunoco's Br. at 25 (citing '548 Patent Prosecution History, Ex. I to 10/17/2017 Krill Decl. in Supp. of Sunoco's Mot. for SJ of No Inequitable Conduct [301-03], at SUNUS040220-22; '948 Patent Prosecution History, Ex. J to 10/17/2017 Krill Decl. in Supp. of Sunoco's Mot. for SJ of No Inequitable Conduct [301-04], at SUNUS039559-61).) The Examiner did not do so. (Sunoco's SOF ¶ 56.) Venture also contends that Sunoco's patent attorney made representations to the PTO regarding the experimental nature of the Equilon contract without first speaking with the inventors. (Venture's Resp. Br. at 23.) But Venture's cited evidence does not clearly support this proposition, nor does Venture explain how, if true, it would constitute clear and convincing evidence of inequitable conduct. Overall, no reasonable jury considering both Venture's and Sunoco's proffered evidence could conclude that specific intent to deceive the PTO is "the single most reasonable inference able to be drawn[.]" Therasense, 649 F.3d at 1290.

ii. Non-disclosure of alleged prior art references

The court draws the same conclusion concerning Venture's charge that the inventors failed to disclose certain alleged prior art references. Regardless of whether those references are material, no reasonable jury could conclude there is clear and convincing evidence that Sunoco's inventors or prosecuting attorneys acted with specific intent to deceive the PTO.

First, regarding the '948 and '548 patents, Venture argues that Sunoco's patent attorneys engaged in inequitable conduct by failing to disclose the TransMontaigne and Williams systems. (Venture's Resp. Br. at 23.) These references appear in Venture's infringement contentions, and Venture argues that Sunoco should have sought relief from the protective order governing the contentions so that it could have disclosed the references to the PTO. (*Id.*) That Sunoco's attorneys did not do so, Venture contends, amounts to inequitable conduct. (*Id.*) These allegations fall far short of clear and convincing evidence that Sunoco's attorneys "made a deliberate decision to withhold a known material reference." *Therasense*, 649 F.3d at 1290. Indeed, because Sunoco argues that these systems do not qualify as prior art—and because the court has ruled in Sunoco's favor in that regard—a reasonable jury could draw at least one other inference: that Sunoco's attorneys decided not to disclose the reference based on a good-faith belief that they are not material. Accordingly, "intent to deceive cannot be found." *Id.* at 1290-91.

Second, Venture argues that the inventors engaged in inequitable conduct while prosecuting the '302, '629, and '671 patents by failing to disclose the Kerr-McGee system, the Altoona system, and a February 1995 letter from Mattingly to the U.S. Department of Labor. (Venture's Resp. Br. at 21-22.) In the letter, Mattingly describes blending operations and seeks

Venture also argues that the inventors acted with specific intent to deceive the PTO in prosecuting the '948 and '548 patents by falsely characterizing the Kerr-McGee system in an IDS. (Venture's Resp. Br. at 22; Venture's SOAF ¶¶ 30-31.) The court addresses this argument in Section 2.B.iii.

a determination that they do not violate Occupational Safety and Health Administration requirements. (2/6/1995 Letter from Mattingly to U.S. Dept. of Labor ("OSHA Letter"), Attachment 3 to Joint Appendix to Claim Construction Briefs [184-3], at A286.) According to Venture, the inventors knew that the systems described in these documents were "more sophisticated" than those discussed in the background sections of the '302 and '629 patents—and therefore were required to be disclosed—because they "involved blending gasoline and butane inline (in the piping) rather than pumping butane directly into a gasoline tank." (Venture's Resp. Br. at 22.) Venture similarly argues that the Kerr-McGee system was capable of taking samples inline, and that in the background sections of the patents, the inventors downplayed the existence of that feature in the prior art. (*Id.*; *see also* Venture's SOAF ¶ 31 (quoting the Kerr-MecGee "Operating & Procedures Manual").)

In arguing that the circumstances compel only one inference—that the inventors acted with specific intent to deceive the PTO—Venture points to the following evidence: the OSHA Letter; an excerpt from Vanderbur's deposition in which he testified that he was involved with the Kerr-McGee project; a letter regarding the Kerr-McGee system that lists Vanderbur as a recipient; faxes regarding the Altoona system that list Vanderbur and Mattingly as recipients; and passages from the Goddard report describing the systems. (See Venture's Resp. Br. at 22 (citing Venture's SOAF ¶ 35).) Venture also cites a deposition excerpt in which Mattingly testified that inline blending is advantageous because it can keep butane and gasoline well-mixed. (See, e.g., 5/10/16 Mattingly Dep. at 218:21-25.) Finally, Venture cites passages from the background section of the '302 patent that characterize in-tank blending as "labor intensive and imprecise," because "several measurements must be taken throughout the tank" and "considerable stirring must occur to maximize homogeneity." (Venture's Resp. Br. at 21 (quoting '302 patent, Attachment 1 to Joint Appendix to Claim Construction Briefs [81-1], at A007, 2:24-44).) Without much in the way of interpretation, Venture urges that there is only one inference that can be drawn

from these seemingly disparate pieces of evidence: the inventors' specific intent to deceive the PTO.

Sunoco, on the other hand, cites deposition testimony from Vanderbur, Mattingly, and others that, according to Sunoco, allows for "multiple reasonable inferences." (Sunoco's SJ Br. at 16.) Vanderbur, for example, testified during his deposition that he considered the Kerr-McGee system to be a type of "tank blending system" and that it was "similar" to a tank-blending system discussed in at least one of the patents. (Sunoco's SJ Br. at 16 (quoting 6/20/2017 Vanderbur Dep., Ex. O to Krill Decl. [304-06], at 339:2-19).) Vanderbur further testified that he believed his attorneys did not disclose the Kerr-McGee system to the PTO because the Kerr-McGee system is "a tank blending operation and we talked about tank blending operations." (Id. at 379:5-14.) Benavides testified during his deposition that in his view, the Kerr-McGee system did not have equipment that would allow for automatic sampling. (7/11/2016 Benavides Dep., Ex. P to Krill Decl. [304-07], at 88:8-22.) And Sunoco's prosecuting attorney—who later disclosed the Kerr-McGee system in connection with the '948 and '548 patents-testified that he had not known about the Kerr-McGee system during prosecution of Sunoco's earlier patents. (6/22/2017 Sullivan Dep., Ex. 10 to Krill Decl. [360-6], at 166:17-24.) Sunoco similarly emphasizes Mattingly's deposition testimony that the systems described in the OSHA Letter are tank blending systems, and that he saw "no reason" to give the letter to his prosecuting attorney because it "ha[d] to do with process safety management, not with blending gasoline." (5/10/2016 Mattingly Dep. at 318:16-23.) Finally, although Vanderbur and Mattingly appear to have received communications about the Altoona system, Vanderbur reviewed documents regarding the system during his deposition and testified that he recalled nothing about it. (See 5/25/2016 Vanderbur Dep., Ex. N to 10/16/2017 Krill Decl. [288-2], at 42:9-19, 87:19-93:13.) Mattingly also reviewed such documents during his deposition and testified that they did not refresh his recollection of "anyone using a master controller in a computer system to control the ratio of blending of butane and

gasoline at a terminal." (See 5/10/2016 Mattingly Dep., Ex. O to 10/16/2017 Krill Decl. [288-2], at 194:4-195:7.)

The court agrees with Sunoco that no reasonable jury viewing all of this evidence could conclude that it compels only the inference of specific intent to deceive. For example, although Venture's evidence demonstrates that Vanderbur had some involvement with the Kerr-McGee system—and although Venture characterizes the system as more sophisticated than other tankblending systems—no reasonable jury could conclude there is clear and convincing evidence foreclosing the possibility that Vanderbur chose not to disclose the Kerr-McGee system because he believed it was cumulative of other prior art and therefore immaterial. Relatedly, no reasonable jury could conclude there is clear and convincing evidence foreclosing the possibility that Sunoco's patent attorney did not disclose the Kerr-McGee system because he did not know about it. Additionally, no reasonable jury could conclude there is clear and convincing foreclosing the possibility that Mattingly did not disclose the OSHA Letter because he believed the PTO would deem it irrelevant. Finally, no reasonable jury could conclude there is clear and convincing evidence foreclosing the possibility that Vanderbur did not disclose the Altoona system because he did not remember it, and that Mattingly did not disclose the system because it was not something he associated with the automated technology at issue in the patent applications. Because a jury could draw multiple, reasonable inferences from the evidence, a finding that the inventors and/or their prosecuting attorneys made "deliberate decision[s] to withhold . . . known material reference[s]" is precluded. *Therasense*, 649 F.3d at 1290.

iii. Alleged misstatements in the Vanderbur Declaration and IDS

Venture claims that the inventors filed two false declarations during the prosecution of several of their patents. On July 5, 2013, Sunoco filed a supplemental examination request for the '671 Patent. (Venture's Am. Answer ¶¶ 178–180.) This request disclosed information relating to a butane blending system built by Texon in Macungie, Pennsylvania ("the Macungie system"),

and now operated by Sunoco. (*Id.*) Inventor Steven Vanderbur also submitted a declaration ("the Vanderbur declaration") discussing the Macungie system, the construction of which he claims he "supervis[ed]" during his tenure as a Senior Vice President at Texon. (*Id.*; Vanderbur Decl., Ex. I to Venture's Answer, Aff. Defenses, and Countercls. [67-2] ("Venture's First Answer"), ¶ 4.) Vanderbur states that his "responsibilities included overseeing the construction of the [Macgunie] butane blending facility" from roughly March 2002 until its completion in June 2004. (Vanderbur Decl. ¶¶ 4–5.) Vanderbur then outlines the design and operation of the system in detail. (*Id.* at ¶¶ 6–18.) Vanderbur signed his declaration and affirmed that it was based on his own knowledge. Venture claims that this final statement was false. Vanderbur, Venture insists, had no personal knowledge of the facts in his opinion, did not supervise construction of the Macungie system, and "admitted that he lacked the expertise to even discern whether the diagram [included with the declaration] depicts a butane blending system." (Venture's Resp. Br. 20.) Sunoco disagrees, claiming not only that Vanderbur's statements do not suggest any intent to deceive, but that his statements are not false at all. (Sunoco's SJ Br. 21.)

To support its claim that Vanderbur lied, Venture points to a portion of his deposition in which he answered "no" to questions asking if he "supervise[d]" or "was ever involved in overseeing the installation [or construction] of a butane blending system?" (5/25/16 Vanderbur Dep. 170:4–16, Ex. 30 to Gross Decl. [278-26].) Later in that same deposition, however, Vanderbur clarifies that "what I meant is that I wasn't, you know, personally involved onsite with the project, but, obviously, in my responsibilities . . . that would have fallen under me." (5/26/16 Vanderbur Dep. 294:20–24, Ex. U to Sunoco's Statement of Material Facts in Supp. of Sunoco's Mot. for SJ of No Inequitable Conduct [304-11].) Although Vanderbur "wasn't a direct supervisor [] at the project itself," he testified that he was familiar with the Macungie system's general operations and was in frequent contact with Larry Mattingly (the other named inventor on Sunoco's patents), who "was very involved" with the project onsite. (*Id.* at 295:7–16.) This minor

misunderstanding hardly amounts to clear and convincing evidence that Vanderbur intentionally lied to the PTO about his involvement with the Macungie system. His declaration merely stated that he supervised the system's construction as a Texon executive. This statement does not require the conclusion that he had direct personal control over the project. Notably, defense counsel never referenced the Macungie system by name during this portion of Vanderbur's deposition, making his interpretation of the question all the more excusable. (See 5/25/16 Vanderbur Dep. 159:10–170:16 (stating "[w]hose drawing is this?" and "I don't know if it's . . . a system I should be familiar with").) Contrary to Venture's argument, it would be clear to any jury that a specific intent to deceive would be the single most *un*reasonable inference that could be drawn from this evidence.

Venture also cites to Vanderbur's testimony regarding the schematic of the Macungie system which was attached to his declaration. In Venture's estimation, this testimony shows that Vanderbur lied about having personal knowledge of the system. Venture claims that Vanderbur had trouble discerning the schematic's contents and quotes the following exchange from his deposition:

[By Defense Counsel]

Q. So looking at this system, can you tell what the schematic is for?

MS. REPLOGLE: Objection.

- A. I—you know, it—yeah, I'm not an engineer so I don't want to—I can see there's butane. I can see that there's an analyzer.
- Q. Can you tell me whether this is the automated butane blending system?
- A. No.
- Q. Can you tell if this is a butane blending system at all?

MS. REPLOGLE: Objection, form.

A. That's not my—not my expertise.

(Venture's Am. Answer ¶ 186 (quoting 5/25/16 Vanderbur Dep. 169:10–22.) But, as stated, defense counsel never told Vanderbur these questions regarded the Macungie system; he simply handed Vanderbur a copy of the schematic and started asking questions about the numerous symbols shown in it. The copy of this schematic included in the court's record is of such low quality that it is difficult to discern anything, but it is not clear that there is a title or any other reference to Macungie on the document. (See Macungie Schematic, Ex. J to Venture's First Answer [67-3].) That Vanderbur did not immediately recognize the document is not particularly surprising, as the document was "broken up into three different partial sections" and Vanderbur himself admitted that he did not routinely look at schematics in his role at Texon. (Sunoco's Resp. to Venture's SOAF, Resp. to ¶ 32.)¹⁶ And, as with the previous alleged lie, Venture ignores Vanderbur's subsequent testimony in which he recalled that the schematic was indeed "a representation of the Macungie butane blending system." (5/26/16 Vanderbur Dep. 295:21-296:11.) None of this evidence suggests in any way that Vanderbur intended to deceive the PTO about his knowledge of the Macungie system. Venture's real argument appears to be that it believes Vanderbur is not an expert on the Macungie system. But Vanderbur's declaration does not claim expertise, nor exaggerate his qualifications. Vanderbur may not have been able to identify every element on the schematic at his deposition, but his testimony as a whole does not support Venture's suggestion that he was flatly unqualified to discuss the Macungie system. 17

As a further testament to the challenge of reading these sorts of schematics, the court notes that the Macungie schematic resembles the drawing provided in Sunoco's patents, which the court generously described as "somewhat opaque" in its *Markman* opinion. *See Sunoco Markman Opinion*, 2017 WL 1550188, at *2.

Vanderbur tentatively identified various elements as valves, injectors, and pressure bypasses. He also identified and discussed the online Grabner unit and "micromotion meter" in detail. Elements he failed to identify include something defense counsel called "a thing that kind of looks like a hair dryer" and another that left defense counsel at a total loss for words: "I don't even know how to describe that shape. But maybe it looks like a flashlight almost?" (5/25/16 Vanderbur Dep. 159:10–170:3.)

Because no reasonable jury could conclude that Vanderbur acted with the specific intent to deceive, summary judgment is appropriate without the need to address the materiality prong of the *Therasense* test. Moreover, even if Venture could prove specific intent, there is no serious case to be made that the alleged misstatements were material. Venture makes no effort to compare the Macungie system to the claims of the '671 Patent. In fact, Venture does not challenge the Vanderbur declaration's description of the Macungie system at all; Venture only contends that Vanderbur was not qualified to present that evidence. The PTO granted the '671 Patent in light of this prior art. There is no reason to think that would change if someone else— Mattingly, for example—had signed the declaration instead. See Symantec Corp. v. Computer Assocs. Intern., Inc., 522 F.3d 1279, 1297–98 (Fed. Cir. 2008) (concluding that a declarant had not misrepresented his familiarity with the state of the art, and that "lack of technical expertise alone was insufficient to establish that his declaration was a misrepresentation"). Rather than focus on whether Vanderbur's alleged misstatements are material, Venture sidesteps the question and calls his declaration "presumptively material." (Venture's Resp. Br. 18, 20 (citing Therasense, 649 F.3d at 1292).) The Federal Circuit has indeed created an exception to the usual but-for materiality standard in cases of "affirmative egregious misconduct"—which includes actions "such as the filing of an unmistakably false affidavit." Therasense, 649 F.3d at 1292. Vanderbur's declaration was not false, much less "unmistakably false." Venture cannot use this exception to bypass the materiality prong of the *Therasense* test when it has already failed to demonstrate intent.

These same issues exist in regard to the other allegedly false declaration identified by Venture: a "Supplemental Information Disclosure Statement" ("IDS") that Sunoco submitted in support of the '948 and '548 Patents. Even assuming that the statements in the IDS were material—which Venture does by again invoking the "affirmative egregious misconduct" exception—there is simply no evidence to suggest the specific intent to deceive. The contested

portions of the IDS disclosed information relating to the Kerr-McGee system (discussed above in the context of the system's non-disclosure during the prosecution of the original three patents). Sunoco's prosecution counsel described the Kerr-McGee system as "a tank blending system of the type disclosed in the background section" of the patent applications. (Sunoco's SOF ¶ 53.) In the corresponding passage present in the specifications of the '671, '948, and '548 Patents, the inventors insist that such tank blending systems are different from their patented system for several reasons:

[T]he inventors are aware of an unpatented system that is used to blend butane and gasoline at several terminal tank farms. These systems continuously monitor the Reid vapor pressure of gasoline that is introduced to a storage tank, and blend butane with the gasoline based upon the vapor pressure measurements. These systems do not continuously monitor the Reid vapor pressure downstream of the blending operation as an integrity check. Instead, they certify the integrity of the blending operation by periodically measuring the Reid vapor pressure of the entire storage tank.

('948 Patent col. 2 I. 60-col. 3 I. 2.) According to Venture, this comparison between the Kerr-McGee system and the previously-disclosed "unpatented system[s]" is not accurate. (Venture's Am. Answer ¶ 239.) Venture claims that Sunoco's "characterizations of the Kerr-McGee system in the [IDS] were false," because "the Kerr-McGee system *did* continuously monitor the [RVP] downstream of the blending operation as an integrity check." (*Id.* at ¶¶ 240, 44 (emphasis added).)

To support its argument, Venture cites to the "Operating & Procedures Manual" for the Kerr-McGee system that Sunoco submitted with the IDS, one section of which instructs the system's operator to "sample the blended product downstream of the static mixer." (Kerr-McGee Refining Corp. Operating & Procedures Manual § 2.5.14, Application File of the '948 Patent [184-3], A345.) As Sunoco points out, however, that same portion of the manual specifies that "[p]eriodic sampling and RVP testing is recommended throughout the blend" and that "[t]he operator should judge sampling frequency." (*Id.* at § 2.5.17 (emphasis added).) This belies any

suggestion that the Kerr-McGee system continuously monitored the RVP of blended gasoline. Furthermore, it is clear from both the manual and the declaration of an engineer who worked on the system, Benny Benavides, that the RVP testing would be conducted by an individual (the operator) physically taking samples with a "portable analyzer" from either the blending unit or the storage tank used to hold the blended product. (*Id.* at § 2.5.18; Benavides Decl. ¶¶ 5–12.) The "system" itself was not capable of doing so. (*Id.*) Overall, the manual is not obviously inconsistent with Sunoco's description of the broader category of unpatented tank blending systems in the '958 and '548 Patents' specifications, and the court is not convinced that Sunoco's statements can be considered false.

In addition to being unable to prove that the statements in the IDS were false, Venture has presented no evidence to suggest that Sunoco's prosecuting attorney *intended* to deceive the PTO. *See Symantec*, 522 F.3d at 1298. As stated earlier in regard to Venture's claim that Sunoco acted inequitably by failing to disclose the Kerr-McGee system during the prosecution of the first three patents, inventor Vanderbur testified that he viewed the Kerr-McGee system as a tank blending system of the type disclosed in the specifications. (Sunoco's SOF ¶ 59.) Venture even deposed Sunoco's prosecuting attorney, Sullivan, but uncovered no evidence of deceit. (*Id.* at ¶ 60.) There is no reason to think that these individuals did not honestly believe that the Kerr-McGee system fell within the already-disclosed prior art. Venture's unsubstantiated claims that the inventors "deliberately downplayed the sophistication of the prior art" and did not "credibly believe" their statements are not enough to create a genuine dispute. (Venture's SOAF, Resp. to ¶¶ 59–61.)

Because no reasonable jury could conclude that Venture can meet its burden of proof on the issues of Sunoco's alleged affirmative misstatements, the court grants summary judgment in favor of Sunoco on these counterclaims.

iv. Non-disclosure of Venture's attorney arguments

Finally, the court grants summary judgment of no inequitable conduct relating to Sunoco's non-disclosure of Venture's attorney arguments.

First, Venture faults Sunoco for failing to disclose, during prosecution of the '948 and '548 patents, Venture's invalidity contentions relating to the Feld and Miller prior art references. (Venture's Resp. Br. at 16-17.) Venture presses this argument despite acknowledging that Sunoco did disclose the Feld and Miller references. (Id.) According to Venture, the invalidity contentions are independently material because they "alert" the examiner that Feld and Miller are more significant than the fifty-plus other references Sunoco submitted, and because they "identify the pertinent teachings of the Feld and Miller . . . references." (Id.) But Venture fails to provide examples of how any specific information in the contentions would have aided the examiner and, more importantly, how any specific information would have persuaded the examiner to reject the patent applications. No reasonable jury could find based on Venture's conclusory arguments that Venture's invalidity contentions are material to patentability. Likewise, no reasonable jury could conclude that Sunoco acted with specific intent to deceive the PTO in failing to disclose the references. Venture argues otherwise, but its only cited evidence is the nondisclosure itself; the fact that, in Venture's view, Sunoco submitted other references "of little relevance;" and the fact that Venture did not "highlight the significant references . . . pursuant to the MPEP guidelines." (Venture's Resp. Br. at 23.) Even if a jury credited this evidence, it could not reasonably conclude that the only possible motive underlying Sunoco's failure to disclose the contentions was intent to deceive the PTO. For example, because Sunoco disclosed the Feld and Miller references, and because the MPEP encourages applicants "to avoid the submission of long lists of documents" (see Venture's Resp. Br. at 17 (quoting MPEP § 2004)), it would be rational for a jury to conclude that Sunoco did not disclose the references based on the belief that they are cumulative.

Second, Venture faults Sunoco for failing to disclose, during prosecution of the '948 and '548 patents, Venture's allegations of inequitable conduct regarding the '302, '629, and '671 patents. (Venture's Resp. Br. at 20.) Venture emphasizes that the MPEP lists "allegations of . . . 'inequitable conduct'" among examples of "material information" that "must be brought" to PTO's attention. (Id. (quoting MPEP § 2001.06(c).) Venture does not dispute, however, that Sunoco disclosed publicly available documents regarding the prior art references underlying Venture's inequitable conduct allegations, such as the Equilon Contract, the Kerr-McGee system, and the OSHA Letter. (Id. at 20; see also '548 Patent Prosecution History at SUNUS040220-22; '948 Patent Prosecution History at SUNUS039559-61; Sunoco's SJ Br. at 20; Venture's RSOF Resp. to ¶ 52.) Nor does Venture dispute that Sunoco notified the examiner that "[s]ome of the documents listed come from a pending litigation involving related patents," or that Sunoco offered to provide the examiner with additional references cited in the documents. (See '548 Patent Prosecution History at SUNUS040220-22; '948 Patent Prosecution History at SUNUS039559-61; Venture's RSOF Resp. to ¶ 51.) Rather, Venture argues that the inequitable conduct allegations "could have aided the examiner by pointing out significant issues, such as the prior art sale to Equilon." (Venture's Resp. Br. at 21.) And Venture points out that Sunoco did not disclose the TransMontaigne and Williams systems even though, according to Venture, Sunoco could have disclosed them by seeking relief from the protective order. (See Venture's Resp. Br. at 23; Venture's RSOF Resp. to ¶ 52.)

Even assuming, without deciding, that the inequitable conduct allegations are material (as provided in MPEP § 2001.06(c)), the court concludes that Sunoco is entitled to summary judgment on this issue. Again, the record lacks sufficient evidence from which a reasonable jury could find that Sunoco acted with specific intent to deceive the PTO. Indeed, the only evidence Venture offers in arguing that Sunoco acted with the requisite intent is (1) the nondisclosure itself and (2) Sunoco's failure to request relief from the protective order in relation to the

TransMontaigne and Williams systems. (See Venture's Resp. Br. at 23.) But considering that Sunoco disclosed the pending litigation, noted that it relates to alleged prior art references, and offered to provide the PTO with additional information regarding those references, no reasonable jury could conclude that Sunoco's specific intent to deceive is "the single most reasonable inference able to be drawn from the evidence." *Therasense*, 649 F.3d at 1290 (quoting *Star*, 537 F.3d at 1366). Instead, a reasonable jury could conclude that at least one other inference may be drawn: that Sunoco did not disclose the allegations based on the belief that they are cumulative of both the underlying documents and the disclosure of pending litigation.

CONCLUSION

Plaintiff Sunoco's motion for partial summary judgment [354] is granted. Defendant U.S. Venture's motion for partial summary judgment [363] is granted in part as follows: claim 1 of the '302 patent and claims 1 and 10 of the '629 patent are invalid as anticipated by the Kerr-McGee system, and claim 1 of the '671 patent is not infringed by U.S. Venture's systems that used Technics' "Not First Pass" software or U.S. Venture's own software. U.S. Venture's motion for summary judgment is otherwise denied.

ENTER:

Dated: October 6, 2018

REBECCA R. PALLMEYER United States District Judge

Roberta Kalpunga

Insofar as this court's Order of September 30, 2018 [425] implied that Venture's motion for summary judgment of invalidity was denied, that order is amended to reflect that Venture's motion is granted with regard to claim 1 of the '302 patent and claims 1 and 10 of the '629 patent.