IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
DENVER DIVISION

CRUSOE ENERGY SYSTEMS LLC,	§	
	§	
Plaintiff,	§	
	§	Civil Action No. 1:22-CV-2142-NYW
v.	§	
	§	
ALKANE MIDSTREAM LLC,	§	**HONORABLE**
	§	**JUDGE NINA Y. WANG**
Defendant.	§	

CRUSOE ENERGY SYSTEMS LLC'S REPLY IN SUPPORT OF ITS EMERGENCY MOTION FOR A TEMPORARY RESTRAINING ORDER AND PRELIMINARY INJUNCTION

TABLE OF CONTENTS

Page

I. Crusoe Has Demonstrated A Likelihood of Success on the Merits of Its Infringement Claims. 1

A. Alkane's Non-Infringement Arguments Are Unsupported and/or Contradicted By Record Evidence or Established Case Law. 1

1. Alkane cannot escape liability for infringement merely by contracting with a third party to provide the distributed computing elements of the accused systems. 1

2. Alkane's Assertion That the Accused Products Do Not Include "an Electrical Transformation Module" That Transforms High-Voltage Electrical Output Into a Low-Voltage Electrical Output Is Unsubstantiated. 3

B. Alkane's Invalidity Arguments Are Insufficient to Overcome the Presumption of Validity to Which the Asserted Patents Are Entitled. 5

II. Crusoe Will Suffer Irreparable Harm Absent An Injunction. 6

A. Money Damages are Inadequate 6

B. Market Share Has Been Lost 7

C. Crusoe's Loss of Goodwill and Price Erosion Will be Irreversible 8

III. The Balance of Hardships Favor Crusoe 8

IV. The Public Interest Favors Crusoe 9

V. Crusoe's Requested Relief is Narrowly Tailored 10

VI. A $5,000 Bond is Proper – Alkane's Request is Excessive 10

VII. Conclusion 10

TABLE OF AUTHORITIES

Page(s)

Cases

Abbott Labs. v. Sandoz, Inc.,
544 F.3d 1341 (Fed. Cir. 2008).....7, 8

Akamai Technologies v. Limelight Networks, Inc.,
797 F.3d 1020 (Fed. Cir. 2015).....2

Alice Corp. Pty. v. CLS Bank Int'l.,
573 U.S. 208, 134 S. Ct. 2347 (2014).....6

BlephEx, LLC v. Myco Indus., Inc.,
24 F.4th 1391 (Fed. Cir. 2022) 5, 10

BMC Res., Inc. v. Paymentech, L.P.,
498 F.3d 1373 (Fed. Cir. 2007).....2

Centillion Data Sys., LLC v. Qwest Communs. Int'l,
631 F.3d 1279 (Fed. Cir. 2011).....2, 3

Douglas Dynamics, LLC v. Buyers Prods. Co.,
717 F.3d 1336 (Fed. Cir. 2013).....10

Enfish, LLC v. Microsoft Corp.,
822 F.3d 1327 (Fed. Cir. 2016).....6

Polymer Technologies, Inc. v. Bridwell,
103 F.3d 970 (Fed. Cir. 1996).....7

Robert Bosch LLC v. Pylon Mfg. Corp.,
659 F.3d 1142 (Fed. Cir. 2011).....7, 9

Windsurfing Int'l, Inc. v. AMF, Inc.,
782 F.2d 995 (Fed. Cir. 1986).....9

TABLE OF EXHIBITS

Exhibits

Aug. 26, 2022 BusinessDen Article.....Exhibit S

Dr. Hilbert's Supplemental Declaration ..... Exhibit T

Alkane's Response to Crusoe's Emergency Motion for Temporary Restraining Order and Preliminary Injunction ("Motion") fails to demonstrate any reason why this Court should not issue a temporary restraining order enjoining Alkane from continued infringement.

I. CRUSOE HAS DEMONSTRATED A LIKELIHOOD OF SUCCESS ON THE MERITS OF ITS INFRINGEMENT CLAIMS.

Alkane contends Crusoe is unlikely to succeed on the merits because (1) Alkane's systems purportedly do not include each element of the asserted claims, and (2) the asserted patents are purportedly "unlikely to withstand an invalidity challenge." ECF 35 at 6-12. With respect to infringement, Alkane's assertions are unsupported, contradicted by record evidence, and/or contradicted by established case law. With respect to validity, Alkane's arguments are insufficient to overcome the presumption of validity to which the asserted patents are entitled.

A. Alkane's Non-Infringement Arguments Are Unsupported and/or Contradicted By Record Evidence or Established Case Law.

Alkane asserts two purported bases of non-infringement: (1) Alkane itself "does not operate a distributed computing system," *id.* at 6-7, and (2) Alkane's system purportedly does not include "'an electrical transformation module' to transform 'the combined high-voltage electrical output into a low-voltage electrical output.'" *Id.* at 7-9. As explained below, both arguments are unavailing.

1. Alkane cannot escape liability for infringement merely by contracting with a third party to provide the distributed computing elements of the accused systems.

As an initial matter, Alkane's contention that Crusoe has not sufficiently pleaded infringement based on Alkane's conduct in combination with others is incorrect. The Amended Complaint includes allegations that, "[t]o the extent specific components . . . are provided and/or

operated by Alkane's customers, vendors, or agents, Alkane . . . jointly infringes with [those parties]" because "Alkane directs and/or controls the infringing acts." *See* ECF 27 ¶¶ 67, 77, 87. Regardless, as explained below, an alleged infringer may be found to "use" an accused system even where it does not physically control all components of the system.

Alkane's contention that it cannot infringe merely because it does not and does not intend to "supply, own, or operate a distributed computing system at any of the well sites where it provides its services," ECF 35 at 7-8, is contradicted by established case law. Indeed, the Federal Circuit has made clear that an alleged infringer cannot avoid liability merely by contracting out portions of the infringing conduct; rather, "the party in control would be liable for direct infringement." *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007), *overruled on other grounds by Akamai Technologies v. Limelight Networks, Inc.,* 797 F.3d 1020 (Fed. Cir. 2015); *cf. Akamai Techs.*, 797 F.3d at 1023 (an accused infringer contracting out portions of infringement will be liable for direct infringement) (citing *BMC*, 498 F.3d at 1380-81). Further, in *Centillion Data Sys., LLC v. Qwest Communs. Int'l*, 631 F.3d 1279, 1284 (Fed. Cir. 2011), the Federal Circuit held that an accused infringement need not "exercise physical or direct control over each individual element of the system." Rather, it is sufficient for purposes of infringement that the alleged infringer has "the ability to place the system as a whole into service" and thus "use[ ] every element of the system." *Id.* at 1283-84.

Thus, Alkane need not "have physical control" over the distributed computing sub-system—it is enough that Alkane's conduct makes the distributing computing sub-system "work for [its] patented purpose." *Id.* at 1284. It is undisputed that Alkane owns and controls the portions of the accused system that generate electricity using flare gas. *See* ECF 35 at 2-3. Alkane's

documents demonstrate that it marketed systems that mitigate flaring by using flare gas to generate electricity that is in turn used to power a distributed computing sub-system. *See* ECF 9-12 at 7-10[1] (illustrating "Alkane Flare Gas Management Ecosystem" inside a blue-dashed line that includes not only power-generation systems, but also distributed computing systems). Even if Alkane lacks physical control over the distributed computing sub-system—a point which has not been established—Alkane nonetheless puts the system as a whole into service because Alkane's actions of generating and transmitting electricity to the distributed computing sub-system cause that sub-system to function for its patented purpose (*i.e.*, to consume energy that would otherwise be discharged through flaring). *Centillion*, 631 F.3d at 1284-85 (holding that Qwest's customers put the system as a whole into service because queries submitted by the users "cause[d]" the back-end processing sub-system—which the users did not physically control—"to act for its intended purpose to run a query and return a result").

2. Alkane's Assertion That the Accused Products Do Not Include "an Electrical Transformation Module" That Transforms High-Voltage Electrical Output Into a Low-Voltage Electrical Output Is Unsubstantiated.

In an effort to support its non-infringement arguments, Alkane mischaracterizes Dr. Hilbert's opinion—and thus Crusoe's contention—regarding the claimed "electrical transformation module." ECF 35 at 9. First, Alkane erroneously contends that Dr. Hilbert's opinion and Crusoe's contentions are based on an assertion that "operating multiple generators in parallel creates a higher combined voltage." ECF 35 at 8. But neither Crusoe nor Dr. Hilbert make an assertion that a transformation module is necessary because the ***voltages*** are combined.

[1] Pinpoint citations for this document are to the page numbers applied by the Court's ECF system. For all other documents, pinpoint citations refer to the document's internal page numbering.

Rather, Crusoe's contention—based on Dr. Hilbert's infringement analysis—is that an electrical transformation module (or its equivalent) is necessary to transform the voltage of the ***combined electrical output*** from the generators because the voltage of that output exceeds the operational input voltage of typical distributed computing system components. *See* ECF 28-2 at 38-39, 66-67, 95-96[2]; Ex. T ¶¶ 7-9. Specifically, typical distributed computing devices are designed for input voltages no higher than about 240 VAC; thus an electrical transformation module would be necessary to transform the output voltage of Alkane's generators—which Alkane contends is 415 VAC—to an appropriate input voltage for the distributed computing components. *Id*. at ¶¶ 10-13.

Alkane's contention that the accused system does not include a transformation module is unpersuasive for two reasons. First, as stated above, the combined electrical output of Alkane's generators is at a voltage that exceeds the operational input voltage of typical distributed computing system components, and Alkane has neither asserted nor identified any evidence that the distributed computing devices in the accused system are capable of receiving voltages at the levels output by Alkane's generators. Second, Alkane's contention that the system does not include a transformation module is unpersuasive and unsubstantiated in light of Alkane's repeated assertion that it lacks knowledge concerning the specific configuration of the distributed computing subsystems. *See* ECF 35 at 7; ECF 37 ¶ 18. Put another way, even if Alkane itself does not provide and install a transformation module, the overall system likely includes one and Alkane has not pointed to any evidence to the contrary. Ex. T ¶¶ 7-9.

Finally, Alkane asserts that Crusoe was "incorrect" in asserting that the output voltage of

[2] Pinpoint citations for this document are to the page numbers applied by the Court's ECF system. For all other documents, pinpoint citations refer to the document's internal page numbering.

Alkane's generators is 480 VAC, ECF 35 at 8, though it is unclear what (if any) impact Alkane contends this purported error has on the analysis of Crusoe's infringement claims. To the extent Alkane intends to imply that the accused systems do not generate a "high-voltage output," any such contention is unavailing for two reasons. First, Alkane has pointed to no evidence beyond the unsubstantiated assertions of its declarant that Alkane's generators are not configured to generate an output voltage of 480 VAC, as stated in Alkane's documentation. *See e.g.* 28-2 at 34-36. Further, as explained in Dr. Hilbert's supplemental declaration, a person of ordinary skill in the art ("POSA") would understand that an electrical output of 415 VAC is a "high-voltage electrical output" as required by the asserted claims. Ex. T at ¶¶ 10-13.

B. Alkane's Invalidity Arguments Are Insufficient to Overcome the Presumption of Validity to Which the Asserted Patents Are Entitled.

For all of Alkane's puffery related to Crusoe's allegedly "invalid" patents, Alkane has not presented any coherent invalidity theory. Rather, Alkane generically alleges that the asserted patents are anticipated or obvious, but does not attempt to map any prior art reference to the asserted claims, nor does it allege that any specific publication (or combination of publications) discloses each element of any asserted claim. *See* ECF 35 at 9-12. Alkane's conclusory allegations are insufficient to raise a "substantial question of validity" as to the asserted patents. *BlephEx, LLC v. Myco Indus., Inc.*, 24 F.4th 1391, 1403-04 (Fed. Cir. 2022) (holding that an accused infringer attempting to evade preliminary injunctive relief must present evidence sufficient to raise "a substantial question of validity").

Alkane's unpatentability allegations under § 101 are similarly deficient. In asserting that the claims are directed to a patent-ineligible abstract idea, Alkane improperly abstracts the claimed invention to such a high level that it is no longer tethered to the claim language. As the Federal

Circuit explained in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016), "describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures" any invention will be argued to be invalid. *See also Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 217, 134 S. Ct. 2347 (2014) (cautioning against over-generalizing the claims when considering patent eligibility). Once again, Alkane's conclusory allegations concerning the purported invalidity of the asserted claims are insufficient to raise a substantial question as to the validity of the asserted patents.

II. CRUSOE WILL SUFFER IRREPARABLE HARM ABSENT AN INJUNCTION.

A. Money Damages are Inadequate

Alkane contends that any harm to Crusoe caused by infringement is "quantifiable and compensable by an ongoing royalty," and thus there is no need for injunctive relief. ECF 35 at 13. In making that argument, however, Alkane fails to meaningfully address the specific circumstances that make Crusoe's harm irreparable. For example, Alkane asserts—based on a single, non-binding district court opinion—that any "difficulty calculating losses in market share" does not justify "an injunction prior to trial." *Id*. Not only does this assertion fail to address the specific facts concerning the irreparable nature of Crusoe's market-share losses, *see* ECF 9 at 12-13, but it also fails to address the contrary Federal Circuit decisions cited in Crusoe's Motion, which hold that direct competition between a patentee and an alleged infringer demonstrates a likelihood of irreparable harm. *See id.*

Alkane secondarily argues that Crusoe has not and will not be irreparably harmed because "Alkane would have been receptive to an arrangement where once the gas processing operation was running, any excess stranded natural gas could have been made available to Crusoe." ECF 35

at 14-15. Not only is this assertion unsubstantiated, but it fails to provide sufficient detail regarding any purported "arrangement" to which Alkane would have agreed. Accordingly, this assertion demonstrates only that Alkane ***may*** have been amenable to an agreement that ***may*** have allowed Crusoe to recoup some of its ***quantifiable*** financial losses. It does not, however, address Crusoe's assertions that it suffered harm that is ***not quantifiable*** due to loss of market share, loss of goodwill, and price erosion. *See* ECF 9 at 2-16.

B. Market Share Has Been Lost

Despite Alkane's assertion to the contrary, Crusoe's market share loss is not "hypothetical." *See* ECF 35 at 15-17. As explained in Crusoe's Motion, Crusoe has already lost market share to Alkane and will continue to do so if Alkane is permitted to continue offering to sell and selling the accused products. *See* ECF 9 at 13. That there are other competitors in the market—as Alkane alleges in its Response (ECF 35 at 15-16)—does not negate this fact. *See Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1151 (Fed. Cir. 2011); *Polymer Technologies, Inc. v. Bridwell*, 103 F.3d 970, 975 (Fed. Cir. 1996) ("The fact that other infringers may be in the marketplace does not negate irreparable harm.").

Indeed, in the very case Alkane relies on—*Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341 (Fed. Cir. 2008)—the Court ***rejected*** the defendant's argument that there was no irreparable harm because "price erosion due to generic competition is already occurring." *See Abbott Labs*, 544 F.3d at 1361-62. Specifically, the Court held that the presence of other competitors in the market that may also be causing price erosion "do[es] not negate" the likelihood of irreparable harm caused by defendant's infringement." *Id.* at 1362.

Alkane further contends that any loss of market share is not the result of Alkane's conduct

because Alkane purportedly does not compete with Crusoe. *See* ECF 35 at 15-16. But that contention is belied by the undisputed fact that the Colorado Producers engaged Alkane to provide the same products/services it had previously contracted with Crusoe to provide. *See* ECF 10 ¶¶ 9-11. That Alkane ultimately plans to switch to a purportedly non-infringing system that "will ultimately be for a completely different use" is of no moment because Alkane agreed to provide an infringing system for use at the Colorado Producers' wellsite during the ***approximately 2 years*** it will take for such a system to be built. ECF 37 ¶¶ 26-29. In other words, offering the infringing system is what allows Alkane to compete for Crusoe's customers, such as the Colorado Producers, who already have significant existing flare mitigation needs.

C. Crusoe's Loss of Goodwill and Price Erosion Will be Irreversible

Alkane's primary argument concerning these factors is that price erosion "is an economic harm" that is "compensable by monetary damages." ECF 35 at 15. In making that argument, however, Alkane again relies on a single, non-binding district court opinion, *see* ECF 35 at 15, while failing to address the Federal Circuit decisions cited in Crusoe's Motion, which hold that price erosion is a valid basis for finding irreparable harm. *See* ECF 9 at 14-15.

Alkane further contends that any loss of goodwill is not the result of Alkane's conduct because Alkane does not compete with Crusoe. *See* ECF 35 at 16. As explained above, however, that assertion is belied by the undisputed fact that the Colorado Producers engaged Alkane to provide the same products/services it had previously contracted with Crusoe to provide. *See* ECF 10 ¶¶ 9-11.

III. THE BALANCE OF HARDSHIPS FAVOR CRUSOE

Alkane contends that the balance of hardships favor Alkane because it is "the significantly

smaller of the two entities" and will face dire economic consequences if enjoined from continued infringement.[3] ECF 35 at 17. Alkane's contention cannot be squared, however, with Alkane's assertions that its primary business is systems that provide "flare gas management through the production and monetization of NGLs and LNG," ECF 35 at 2, and that Alkane uses the accused systems (*i.e.*, systems in which flare gas is used to power distributed computing) only as a "last resort project," Ex. S at 2. *See* ECF 37 ¶ 35. Regardless, "[a] party cannot escape an injunction simply because it is smaller than the patentee or because its primary product is an infringing one." *See Robert Bosch*, 659 F.3d at 1156. "On the other hand, requiring [Crusoe] to compete against its own patented invention, with the resultant harms described above [and in Crusoe's Motion], places a substantial hardship on [Crusoe]." *Id.*

Alkane further argues that an injunction barring it from installing the accused system at the Colorado Producers' wellsite would cause Alkane to suffer significant financial losses. *See* ECF 35 at 19. But "[o]ne who elects to build a business on a product found [likely] to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected." *Windsurfing Int'l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986).

IV. THE PUBLIC INTEREST FAVORS CRUSOE

Alkane contends the public interest favors denying injunctive relief because an injunction would also allegedly harm the Colorado Producers. *See* ECF 35 at 19-20. But this is not what is meant by ***public interest***. *See e.g. Douglas Dynamics, LLC v. Buyers Prods. Co.*, 717 F.3d 1336,

[3] To the extent Alkane is to be believed that an injunction would "effectively take Alkane out of the market across the nation," ECF 35 at 18, such assertions are a tacit admission that Alkane stands to inflict substantial irreparable harm on Crusoe because powering distributed computing systems is a significant portion of Alkane's business. *See* ECF 37 ¶ 35.

1345-46 (Fed. Cir. 2013) (this factor concerns the general public).

Alkane also contends that the public interest weighs against granting the injunction because doing so would not maintain the status quo. ECF 35 at 20. But that assertion ignores the fact that "preservation of the status quo is not the sole objective of preliminary injunctions." *Blephex*, 24 F.4th at 1404 (rejecting defendant's argument that enjoining infringement would "upset the status quo"). "Preliminary injunctions also serve to prevent ongoing trespasses during the pendency of an infringement case." *Id.*

V. CRUSOE'S REQUESTED RELIEF IS NARROWLY TAILORED

Alkane further—and erroneously—contends that Crusoe is attempting to "use this Court's power to recreate a business relationship." ECF 35 at 20. To the contrary, Crusoe's requested relief is narrowly tailored to enjoining Alkane's infringing conduct. Alkane's contention that such an injunction would apply to "any generator capable of consuming natural gas to generate electricity," ECF 35 at 20, is unfounded and ignores the specifics contained in Crusoe's Proposed Order. *See* ECF 9-18.

VI. A $5,000 BOND IS PROPER – ALKANE'S REQUEST IS EXCESSIVE

A $5,000 bond is proper. Alkane's request for a $5 million bond far exceeds the needs of this case.

VII. CONCLUSION

For the foregoing reasons, Crusoe prays that this Court grant the emergency temporary relief and enjoin Alkane until such time as a preliminary injunction can be decided.

Dated: September 14, 2022

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on September 14, 2022 all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system. Any other counsel of record will be served in accordance with the Federal Rules of Civil Procedure.

/s/ Brett C. Govett
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