

NUMBER 13-22-00377-CV COURT OF APPEALS THIRTEENTH DISTRICT OF TEXAS CORPUS CHRISTI – EDINBURG

IN RE KIRBY OFFSHORE MARINE OPERATING, LLC

On Petition for Writ of Mandamus.

MEMORANDUM OPINION

Before Justices Benavides, Silva, and Peña Memorandum Opinion by Justice Benavides¹

Relator Kirby Offshore Marine Operating, LLC (Kirby) filed a petition for writ of mandamus through which it asserts that the trial court² abused its discretion by granting a motion for new trial in favor of the real party in interest, Southern Recycling, LLC

¹ See Tex. R. App. P. 52.8(d) ("When denying relief, the court may hand down an opinion but is not required to do so. When granting relief, the court must hand down an opinion as in any other case."); *id.* R. 47.1 (requiring the appellate courts to "hand down a written opinion that is as brief as practicable but that addresses every issue raised and necessary to final disposition"); *id.* R. 47.4 (distinguishing opinions and memorandum opinions).

² This original proceeding arises from trial court cause number 2019-DCL-03625 in the 444th District Court of Cameron County, Texas, and the respondent is the Honorable David Sanchez. *See id.* R. 52.2.

(Southern). In summary, as will be explained in more detail, Kirby sold Southern a tank barge and its towing vessel for scrap. During shipbreaking, the tank barge caught fire and caused personal injury and death to the employees involved in the work. After resolution of the personal injury and wrongful death claims, Kirby and Southern litigated breach of contract and related claims against each other. The gravamen of the dispute was whether Kirby met its obligation under the parties' agreement to appropriately clean the barge of hazardous materials prior to its sale.

Their claims were submitted to a jury, and the jury awarded damages to Kirby, but not to Southern. The trial court entered a take-nothing judgment against both Kirby and Southern, but later granted Southern's motion for new trial. Kirby contends that the trial court's articulated reasons for granting a new trial—that (1) there is an irreconcilable conflict in the jury's verdict, and (2) the verdict is not supported by legally and factually sufficient evidence—are not supported by the record.

After conducting a merits-based review of the order granting a new trial, we agree with Kirby. Accordingly, we conditionally grant the petition for writ of mandamus.

I. BACKGROUND

In March of 2019, Kirby, which owns and operates a fleet of tug barges, decommissioned a tank barge, the DBL 134, and its towing vessel, the Viking. The tank barge was equipped with heating coils, or pipes, which encompassed the barge's cargo tanks. The heating coils had previously been used to keep cargo hot during transportation; however, leading up to the sale, the heating coils were not in use, and the barge was being used to transport other substances, such as gasoline. Southern's wholly

owned subsidiary, International Shipbreaking LLC (ISL) specializes in scrapping or shipbreaking marine vessels for recycling, and Southern intended for ISL to scrap the DBL 134 and Viking.

Kirby and Southern executed a purchase and sale letter agreement in which Southern agreed to pay Kirby seventy percent of the estimated aggregate purchase price of \$908,424.00, or \$635,896.80, within three days from the date of the agreement, with the aggregate purchase price to be adjusted and the remainder thereafter based on deadweight surveys of the vessels. Kirby agreed to deliver the vessels to Southern. The agreement contains seven enumerated paragraphs which contain the following provisions that are directly relevant to the parties' dispute:

[Kirby] agrees that the Barge shall be delivered to [Southern] cleaned of all chemicals, petroleum products, and sludge. A Marine Chemist certificate will be sent to [Southern] where available.

[Southern] shall inspect the Vessels upon delivery by [Kirby], and, upon acceptance by [Southern], [Kirby] shall have no further obligation to [Southern] with respect to the Vessels, except as provided herein.

[Southern] specifically acknowledges that the Vessels are sold "as is, where is," without warranty of seaworthiness, condition, fitness for purpose or intended use, merchantability, or any other warranty whatsoever by [Kirby], except as set forth herein.

[Kirby] acknowledges that [Southern] is not a hazardous waste disposal company, and, therefore, upon discovery of any toxic or hazardous substances on or in the Vessels, [Southern] shall immediately notify [Kirby] in writing, and [Kirby] shall remove said substance at its cost. Should [Kirby] fail or otherwise refuse to remove the substance within five (5) days from the date of such notification, [Southern] may immediately remove and dispose of the substance in compliance with all applicable laws and regulations, all at [Kirby's] cost and expense.

Before Kirby delivered the barge to Southern, Kirby had the barge cleaned by Clean Water of New York, Inc. (Clean Water). After Clean Water's work on the barge, Austin Montanti, a marine chemist³ employed by Independent Testing & Consulting, Inc. (IT&C), inspected the barge and issued a marine chemist certificate stating that the barge was safe for shipbreaking.

Southern made the initial payment for the barge, and Kirby sent the barge and tug to a shipbreaking facility belonging to ISL pursuant to Southern's instructions. After the barge arrived at ISL's facility, ISL employed another marine chemist, James Bell, employed by Maritime Chemists Services of the Coastal Bend of Texas, Inc. (Maritime), to inspect the barge. Bell issued a marine chemist certificate which also stated that the barge was safe for shipbreaking.

On May 14, 2019, after ISL had been shipbreaking the DBL 134 for approximately two weeks, its employees Jorge Loredo and Nestor Aguilar, who were pumpers,⁴ were working on the barge in cargo tank 2-S. Other employees had been sent home due to poor weather conditions. Loredo and Aguilar were using a Sawzall, an electrical reciprocating saw, to cut through the heating coils in the tank when the Sawzall ignited vapors emanating from the heating coils. The resulting fire seriously injured both employees, and Loredo ultimately died as a result of his injuries. Subsequent investigations determined that remnants of gasoline in the heating coils ignited during the

³ According to trial testimony, a marine chemist is an "independent expert who inspects vessels and authorizes what work may or may not be performed."

⁴ ISL's various categories of workers include "laborers" who handle most tasks, such as removing insulation or pipes, "pumpers," such as Aguilar and Loredo, who drain pipes and tanks, and "cutters" who use torches to cut metal during the shipbreaking process.

shipbreaking process.

The personal injury plaintiffs⁵ filed suit against Southern, Kirby, Clean Water, IT&C, Bell, and Maritime. They did not sue ISL, who employed Loredo and Aguilar, due to the workers compensation scheme. Southern and Kirby filed cross claims against each other. Southern sued Kirby for failing to adequately clean the vessel before delivering it to Southern seeking to recover: (1) the amount Southern paid to the personal injury plaintiffs in settlement (\$8 million), (2) the attorney's fees and legal expenses that Southern incurred in defending the personal injury lawsuit (\$1,271,156), and (3) the consideration Southern had paid Kirby for the vessel (\$635,896.80). Kirby denied liability and counter-sued Southern for the remaining payment due for the sale of the vessels.

Ultimately, all defendants settled with the personal injury plaintiffs prior to trial, leaving only the causes remaining between Southern and Kirby.⁶ Southern and Kirby's case was submitted to a jury for trial over a two-week time span. The charge submitted to the jury contained extensive definitions and instructions regarding: the nature of the claims between the parties, breach of warranty, damages for breach of warranty, breach of contract, damages for breach of contract, promissory estoppel, and fraudulent concealment. The relevant portions of the charge to the jury and its verdict are summarized as follows:

 Kirby's failure to comply with a warranty was a proximate cause of damages to Southern; however, the jury did not award any damages to

⁵ These individuals included Dora Mendieta, individually, and as next friend of J.L. III and as legal representative of the estate of Jorge Loredo, deceased; Jane Mary Loredo, individually as surviving mother of Jorge Loredo; Nestor Aguilar, individually; and Lorena Aguilar, individually.

⁶ The defendants settled the personal injury and wrongful death lawsuit for the global amount of \$38,600,000.

Southern after considering three specified elements of damages: (1) Southern's reasonable cost to settle the claims asserted against it by the original plaintiffs which was a natural probable and foreseeable consequence of Kirby's failure to comply; (2) return of Southern's down payment of \$635,896.80; and (3) attorney's fees in the amount of \$1,271,156 incurred by Southern in defending the personal injury claims brought by the original plaintiffs.

- Kirby failed to comply with the purchase agreement for the barge; however, the jury did not award any damages to Southern after considering two specified elements of damages: (1) the reasonable cost to settle claims against it by the original plaintiffs; and (2) the return of Southern's down payment.
- Southern failed to comply with the purchase agreement for the barge; and the jury awarded Kirby \$272,527.20 as damages caused by Southern's failure to comply.
- Kirby failed to comply with the purchase agreement first.
- Kirby committed fraud against Southern; however, the jury did not award any damages to Southern after considering two specified elements of damages: (1) the reasonable cost to settle claims against it by the original plaintiffs; and (2) for the return of Southern's down payment.
- The negligence of ISL, Southern, Clean Water, Bell, and Montanti caused the occurrence, and Kirby was thirty-one percent responsible; ISL was twenty-nine percent responsible; Southern was twenty-five percent responsible; Clean Water was three percent responsible; and Bell and Montanti were each six percent responsible.

Southern objected to the jury's verdict under Rule 295 of the Texas Rules of Civil Procedure and requested the trial court to require the jury to continue deliberations; however, the trial court overruled Southern's motion. See Tex. R. Civ. P. 295 (delineating the procedure for correcting a defective verdict). Southern then filed a motion for judgment notwithstanding the verdict, or alternatively, a new trial. The trial court denied Southern's motion.

On November 30, 2021, the trial court issued a take-nothing judgment against both Southern and Kirby and taxed costs of court against Southern. On or about December 16, 2021, Southern moved to modify the judgment seeking to reallocate the court costs. On February 11, 2022, the trial court sua sponte signed an order vacating its judgment and granting a new trial; however, its new trial order did not explain the court's rationale for granting a new trial. R. 320 (allowing the trial court to grant a new trial "on the court's own motion"). Southern thus requested the trial court to modify its new trial order to explain its reasoning.

On June 2, 2022, the trial court signed an amended order granting Southern's motion for a new trial which delineates the trial court's rationales for granting a new trial. In summary, the trial court concluded that: (1) the jury's finding that Kirby breached a warranty conflicted with the jury's finding that Southern should not recover any damages, and (2) the jury's finding that Southern should recover zero damages was supported by legally and factually insufficient evidence.

This original proceeding ensued. By one issue, Kirby asserts that the trial court abused its discretion by ordering a new trial and Kirby lacks an adequate remedy by appeal to address this error. Southern filed a response to the petition for writ of mandamus in support of the new trial order, and Kirby filed a reply thereto. See Tex. R. App. P. 52.2, 52.4, 52.8.

⁷ See In re Kirby Offshore Marine Operating, LLC, No. 13-22-00236-CV, 2022 WL 2057506, at *1 (Tex. App.—Corpus Christi–Edinburg June 7, 2022, orig. proceeding) (mem. op.).

II. MANDAMUS

Mandamus is an extraordinary and discretionary remedy. See In re Allstate Indem. Co., 622 S.W.3d 870, 883 (Tex. 2021) (orig. proceeding); In re Garza, 544 S.W.3d 836, 840 (Tex. 2018) (orig. proceeding) (per curiam); In re Prudential Ins. Co. of Am., 148 S.W.3d 124, 138 (Tex. 2004) (orig. proceeding). The relator must show that (1) the trial court abused its discretion, and (2) the relator lacks an adequate remedy on appeal. In re USAA Gen. Indem. Co., 624 S.W.3d 782, 787 (Tex. 2021) (orig. proceeding); In re Prudential Ins. Co. of Am., 148 S.W.3d at 135–36; Walker v. Packer, 827 S.W.2d 833, 839–40 (Tex. 1992) (orig. proceeding). "The relator bears the burden of proving these two requirements." In re H.E.B. Grocery Co., 492 S.W.3d 300, 302 (Tex. 2016) (orig. proceeding) (per curiam); Walker, 827 S.W.2d at 840.

"A writ of mandamus shall issue to correct a clear abuse of discretion committed by a trial court in granting a new trial." *In re Whataburger Rests., LP*, 429 S.W.3d 597, 598 (Tex. 2014) (orig. proceeding) (per curiam); see *In re Toyota Motor Sales, U.S.A., Inc.*, 407 S.W.3d 746, 757–58 (Tex. 2013) (orig. proceeding); *In re United Scaffolding, Inc.*, 377 S.W.3d 685, 689 (Tex. 2012) (orig. proceeding). In such a case, the relator lacks an adequate remedy by appeal. *In re Columbia Med. Ctr. of Las Colinas, Subsidiary, L.P.*, 290 S.W.3d 204, 209–10 (Tex. 2009) (orig. proceeding).

III. NEW TRIALS

Rule 320 of the Texas Rules of Civil Procedure gives the trial court broad discretion to grant a new trial "for good cause, on motion or on the court's own motion." Tex. R. Civ. P. 320. However, because the Texas Constitution guarantees the right to trial by jury, that

authority is not "unfettered." *In re Bent*, 487 S.W.3d 170, 175 (Tex. 2016) (orig. proceeding); see Tex. Const. art. I, § 15; *In re Cambell*, 577 S.W.3d 293, 297 (Tex. App.—Houston [14th Dist.] 2019, orig. proceeding). Although trial courts have significant discretion in granting new trials, "such discretion should not, and does not, permit a trial judge to substitute his or her own views for that of the jury without a valid basis." *In re Columbia Med. Ctr.*, 290 S.W.3d at 212; see *In re United Scaffolding, Inc.*, 377 S.W.3d at 688–89; *In re Pantalion*, 575 S.W.3d 382, 383 (Tex. App.—Beaumont 2019, orig. proceeding) (per curiam).

We employ a two-tier analysis to determine whether a trial court has abused its discretion in granting a new trial. First, we examine the facial validity of the order granting a new trial. See In re Bent, 487 S.W.3d at 176; In re United Servs. Auto. Ass'n, 521 S.W.3d 920, 927 (Tex. App.—Houston [1st Dist.] 2017, orig. proceeding [mand. denied]). An order granting a new trial must provide "an understandable, reasonably specific explanation why [the parties'] expectations are frustrated by a jury verdict being disregarded or set aside, the trial process being nullified, and the case having to be retried." In re Bent, 487 S.W.3d at 176 (quoting In re Columbia Med. Ctr., 290 S.W.3d at 213); see In re Munsch, 614 S.W.3d 397, 400 (Tex. App.—Houston [14th Dist.] 2020, orig. proceeding [mand. denied]). Second, we perform a merits-based review of the trial court's articulated reasons for granting a new trial. See In re Toyota Motor Sales, U.S.A., Inc., 407 S.W.3d at 758; see also In re Whataburger Rests., L.P., 429 S.W.3d at 598. If the articulated reasons are not supported by the law and the record, mandamus relief is appropriate. In re Toyota Motor Sales, U.S.A., Inc., 407 S.W.3d at 761–62. "[T]he abuse-

of-discretion standard applies to merits review just as it does in all mandamus proceedings." *In re Bent*, 487 S.W.3d at 178.

IV. IRRECONCILABLE CONFLICT IN JURY'S VERDICT

In part of its first issue, Kirby alleges that there is not an irreconcilable conflict in the jury's verdict. The trial court's first rationale offered in support of granting a new trial is that the jury's affirmative answer to Question 1 of the charge—"Was the failure, if any, of [Kirby] to comply with a warranty a proximate cause of damages to [Southern]"—conflicts with the jury's failure to award any of the damages sought by Southern in Question 2 of the charge, which asked, "What sum of money, if any, if paid now in cash, would fairly and reasonably compensate [Southern] for its damages, if any, that were proximately caused by [Kirby's] failure to comply [with the warranty]?"

A. Applicable Law

The Texas Supreme Court has explained that we review alleged conflicts in jury findings as follows:

The threshold question in reviewing jury findings for fatal conflict is "whether the findings are about the same material fact." *Bender v. S. Pac. Transp. Co.*, 600 S.W.2d 257, 260 (Tex. 1980). In making this determination, courts have a "duty to harmonize jury findings when possible." *Producers Chem. Co. v. McKay*, 366 S.W.2d 220, 224 (Tex. 1963). Courts must uphold jury findings if "there is any reasonably possible basis upon which they may be reconciled." *Bender*, 600 S.W.2d at 260. The inquiry does not end, however, if the court determines that the findings create a conflict about the same material fact. The court must determine whether the conflict is fatal to the entry of judgment. *Bay Petroleum Corp. v. Crumpler*, 372 S.W.2d 318, 319 (Tex. 1963).

To determine whether a conflict is fatal.

the court must consider each of the answers claimed to be in conflict, disregarding the alleged conflicting answer but taking into consideration all of the rest of the verdict, and if, so considered, one of the answers would require a judgment in favor of the plaintiff and the other would require a judgment in favor of the defendant, then the answers are fatally in conflict.

Little Rock Furniture Mfg. Co. v. Dunn, [222 S.W.2d 985, 991 (Tex. 1949)]. Thus, to satisfy this test, the party claiming conflict must show that one of the conflicting findings "necessarily requires the entry of a judgment different from that which the court has entered." *Id.*

Arvizu v. Estate of Puckett, 364 S.W.3d 273, 275–76 (Tex. 2012) (per curiam) (footnote omitted); see Burnett v. Rios, 549 S.W.3d 214, 220–21 (Tex. App.—Houston [14th Dist.] 2018, no pet.). Thus, jury findings can conflict or be inconsistent, or even be in "irreconcilable conflict," and still not be fatal to the entry of a judgment; however, if the jury findings create a conflict about the same material fact, and one of the conflicting findings "necessarily requires the entry of a judgment different from that which the court has entered," then the conflicting findings are fatal to the entry of a judgment. Arvizu, 364 S.W.3d at 275–76.

B. Analysis

As stated previously, the jury found that Kirby's failure to comply with a warranty was a proximate cause of damages to Southern, but the jury failed to award Southern any damages. We examine whether these jury findings create a conflict about the same material fact and whether one of the conflicting findings necessarily requires the entry of judgment different from that which the court has entered. *See Arvizu*, 364 S.W.3d at 275–76. We conclude they do not. Liability and damage findings do not concern the same material fact; thus, the jury's findings here do not necessarily require the entry of a different judgment. *See Davis v. Nat'l Lloyds Ins.*, 484 S.W.3d 459, 475 (Tex. App.—

Houston [1st Dist.] 2015, pet. denied) (concluding that a finding that the defendant breached a contract, common law, and statutory duties did not fatally conflict with a finding of zero damages); 7979 Airport Garage, L.L.C. v. Dollar Rent A Car Sys., Inc., 245 S.W.3d 488, 505 (Tex. App.—Houston [14th Dist.] 2007, pet. denied) (concluding that a breachof-lease finding did not present an irreconcilable conflict with a zero damages award); Cooper v. Lyon Fin. Servs., Inc., 65 S.W.3d 197, 204 n.5 (Tex. App.—Houston [14th Dist.] 2001, no pet.) (concluding that findings of liability coupled with a zero damage award "merely show[ed that the claimant] met his burden of proof in the first instance but not in the second"); Am. Recreational Mkts. Gen. Agency, Inc. v. Hawkins, 846 S.W.2d 476, 478 (Tex. App.—Houston [14th Dist.] 1993, no writ) ("The 'if any' language used in [the damages question] gives the jury the option to find that [plaintiff] was entitled to zero dollars for actual damages despite the jury's finding in the previous question. An answer favorable to a party concerning one of the elements submitted and an answer of 'none' or 'zero dollars' to another issue does not put the answers in conflict."); see also Watts v. BHP Billiton Petroleum (Ams.), Inc., No. 14-05-00480-CV, 2006 WL 2669350, at *5 (Tex. App.—Houston [14th Dist.] Sept. 19, 2006, pet. denied) (mem. op.) ("We note first that a finding favorable to a party on liability does not render a conflict with a finding of zero damages."); Fischl v. Fischl, No. 04-03-00345-CV, 2004 WL 1195705, at *3 (Tex. App.— San Antonio June 2, 2004, no pet.) (mem. op.) (concluding that a breach of contract question and a damages question did not concern "the same material fact").

C. Summary

We conclude that the jury's finding that Kirby breached a warranty and the jury's

failure to award damages for that breach are not fatal to the entry of a judgment based on the findings. See Arvizu, 364 S.W.3d at 275–76; Davis, 484 S.W.3d at 475; 7979 Airport Garage, L.L.C., 245 S.W.3d at 505. Accordingly, we reject this rationale for the trial court's new trial order, and we sustain Kirby's sole issue to the extent it concerns an irreconcilable conflict in the jury's verdict.

V. SUFFICIENCY OF THE EVIDENCE

In its second issue, Kirby contends that the jury's verdict was supported by legally and factually sufficient evidence. The new trial order states that the jury's failure to award damages to Southern was not supported by the evidence because, *inter alia*, it was uncontested that Southern suffered damages in specific amounts⁸ and because any negligence on Southern's part was "immaterial" in the context of a breach of express warranty. Southern alleges that its damages were caused by Kirby's breach of warranty in selling a ship with hidden pockets of gasoline in the heating coils—a problem which Kirby allegedly knew about but concealed. In contrast, Kirby asserts that ample evidence supports the jury's verdict. Kirby contends that its actions did not proximately cause Southern's damages and Southern could have avoided its losses by exercising

⁸ The jury charge contained the parties' stipulation that Southern incurred \$1,271,156 in reasonable attorney's fees and expenses and provided that Kirby "[did] not agree that any of these fees or expenses are damages caused by Kirby, only that this amount is reasonable and necessary for the defense against the plaintiffs' claims." Despite the express language of the stipulation, both the new trial order and Southern's arguments suggest that the stipulation encompassed liability issues. "In construing a stipulation by parties to a judicial proceeding, a court must determine the intent of the parties from the language used in the entire agreement, examining the surrounding circumstances, including the state of the pleadings, the allegations made therein, and the attitude of the parties with respect to the issue." *Humble Surgical Hosp., LLC v. Da*vis, 542 S.W.3d 12, 19 (Tex. App.—Houston [14th Dist.] 2017, pet. denied). "A stipulation by parties to a judicial proceeding should not be given greater effect than the parties intended." *Id.* Examining the language of the stipulation and considering that the parties engaged in a two-week trial on liability, we conclude that the stipulation addressed only various elements of damages but did not encompass liability. *See id.*

reasonable care.

A. Standard of Review

Evidence is legally insufficient to support a jury finding when: (1) the record discloses a complete absence of evidence of a vital fact; (2) the court is barred by rules of law or of evidence from giving weight to the only evidence offered to prove a vital fact; (3) the evidence offered to prove a vital fact is no more than a mere scintilla; or (4) the evidence establishes conclusively the opposite of a vital fact. Shields Ltd. P'ship v. Bradberry, 526 S.W.3d 471, 480 (Tex. 2017); Crosstex N. Tex. Pipeline, L.P. v. Gardiner, 505 S.W.3d 580, 613 (Tex. 2016); Ford Motor Co. v. Castillo, 444 S.W.3d 616, 620 (Tex. 2014) (per curiam) (op. on reh'g). When determining if legally sufficient evidence supports a jury finding, we consider evidence favorable to the finding if a reasonable factfinder could and disregard contrary evidence unless a reasonable factfinder could not. Crosstex N. Tex. Pipeline, L.P., 505 S.W.3d at 613; City of Keller v. Wilson, 168 S.W.3d 802, 807, 827 (Tex. 2005). We indulge "every reasonable inference deducible from the evidence" in support of the challenged finding. Gunn v. McCoy, 554 S.W.3d 645, 658 (Tex. 2018). Evidence is legally sufficient when it constitutes more than a "scintilla" of evidence on which a reasonable juror could find the fact to be true. Crosstex N. Tex. Pipeline, L.P., 505 S.W.3d at 613.

The evidence is factually insufficient to support a jury finding if, considering the record as a whole, the supporting evidence is so weak, or so contrary to the weight of all the evidence, as to make the finding clearly wrong and manifestly unjust. *Id.* at 615. When reviewing a finding for factual sufficiency, we set it aside only if, after considering and

weighing all the pertinent record evidence, we determine that the credible evidence supporting the finding is so weak, or so contrary to the overwhelming weight of all the evidence, that the finding should be set aside, and a new trial ordered. *Id.*; *Cain v. Bain*, 709 S.W.2d 175, 176 (Tex. 1986); *Pool v. Ford Motor Co.*, 715 S.W.2d 629, 635 (Tex. 1986) (op. on reh'g). The factfinder is the sole judge of the witnesses' credibility and the weight to be given to their testimony. *Golden Eagle Archery, Inc. v. Jackson*, 116 S.W.3d 757, 761 (Tex. 2003).

The charge instructed the jury that Kirby breached an express warranty to Southern if, among other things, Southern could show that it was injured by the failure of the product to comply with the express warranty and the failure was the proximate cause of the injury. Causation is an essential element of a breach of warranty cause of action. See Mack Trucks, Inc. v. Tamez, 206 S.W.3d 572, 582 (Tex. 2006) (holding that breach of warranty claims require proof of causation-in-fact); Hyundai Motor Co. v. Rodriguez, 995 S.W.2d 661, 667 (Tex. 1999) (concluding that liability for breach of warranty requires "showing of proximate causation"); Casa Del Mar Ass'n, Inc. v. Gossen Livingston Assocs., Inc., 434 S.W.3d 211, 221 (Tex. App.—Houston [1st Dist.] 2014, pet. denied). Proximate cause includes causation in fact, which requires that the defendant's conduct be a substantial factor in bringing about the injuries in question. See Mack Trucks, Inc., 206 S.W.3d at 582; Union Pump Co. v. Allbritton, 898 S.W.2d 773, 775 (Tex. 1995), abrogated on other grounds by Ford Motor Co. v. Ledesma, 242 S.W.3d 32, 46 (Tex. 2007); Peeler v. Hughes & Luce, 909 S.W.2d 494, 498 (Tex. 1995). According to the supreme court:

The word "substantial" is used to denote the fact that the defendant's conduct has such an effect in producing the harm as to lead reasonable men to regard it as a cause, using that word in the popular sense, in which there always lurks the idea of responsibility, rather than in the so-called "philosophic sense," which includes every one of the great number of events without which any happening would not have occurred. Each of these events is a cause in the so-called "philosophic sense," yet the effect of many of them is so insignificant that no ordinary mind would think of them as causes.

Lear Siegler, Inc. v. Perez, 819 S.W.2d 470, 472 (Tex. 1991) (quoting RESTATEMENT (SECOND) OF TORTS § 431 (1965)). Further, the supreme court has "repeatedly explained that 'the connection between the defendant and the plaintiff's injuries simply may be too attenuated to constitute legal cause,' which 'is not established if the defendant's conduct or product does no more than furnish the condition that makes the plaintiff's injury possible." Allways Auto Grp., Ltd. v. Walters, 530 S.W.3d 147, 149 (Tex. 2017) (per curiam) (quoting Union Pump Co., 898 S.W.2d at 776); see W. Invs., Inc. v. Urena, 162 S.W.3d 547, 551 (Tex. 2005); IHS Cedars Treatment Ctr. of DeSoto, Tex., Inc. v. Mason, 143 S.W.3d 794, 800 (Tex. 2004); Lear Siegler, Inc., 819 S.W.2d at 472; Bell v. Campbell, 434 S.W.2d 117, 122 (Tex. 1968). Thus, in some cases, "the conduct of the defendant may be too attenuated from the resulting injuries to the plaintiff to be a substantial factor in bringing about the harm." IHS Cedars Treatment Ctr., 143 S.W.3d at 799.

B. Evidence

We review the jury's finding of zero damages for the legal and factual sufficiency of the evidence. The jury examined voluminous exhibits and heard testimony from: Kirby's corporate representative James Fewell, its senior port engineer Richard Wykoff, and Captain Christopher Nash; Southern's chief operating officer Andrew Sheppard and its

vice-president for marine logistics and decommission Douglas Higginbotham; Clean Water's vice-president Ralph Duca; marine chemist Montanti; ISL's president Christopher Green, its safety manager Alejandro "Alex" Mata, supervisor Sergio "Cheto" Beltran Flores (Beltran), and its safety officer Jose Alfredo Selvera; marine chemist Bell; and expert witnesses Dennis John Scardino and Michael B. Craddock, consultants with Engineering Systems, Inc.; Bob Borison, a marine safety expert; Joel Dupre, a shipbreaking expert; and James Mazerat, a fire safety expert.

(1) The DBL 134 and its History

The DBL 134 was equipped with metal heating coils, or pipes, that spanned from the deck into the vessel's ten cargo tanks, crisscrossed the cargo tanks, then returned to the deck. They were intended to be filled with thermal oil⁹ and acted as an enclosed loop. According to trial testimony, the heating coils spanned approximately three miles in length.

Richard Wycoff, the senior port engineer with Kirby who was in charge of the DBL 134 and the Viking, testified that he handles the coordination of repairs, maintenance, and annual regulatory inspections of Kirby's vessels by the Coast Guard and American Bureau of Shipping. If any entity finds deficiencies during the annual inspections, the deficiencies must be remedied before the vessel resumes operations. According to Wycoff, when a barge is built, it is given a five-year certificate, and in that period, the

⁹ According to trial testimony, thermal oil is not considered a hazardous substance. It is a combustible liquid with a flash point of 380 degrees. The flash point indicates when a liquid is heated enough to provide vapors which can be ignited by a heating source. In contrast, gasoline, which is considered a hazardous substance, has a flashpoint of minus 75 degrees.

barge must be dry docked twice at three and five-year intervals. At three and five years, the required inspections include the cargo tanks, which must be cleaned prior to each inspection. Wykoff testified that Kirby does not perform ship cleaning, and it hires vendors to perform maintenance on its vessels.

Wykoff testified regarding the history of the DBL 134. In 2012, the Coast Guard instructed Kirby to disable or remove the thermal fluid heater on the barge which, according to some of the trial testimony, indicated that there was a problem with the heating system. This was characterized elsewhere in the record as a "lock out" or "tag out," and indicated a high priority issue. According to Wykoff, the alarm system for the heater was not successfully demonstrated during the inspection, so the Coast Guard instructed Kirby to either remove the heater from the barge or block it off so that it could not be used. Kirby blocked it off, thus satisfying the deficiency. Wykoff testified that the issue identified in this inspection had nothing to do with the condition of the heating coils.

In 2014, the barge was dry docked for repairs and its five-year inspection. At this point, the heating coils had not been in service since 2012. An internal Kirby memorandum stated, however, that Kirby had "renewed" sections of the heating coils and one of its employees recommended removing them entirely during the next dry docking. According to Wycoff, the 2014 repairs had nothing to do with the heating coils, although they had to be moved and replaced due to work on the adjacent bulkhead, and the heating coils were successfully subjected to pressure testing after the repairs. According to Wykoff, the 2014 records showed no indications that the heating coils were impaired, and Wycoff did not know why a Kirby employee had recommended their removal.

In 2017, the barge went in for an intermediate dry docking. Crewmembers informed Wycoff about the results of a cargo pipeline pressure test, advising him that a "3 [inch] heating coil rupture" was found in the 1P tank, "heating coil rupture found (full of gas)" in the 4P tank, and "several holes in heating coil [were] found" in the barge's 5S tank. Wykoff testified that he personally inspected the tanks after receiving this report and found no evidence that the heating coils were leaking. According to Wykoff, any permeations of the heating coils would have left fluids or "staining" on the floors of the cargo tanks as well as elevated hydrocarbons, and they found neither. Wykoff acknowledged that he did not inspect every inch of the heating coils, he used a flashlight for illumination, he did not use a mirror to examine the lower sides of the coils, and he possessed no documentation evidencing his inspection. However, he further testified that other workers in the yard, the American Bureau of Shipping, and a marine chemist also examined the heating coils and found no holes or deficiencies. Thus, Wykoff did not recommend that Kirby replace the heating coils, and instead recommended that Kirby consider replacing the thermal fluid tracer lines, which are on the deck of the barge, and thus more susceptible to corruption, at the next dry dock.

Wykoff testified that in 2017, Kirby was contemplating using the DBL 134 for caustic service, which involves products with a low freezing point, so Kirby needed to maintain the heating coils to preserve that option. Wycoff testified that he had three stainless steel cargo pumps specifically built for caustic service, at a cost of approximately \$300,000, and that he recommended blasting and cleaning the cargo tanks in preparation for coating them with a specific substance suitable for caustic service.

At trial, Wykoff was shown several photographs of the heating coils, taken in 2019, which depicted numerous holes in the heating coils. Wycoff testified that the holes were not there when he inspected the barge two years previously. According to Wycoff, the holes depicted in the photographs appeared to be damage sustained in the intervening years by freezing temperatures.

(2) Kirby's Decision to Scrap or Sell the DBL 134 and Viking

In 2019, Kirby decided to scrap or sell the barge and tug. On or about March 27, 2019, Fewell solicited bids from the recycling community to purchase the DBL 134 and the Viking. Fewell informed the bidders that: the "[b]arge cargo tanks will be cleaned," the barge carried "[p]revious cargoes of gasoline and ethanol," "[t]he tug and barge must be scrapped," "reselling or any alternate usage" was not allowed, and "[s]crap bid subject to being pulled if potential foreign buyer funds deposit prior to scrap award." Fewell informed potential purchasers that the vessels would be sent to Clean Water "to undergo cargo tank cleaning of the DBL 134." Fewell estimated that cleaning the barge would take approximately three days, then the Viking would be used to transport the DBL 134 to the purchaser's location.

(3) Kirby's Directives to Clean Water

Kirby sent the barge to Clean Water for cleaning. Based on documentation in the record, the DBL 134 arrived there on March 28, 2019, and Clean Water began work on the barge that same day. On March 28, 2019, Fewell sent an internal email to fellow Kirby employee Jordan Anderson regarding "[c]leaning instructions for DBL 134," requesting that someone advise Clean Water that "[c]argo tanks/lines/pipes/etc. should be '[s]afe for

shipbreaking," and directing that "[a]t completion please have the chemist certificate sent to me showing 'safe for shipbreaking." Shortly thereafter, Anderson included Kirby employee Augie Barreiro on an email responding to Fewell's directions and asking Barreiro to confirm with Clean Water it was performing the requested tasks. Later that day, in another internal Kirby email, Barreiro advised Fewell and Anderson:

- 1. For Clean Water to perform barge's cleaning "safe for shipwrecking and gas free" they will need to muck cargo tanks in addition to the basic cleaning /safe for tank entry. Chemist is scheduled to arrive to unit this evening and will then determine amount of sediment to remove.
- 2. Spoke with crew, and was reminded that there are coils in all cargo tanks and those were found to be leaking during last shipyard period. Do we need to blow the coils? If we do, most likely all cargo tanks will be contaminated and the barge will need to be clean again.
- 3. Clean Water had prior commitments to clean other barges, therefore if mucking is required unit will need to be relocated to Clean Water Main Yard and/or go to anchor and return upon completion of other two barges cleaning.

Fewell responded, in relevant part:

- Yes, it needs to be suitable for shipbreaking. Let me know what the chemist says. Assume sediment should only be rust. The barge has been in dedicated gasoline service and just loaded an ethanol trip. If there were true bottoms the ethanol would likely have cleared them out.
- 2. Leave oil in the coils. Scrappers can vac it out, cold cut, etc.
- 3. We will just have to figure out schedule once we have more clarity for item 1.

Wykoff testified that he was on vacation when the DBL 134 was sent to Clean Water in 2019, so Barreiro handled the communications with Clean Water regarding cleaning the barge. Wycoff was unaware that Clean Water lacked experience in cleaning

a ship for shipbreaking purposes; however, Wykoff testified that Kirby has never directed that a barge be cleaned specifically for either lay-up or shipbreaking. Wykoff testified that the scope and parameters regarding how a vessel is cleaned are determined by the cleaning service and the marine chemist, and Kirby relies on the marine chemist's certificate to ensure that its vessels are properly cleaned. Wykoff testified that he has used Clean Water to clean Kirby's vessels since 2007, and that Clean Water is used by the United States Navy and all the other ship owners in the New York Harbor.

(4) Clean Water's Work

At trial, Duca, the vice-president of Clean Water, testified that Clean Water had been cleaning vessels for approximately thirty years, and one of its specialties is cleaning tank barges that carry cargo such as gasoline. Duca testified that Clean Water cleaned vessels for Kirby pursuant to a master services agreement, Kirby never instructed Clean Water to cut corners or costs, and Kirby was "probably the most or one of the most conservative companies" for which Clean Water provided services.

Duca testified that Kirby had used an auditor to check Clean Water's work several times in the past. The auditor scored cleaning companies on a scale from zero to four, where a zero indicated that the company lacked a safety manual, and a four indicated that the company had a perfect safety manual. In 2017 and 2018, the auditor assessed Clean Water with a 0.49 and 0.44 scores respectively. Clean Water reviewed its performance on the audits with the auditing company but did not review them with Kirby. At trial, Fewell testified that Clean Water's scores on the audits did not concern Kirby because the auditor's scoring materials provided that most companies score between a

zero and a one, and Clean Water's scores fell within this parameter.

Duca testified that the Clean Water manual specifies the use of the "Butterworth" method to clean vessels, and that Butterworthing is "the designated cleaning method that the entire industry uses" for cleaning the inside of cargo tanks. According to Duca, Butterworthing consists of "basically hot water under pressure" followed by ventilation. Clean Water's manual specifies that when cleaning vessels that have stored gasoline, the vessel must first be purged of gasoline vapors before beginning the Butterworthing process.

Clean Water had cleaned the DBL 134 for Kirby on other occasions in the past. Duca testified that in March 2019, Barreiro told Clean Water to clean the barge for "lay-up" rather than for shipbreaking; however, Duca explained that the terms were basically synonymous under Clean Water's understanding. Duca conceded that Clean Water had not previously cleaned a ship for shipbreaking purposes. It took Clean Water two to three weeks to clean the barge, which was the most extensive cleaning that it had ever undertaken on the DBL 134. According to Duca, Clean Water mucked out the cargo tanks to remove debris, which entailed physically going down into the tanks with scrapers and shovels and removing the collected sediment. Clean Water removed 150 drums of muck from the barge, which Duca testified was an "inordinate" amount in comparison to a standard job which typically involves only twenty-five to fifty drums of muck. Clean Water charged Kirby \$176,620.10 for cleaning the barge, and it was one of the most expensive jobs Clean Water had performed for Kirby or any other customer.

Duca testified that Kirby did not inform Clean Water that the heating coils on the barge were perforated or leaking. Duca testified that the fact that Kirby did not provide that information "didn't have an impact on what we were doing"; however, Duca conceded that if Clean Water had known that the coils were leaking and contained gasoline, Clean Water would have changed its procedure and assessed the situation in consultation with Kirby and a marine chemist.

Duca testified that he did not think that there was any process that could remove all petroleum from a vessel. The standard that Clean Water sought to achieve was "gas free" or "vapor free." Duca testified that the marine chemist is the arbiter regarding whether a vessel has been sufficiently cleaned. According to Duca, Clean Water's cleaning methods are not designed to remove residual gasoline that might be trapped in the linings of the cargo tanks or inside the heating coils at the bottom of the cargo tanks. Duca testified that Kirby did not provide Clean Water with cleaning manuals, used by a separate Kirby entity, which suggested that cargo tanks could be cleaned by hydro blasting. Duca testified that he has never heard of anyone using hydro blasting, grit blasting, or sandblasting as methods for cleaning cargo tanks. On this topic, Fewell testified that he did not believe hydro blasting was a common cleaning method, and that hydro blasting is used to prepare tanks when they are being painted or provided with new linings.

(5) Montanti's Inspection and Certificates

Clean Water retained marine chemist Montanti to inspect the DBL 134. Initially, Montanti walked the surface of the barge with his gas meter, then began looking into each

of the vessel's ten cargo tanks. Montanti did not inspect the heating coils because they were covered with "a few inches of silt and filth." In this first inspection, Montanti did not review all of the vessel's cargo tanks because the air from the tanks that he tested at the beginning of his inspection exceeded the recommendations for safe entry. In this regard, Montanti testified that a vessel's designation as "gas free" essentially means that the vessel has no flammable vapors and has the minimum oxygen content to sustain life.

Montanti ultimately issued a series of three marine chemist certificates regarding the DBL 134 on March 30, 2019, April 5, 2019, and April 11, 2019, which essentially represent the evolving status of the DBL 134 through the course of Clean Water's work on the barge. Marine chemist certificates are prepared on a basic form that includes standard printed directions and qualifications. The certificates are completed by the marine chemist with specific data regarding the vessel and specialized instructions. The basic form for a marine chemist certificate requires data regarding, inter alia, the last three loads that the vessel carried, the type of vessel, the tests performed, the inspected spaces, the safety designations, the instructions, and the test results. In terms of printed data, the forms advise, among other matters, that: "[a]ll lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered 'not safe' unless otherwise specifically designated." The forms further advise that a certificate is rendered void by "physical or atmospheric changes" affecting the safety designations, and, unless stated otherwise, "all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the [shipyard competent person (SCP)] in support of work prior to entry or recommencement of work."

Montanti's initial March 30, 2019 certificate stated, *inter alia*, that some of the cargo tanks were not safe for workers or hot work, directed Clean Water's employees to enter some of the tanks with restrictions, including a respirator and proper personal protective equipment (PPE), and instructed the SCP to reinspect certain spaces daily. Montanti's second April 5, 2019 certificate included similar warnings and restrictions. On April 11, 2019, Montanti issued his third and final marine chemist certificate stating that the barge had carried "Gasoline/Ethanol (x3)" for its last three loads, that the atmosphere was safe for workers, and that the vessel was safe for shipbreaking. In the certificate, Montanti provided specific instructions to "[m]aintain an active fire watch during [h]ot [w]ork." Montanti testified that "hot work" is any work that involves sparks, high heat, or fire.

Montanti discussed the certificate's printed directive that heating coils "shall be considered 'not safe." He agreed that "the baseline expectation is that all lines, vents, heating coils, valves and similarly enclosed appurtenances shall be considered not safe unless specifically designated." Montanti testified that the only time that hot work should be performed on heating coils is if they are specifically included in the "inspected spaces" section of the marine chemist certificate. According to Montanti, the distinction between hot work and cold work is important because cold work eliminates the potential for fire by eliminating activities which cause sparking. Montanti had no expectation that anyone would perform hot work on the heating coils and his certificate did not allow the coils to be dismantled by hot work. Montanti expected the heating coils to be dismantled, or disconnected at the flanges, blown with water, and drained. Montanti noted that Fewell's

email to Barreiro regarding cleaning the barge also contemplated that the coils would be dismantled by cold work, which can be performed by certain pneumatic or hydraulic tools, including some types of Sawzalls.

Montanti testified that marine chemists rely on the National Fire Prevention Association (NFPA) 306 guide, which includes rules, regulations, and minimum standards, and provides guidance regarding the locations where combustible materials may be found on vessels and safety precautions for entry and work in confined spaces. Fewell is a member of the NFPA technical committee on gas hazards, which puts together the NFPA 306 guide, and Montanti suggested that Fewell's standards as a member of that group would have dictated that Kirby flush the heating coils on the DBL 134 prior to selling the vessel for scrap.

Montanti testified that Kirby did not advise him about the problems with the heating coils, and he "believe[d] Kirby withheld information that would have been useful," though "hindsight is always 20/20." Montanti testified that he saw no evidence that the coils were leaking when he inspected the barge. "No puddles, no dripping, nothing of that sort." If he had known that the coils were leaking, he would have directed Clean Water to flush the coils. Montanti further explained that if there had been gas present in the cargo tanks when he inspected them, his meter would have picked it up: "You can't have gasoline in a tank and not have the meter pick it up."

(6) Southern's Purchase

Southern, acting through its vice-president Higginbotham, submitted the winning bid for the DBL 134 and Viking. The purchase and sale letter agreement was executed

by Higginbotham on April 15, 2019, and a representative for Kirby on April 17, 2019. Higginbotham testified that the agreement followed the same format that Kirby and Southern had used for years in other transactions. Fewell, on the other hand, testified that the agreement was dissimilar to other agreements for sale that Kirby uses, so he assumed that the agreement was originally developed with input from Southern. Higginbotham testified that Southern had previously acquired "dozens" of assets from Kirby. Higginbotham testified that Southern had performed pre-bid inspections prior to purchasing other vessels but did not do so with regard to Southern's purchase of the DBL 134.

Southern's chief operating officer Sheppard testified that he expects parties to enter contracts in honesty and in good faith, and it is "vital" to "consider what the other side [of] the contract would want to know." Sheppard testified that: Kirby did not deliver a clean barge to Southern; this failure surprised him; Kirby did not act in good faith; and he believed that Kirby breached the purchase agreement for the barge. Sheppard testified that the barge's historical problems with the coils would have been "critical" for Southern to know, and Southern "probably wouldn't have bought" the barge if it had known of these issues. Sheppard explained that purchasing a dirty vessel is "a serious hazard" and that it would not be commercially viable. Given the problems with the coils, Sheppard speculated that the cost to clean the heating coils would probably have exceeded the purchase price for the barge.

Similarly, Higginbotham testified that purchasing clean assets was "very important" for Southern because commodity pricing changes rapidly, and Southern could start

processing a clean vessel "in a fairly quick manner." Higginbotham testified that in March 2019, Southern was not purchasing dirty assets because "we had other things to do." Higginbotham stated that Kirby knew that Southern "didn't want to even look at assets that were not cleaned," testified that Southern would not have bid on the barge if it knew it was dirty and would "[a]bsolutely not" have purchased the barge if it knew it had gasoline in it.

Sheppard was not aware of Clean Water's qualifications to clean the barge, but he expected Kirby to send the barge to a facility that would clean it for shipbreaking. He acknowledged that Southern has never provided instructions to vendors regarding how Southern wants the vessels to be cleaned prior to purchase. Higginbotham testified that Southern worked with customers "to educate them on . . . what needs to be done in order" for Southern to accept a vessel for recycling, but also testified that Southern did not contact Clean Water, or otherwise investigate its cleaning procedures, because Southern "assumed that Kirby was the expert and [was] hiring experts." Higginbotham acknowledged that Southern did not investigate the cleaning methods utilized by the other vendors from which it purchased vessels and did not provide instructions to other vendors regarding how to clean these assets.

Pursuant to the parties' agreement, after Clean Water completed its work on the barge, and Montanti issued his final certificate, Kirby's employee Captain Christopher Nash transported the barge via the Viking from New York to ISL's facility in Brownsville, Texas. According to Nash, this was the first time that he had delivered vessels for shipbreaking. He provided ISL with a liquid load list which included information regarding

various forms and amounts of fuel on the DBL134 and Viking, including some found in a bucket, but did not include any data regarding the thermal heating fluid in the heating coils.

Sheppard testified that ISL, a separate but related entity, was "specifically created for this type of contracting." Sheppard explained that Southern, which did some shipbreaking, did not lend its experience in shipbreaking to ISL, and it did not monitor ISL to determine whether it complies with its safety protocols because "[t]hat's what the government entities are for." Sheppard clarified that Southern did not exercise oversight or control over ISL's operations. He explained, though, that Southern's board of managers had examined ISL's safety record, and it was "absolutely exemplary." Higginbotham confirmed that Southern was not involved in the "day-to-day" operations of ISL. Higginbotham nevertheless testified that ISL was an "expert" and "sophisticated" shipbreaking company, and he assumed that ISL would follow its own internal procedures, guidance from marine chemists, and industry practices during shipbreaking.

(7) Bell's Inspection and Certificate

ISL retained Bell to provide a marine chemist certificate for the DBL 134. Green, who had served as ISL's president since 2016, testified that he had been using Bell as a marine chemist for more than ten years and had never had any issues with his work. Bell inspected the DBL 134 with an ISL representative. Bell testified that he verbally indicated during that inspection that the pipelines were to be broken by cold work. Bell then met with Green and ISL's shipbreaking depot manager Troy Berry to discuss the barge. At this meeting, Berry recounted that he had previously encountered vessels which had

carried flammable products where there were "issues" and "catastrophic events."

Bell testified that he did not inspect or certify the heating coils on the DBL 134 as safe for hot work because he was hired to inspect the barge for shipbreaking and ISL was going to handle "all the pipelines via cold work." He inspected the vessel and the heating coils "to ensure the integrity of the heating coils," and "did not see any leaks of products or cargo—or staining inside the cargo tanks at the time of [his] inspection, which is an indication that the integrity of the thermal oil systems [was] sound." Bell performed his inspection with flashlights and with natural light from a main access hatch and multiple Butterworth hatches. He acknowledged that he did not examine every inch of the three miles of coils and conceded he "may not have put [his] feet on the bottom of each of the tanks." Bell testified that he touched the walls of the cargo tanks to check for residue and placed his air monitor against the tank walls, and neither test indicated any hazards.

Bell's April 19, 2019 marine chemist certificate contained all of the printed, standard qualifications as previously discussed, and stated that the DBL 134 was safe for shipbreaking. In terms of "[i]nstructions," Bell specifically directed that:

Fire watch with fire protection equipment is placed at the hot work site during hot work. Fire watch has the power to stop all hot work operation [and] all hot work fire watch shall follow 29 CFR 1915 sub part "P" Fire Protection in Shipyard Employment[.] Maintain all Class "A" combustible material clear of the hot work during hot work operation[.] No hot work permitted against insulated deck/bulkheads[.] [Pipelines] to be broken by cold work[.]

Bell testified that he assumed that the heating coils contained thermal oil, which precipitated his direction to use cold work to break them. According to Bell, tools suitable for cold work include shears, a hacksaw with a wetting agent, and hydraulic cutters. At

trial, Green acknowledged that heating coils fall within the category of "[pipelines]" with regard to Bell's instructions that they were "to be broken by cold work."

Bell conceded that it would have been important for him to know that the heating coils were leaking: "[i]nformation is important to ensure safety of all individuals." However, according to Bell, ISL had been working on the DBL 134 for two weeks preceding the accident, and air monitoring tests performed during this period would have shown LEL (lower explosive limit) gases if the heating coils had been permeable and full of gasoline, or if gasoline vapors had been impregnated in the tank walls. Ultimately, Bell concurred with Montanti's assessment that there is no way to clean a vessel so that it has no volatile gases. Finally, Bell acknowledged that his license as a marine chemist had been revoked based on his issuance of the marine chemist certificate for the DBL134.

(8) ISL's Inspection of the DBL 134

Although the purchase agreement provides that Southern "shall inspect" the barge upon delivery, Southern did not inspect the ship and delegated the inspection to ISL. Sheppard confirmed that Southern had an obligation to "inspect and confirm the cleanliness" of the barge when it arrived at ISL's premises; however, Sheppard did not do so because it considered ISL to be an expert shipbreaker.

Green testified that he personally participated in the inspection of the barge, including its cargo tanks, when it arrived at the shipyard, the inspection took place over two days, and they found "nothing out of the ordinary." ISL employee Selvera, who served as the SCP or safety officer for the DBL 134, confirmed that a group inspection of the barge identified only one safety hazard—a broken step on one of the barge's ladders.

ISL's safety manager Mata testified that the initial inspection of the barge, Bell's certificate, and daily inspections, including daily air monitoring, did not provide any indication that the barge was not safe for shipbreaking. Mata conceded, though, that the thermal oil in the heating coils should have been indicated on the liquid load list provided by Nash but was not.

(9) ISL and Its Standard Practices

ISL's president, Green, who began working for ISL in 2013 as its environmental safety manager, testified that he possessed twenty years of experience in shipbreaking. According to Green, ISL specializes in ship recycling and was "basically" created to provide the United States Navy and Maritime Administration with a safe way to dispose of their vessels. In 2019, when the accident occurred, ISL had approximately 210 employees.

ISL's safety manager Mata testified that he had worked with ISL since 2009. He explained that he supervises its safety officers and technicians and ensures that: (1) ISL is performing required training for employees, (2) its worksite is safe, (3) its machinery, equipment, and employees are working safely and efficiently, and (4) ISL's work is performed in compliance with OSHA regulations. In terms of safety management for shipbreaking, Mata testified that when ISL obtains a vessel for scrapping: (1) it obtains the liquid load list; (2) ISL's management performs a group inspection; and (3) ISL obtains a marine chemist certificate for the vessel.

In terms of ISL's view of the marine chemist certificate, Green testified that the marine chemist certificate is "very important," and ISL abides by the conditions and

restrictions in the certificate because it is "one of our checks." Mata and Selvera confirmed their understanding that ISL was required to comply with the marine chemist's directions. However, Green, Mata, and Selvera further testified that even if a marine chemist certifies that a vessel is safe for shipbreaking, ISL independently verifies that conclusion. According to Green, ISL "never assume[s] a vessel is 100 percent safe," and while ISL relies on the marine chemist, it does not "trust people that are not on [ISL's] team."

Mata provided ample testimony regarding the safety management tools that ISL routinely employs during the shipbreaking process which include: daily cutting plans, hazard identification cards, job site safety reviews, job safety analyses, and daily safety meetings. ISL also provides its employees with PPE, such as coveralls, hard hats, gloves, masks, and respirators, and assigns a personal gas meter to one employee in each team working in the same space which sounds an alarm, vibrates, and flashes to signal any change in atmospheric conditions. Mata further testified that ISL, acting through the safety team, supervisors, and other employees, is "continuous[ly] monitoring" its employees throughout the workday for safety purposes.

In accordance with the requirements of marine chemist certificates, ISL also deploys SCPs to check the atmosphere in its vessels. According to ISL, its SCPs perform testing as required by the certificates, and they also test every two hours during active work as an "extra check" in addition to minimum requirements. The SCPs maintain competent person logs reflecting the data obtained during their testing. Mata explained that the gas meters used by the SCPs are extremely sensitive, but nevertheless, it was not unusual for a competent person log to reflect identical, normal readings on a daily

basis. Mata stated that if ISL saw that the numbers had fluctuated, it would be a "trigger" for ISL to "immediately" stop work and investigate.

SCP Selvera explained how he performed gas testing on the vessels' atmosphere. Selvera testified that he arrives at work before other ISL employees, checks out a personal gas meter and a larger gas meter, and using both meters, walks his assigned vessels to examine them for atmospheric safety. He drops the air monitoring hose for the larger meter "down any hole that there is" on the vessel, and checks the atmosphere at the bottom, middle, and top of the space. If Selvera obtains normal results, he proceeds to the next testing location on the vessel and repeats his testing. After completing these tests, he climbs down into the tanks of the vessels and checks each tank individually by testing the atmosphere while standing in the middle of the tank. Selvera explained that he did not carry his competent person log with him during his inspections, but instead carried a notepad with him to record the atmospheric readings, then transferred the test results to the log.

(10) The ATC 25

At trial, the parties testified regarding events surrounding a separate vessel that Southern had previously purchased from Kirby, the ATC 25. Higginbotham acknowledged that the ATC 25 had "some issues." On March 21, 2019, less than two months before the accident at issue in this case, Green advised Sheppard, Higginbotham, Berry, Mata, and others that ISL "had to stop work on the [ATC 25] today due to a large deck pipe still charged with [c]umene." Green explained, "This material is highly flammable and

dangerous. We need to drain and flush this pipe before we can recommence hot work."¹⁰ Green subsequently advised, "I credit ISL Safety and Ship Cutting team for following company procedures. Never trust a Marine Chemist Certificate or anyone else who says a tank/pipe is safe. **ALWAYS** double check with our Safety team before entry or hot work."

Green testified that when ISL found the cumene, its employees inspected the scene, determined the identity of the substance, and they sent photos to Higginbotham so that he could, in turn, notify Kirby. Green testified that ISL does not "put all [its] trust in anyone that says something is safe," and it does "[its] own checks to verify that it is safe, so [as] to prevent accidents and situations like this."

The parties disagreed regarding the events that occurred in the aftermath of this discovery. Higginbotham testified that he was "pretty upset" and immediately called Fewell, informing him that such an occurrence could not happen again and that Kirby "has got to do a better job with this." According to Higginbotham, Fewell assured him that there would not be any further incidents of this type. Fewell disagreed with this recitation of events. According to Fewell, Higginbotham merely advised Kirby that Southern was investigating an unidentified substance found on the ATC 25. Fewell testified that he did not tell Higginbotham that such an incident would not happen again, or that it should not have happened, because the parties would have instead employed the "discovery of any toxic or hazardous substances" provision in the parties' standard purchase agreement.

¹⁰ Cumene, used in a variety of petroleum products, is a clear colorless liquid that is insoluble in water, has a flash point of 115 °F, and may be moderately toxic by inhalation, ingestion, and skin absorption. See National Center for Biotechnology Information, https://pubchem.ncbi.nlm.nih.gov/compound/Cumene (last visited May 4, 2023).

This provision required Kirby to either remove a toxic or hazardous substance at its cost or allowed Southern to remove the substance at Kirby's cost. Fewell testified, and Higginbotham acknowledged, that Kirby and Southern had used this provision with regard to other vessels.

Ultimately, Southern did not request Kirby to clean the ATC 25 or to pay any costs for cleaning it, and ISL successfully finished scrapping the ATC 25. Southern's witnesses contended that the incident with the ATC 25 was completely dissimilar to the situation presented in this case. According to Sheppard, Kirby did not know about the cumene when it sold the ATC 25 to Southern, but Kirby knew that the heating coils on the DBL 134 contained gasoline prior to sale.

(11) ISL Begins Work on the DBL 134

After its inspection and receiving Bell's marine chemist certificate, ISL began scrapping the barge. In addition to other shipbreaking activities, ISL made precuts in the decking on the barge, then, using the precut sections, pulled the panels off the deck before working on the underlying cargo tanks. This process provided additional ventilation for work on the cargo tanks. ISL employed this process with regard to tank 1-P, and ISL successfully dismantled and removed the heating coils in tank 1-P without incident. SCP Selvera acknowledged that ISL did not drill the pipes in 1-P to perform gas testing because he performed the gas testing in that tank from the deck through a flange.

After completing work on tank 1-P, ISL cut openings or doorways between tank 1 and tank 2. ISL then began working on tank 2. The decking over tank 2 was precut, but unlike tank 1, the panels had not been removed when Aguilar and Loredo began

dismantling the heating coils in that tank. ISL had the ability to mechanically ventilate the tanks but was not doing so at the time of the accident.

Green acknowledged that due to the problems with the ATC 25 and knowing that the DBL 134 had previous cargos of gasoline and ethanol, ISL was "progressing . . . as if there may be cargo left in the cargo system." He further acknowledged that ISL was "aware of the possibility that the tank cleaning was not conducted completely" by Kirby before ISL began shipbreaking. Thus, ISL took "extra measures" on the barge "to mainly dismantle all of the cargo lines," to ensure it did not happen again.

(12) ISL Discovers Oil and Liquid on the Barge

On May 13, 2019, the day before the accident, ISL discovered an unknown substance in the heating coils. Supervisor Beltran testified that he found the unknown substance in tank 1 and stopped his cutting crew from further work that day. A statement provided by Berry addressed the discovery:

On 05-13-2019, [pumping foreman] Alan Medina came to my office and stated that he discovered water with some other dark substance while opening and draining heating coils inside DBL134 Cargo Tank #1 Port. [Medina] stated that . . . the substance was mostly water with a small amount of thick oil and that it had a distinct smell like burned oil. We then met with [Green] and again discussed what the substance could be. At the end of this meeting[,] we agreed that this was a water and heavy oil mixture. I called my ship cutting supervisor [Beltran] to discuss what it could be inside the pipe. [Beltran, Medina], and I made the decision for no torching operations to be held in the area and the approximate time was 10:30 [a.m.]. I then instructed [Medina] to conduct more inspections of the pipes, drain the material and document the material that came out. I also informed [safety supervisor] Juan Banda of the situation. I wanted to involve everyone so we could all be on the same page. In the later afternoon ship cutting supervisor [Beltran] commenced cutting operations on the deck of the [DBL 134,] cutting pipes that had previously been drained and washed and also been inspected by safety department with gas meter and cleared for hot work. Before the end of the day[,] I instructed [Banda] that we needed to have a toolbox meeting with employees working on the barge about the contents in pipe and the possibility of gasoline (flammable vapor) hazards on this project due to DBL 134 previous cargo. Safety Supervisor [Banda] was instructed to conduct this meeting at 7:10 [a.m.] on 05-14-2019 before work on the barge commenced.

Green explained that he examined a sample of the material, smelled it, and determined it was "benign," consisting of heavy oil and water. According to Mata, the "oily water" substance did not smell, set off a gas meter, or catch fire when they tested it with a torch. In his deposition, SCP Selvera testified that a fellow employee told him that the liquid smelled like gasoline; however, he did not recall that fact at trial. As a result of this discovery, Selvera met with safety supervisor Banda and pumping foreman Medina and was told that ISL would proceed by drilling the heating coils, testing for gases or vapors, and then cutting the heating coils.

Green testified that ISL did not inform Southern of this finding because the material was determined to be non-hazardous. The substance was not actually tested until after the accident, as part of the investigation, and that testing showed that the material's flash point was greater than 200 degrees Fahrenheit, consistent with a heating-oil-type substance. That substance, or thermal oil itself, would not ignite in conjunction with the use of an electric Sawzall. On May 17, after the accident at issue, ISL employees collected additional samples of a similar substance that was also determined to be non-hazardous.

Green testified that when ISL found substances in the heating coils of the DBL 134, it simply signified that the pipes had been "flushed and cleaned" leaving "remnants" of the materials they had contained. According to Green, "every project . . . is going to

have residue with water, or oily water." Green acknowledged that finding residue in a pipe is not uncommon, and that ISL sees it "every[]day." Supervisor Beltran testified that when he and other ISL employees dismantled heating coils, they "always" had oil in them.

(13) Safety Meeting Regarding Flammable Material on the DBL 134

ISL held a safety meeting the morning on May 14, 2019, the day of the accident. The meeting was commemorated by a "Safety Training Attendance" sheet which states that the "Training Topic" was "Flam[m]able Material on Board Barge DBL 134 (Gasoline, Oil, etc.)." Mata nevertheless denied that ISL was aware that there might be gasoline on the barge and disagreed that the Safety Training Attendance sheet for the date of the accident indicated otherwise. At trial, SCP Selvera testified that he was not aware that there was a potential for gasoline to be on the vessel because he had been told the barge had been cleaned. However, he admitted that he testified to the contrary in his deposition, when he stated under oath that he knew that there was a potential for gasoline to be on the vessel, and ultimately testified that there is a potential to find gasoline in every ship.

The Safety Training Attendance sheet is signed by those employees who attended the meeting. Loredo attended the meeting, but Aguilar did not, nor did Selvera. Mata conceded that it defeated the purpose of holding safety meetings if all employees did not attend because it only takes one person to potentially endanger an entire work crew.

(14) May 14, 2019

On the day of the accident, after the other employees had been sent home, Aguilar and Loredo entered tank 2 and began dismantling the heating coils with an electric Sawzall. Selvera testified that he was in the tank when Aguilar and Loredo began work,

and that he stayed in the tank during the morning assisting Aguilar and Loredo in dismantling the heating coils. Selvera's statement, taken the day after the accident, does not reflect that he was in the tank working at any time. Selvera testified at trial that the bottom of the tank had rainwater in it; however, in his deposition, he stated that there was no water in the tank before they started cutting the coils and that "[t]he water liquid started coming out when they started doing the cuts." The ISL employees did not stop work or perform testing to determine the nature of the "water liquid."

Selvera explained that his air monitor displayed normal readings throughout their work. Selvera stated that he used his air monitor to perform the testing, and that Aguilar had been issued a personal air monitor to use during the work. As will be explored more fully *infra*, Aguilar provided a statement after the accident denying that any air monitoring had taken place on the DBL 134 or that he was using a personal air monitor at the time of the accident.

Selvera testified that they dismantled the heating coils by repeatedly drilling holes in the coils with a non-sparking drill, inserting an air monitoring hose into the resulting holes to perform air monitoring, then cutting the coils with the Sawzall. Mata and Beltran testified that drilling, testing, then cutting was ISL's standard procedure; however, Green testified otherwise. According to Green: (1) ISL only drills pipes when the end of the pipe cannot be opened; (2) drilling the heating coils would have been inappropriate because drilling constituted hot work; and (3) "[t]his was a draining operation not a non-sparking draining operation."

At some point, Selvera left the tank, and Aguilar and Loredo proceeded with their work. Aguilar was sawing when the Sawzall became jammed in a heating coil. Aguilar and Loredo then took a lunch break. Selvera conceded that contrary to instructions in the marine chemist's certificate, and ISL's procedures, Selvera did not recheck the air in the tank when Aguilar and Loredo returned to work in the tank after their lunch break. Green testified that ISL was not required to check the air in the cargo tank because it would not be a "reasonable procedure" to have to retest after breaks. After the break, Loredo took over sawing on the heating coils. Loredo had just begun work when the fire erupted.

ISL issues entry permits which define the scope of work and require the presence of a safety standby person when its employees enter confined spaces. Loredo and Aguilar's entry permit for the date of the accident states that the purpose of their entry was to "clean tank/Pump out liquid Tank 2 & 3," and does not identify the employee serving as the safety standby person. At trial, Selvera testified that he served as the safety standby person for Aguilar and Loredo; however, Selvera acknowledged that in his deposition, he testified that "no one" was the safety standby person and also acknowledged that he was not on board the barge at the time of the accident. Green and Mata testified that Aguilar and Loredo did not need a safety standby person, as required by the entry permit, because the cargo tank did not constitute a confined space given that they had cut doorways between the tanks. Other ISL entry permits examined at trial specifically identified occasions when ISL employees were cutting the heating coils.

Further testimony indicated that ISL required cutting permits to be issued for hot work, and ISL did not issue one for May 14, 2019. The form for a cutting permit requires

hollow metal structures to be opened, drained, cleaned, and tested. Mata agreed that the heating coils are hollow metal structures, and that any form of cutting requires a cutting permit. Mata nevertheless testified that a cutting permit was not required for the work that Aguilar and Loredo were doing at the time of the accident because a pumper "may or may not do some cutting of pipes."

Despite the fact that Bell's marine chemist certificate required ISL to provide a fire watch during hot work, Mata confirmed that Aguilar and Loredo did not have a fire watch on the day of the accident. Green testified that it was not necessary to provide Aguilar and Loredo with a fire watch because ISL only provided fire watches for torch cutting, and "[f]ire watch is never used while sawing." According to Selvera, ISL complied with Bell's requirement to provide a fire watch at the time of the accident because it "could have been" Aguilar or Loredo. However, other trial testimony explained that, under OSHA requirements, employees who are acting as a fire watch cannot be the same employees who are performing the work necessitating the watch. Further, a fire watch must have a water hose, or other fire-fighting equipment, and Selvera acknowledged that there were no water hoses or other fire-fighting equipment in the cargo tank.

ISL's air monitoring records for the DBL 134 were problematic both for the day of the accident and historically. ISL's records contained two different competent person logs for the barge on the day of the accident; this is the only time two different logs for the same date appear in the records. One of the two competent person logs for May 14 indicates that all air monitoring readings were normal, and the second includes a handwritten line striking through the "FWD Fuel Tank" and the spaces for entering the testing

data for the FWD Fuel Tank. According to trial testimony, ISL had removed the FWD Fuel Tank from the barge before May 14, 2019, and thus it could not have been tested on that date. At trial, Selvera explained that he prepared the first, incorrect log on the day of the accident, then realized his mistake and completed the correct log. He testified that if he had wanted to destroy the inaccurate log, "nobody would have known that sheet was even here."

Historically, instead of completing competent person logs on a daily basis, Selvera instead made copies of a competent person log annotated with normal air monitoring results at all locations and times, and simply added new dates and signatures. At trial, Mata stated that he did not think it was improper to take an old log and sign and date it with a new date, so long as the air monitoring was performed, but in his deposition, he testified it was improper. Mata conceded that ISL's training required the logs to be individually filled out on a daily basis. Selvera testified that he performed all required air monitoring on the barge. He testified that he would not fail to perform the necessary checks because he performed some of the cutting and he would not endanger his coworkers, who were also his friends.

As stated previously, Bell's certificate required the coils to be broken by cold work. The testimony provided by ISL's witnesses regarding the distinction between hot work and cold work was conflicting. ISL's internal policies and procedures regarding "hot work safety" on hollow and enclosed structures defined hot work as including "spark-producing operations" such as "cutting with abrasive or metal blades," warned of "Explosion and Fire Hazards" during hot work, referenced testing for "residual products," inspecting and

testing for the presence of flammable vapors or liquids, flushing and ventilating the structure if flammable products were found, and retesting prior to continuing work.

Higginbotham acknowledged that using a Sawzall on the heating coils constituted hot work and thus violated the marine chemist certificate. Green acknowledged that heating coils are pipelines and that Bell's certificate directed them to be broken by cold work. He further acknowledged that Aguilar and Loredo "were engaged in hot work on the heating coils" at the time of the accident. However, Green testified that language on the marine chemist certificate stating that heating coils were considered unsafe unless specifically designated otherwise was merely "boiler plate language that [was] not [Bell's] instruction." According to Green, when a marine chemist requires pipelines to be broken by cold work, that simply means "you take off the ends of the pipeline," and does not "mean every single cut in that line has to be by some kind of cold cutting" because that would be "ridiculous." Green stated that ISL "opened both ends [of the pipes], did the testing, [and] that's why they were doing the hot work that they were doing at that time." Sheppard testified that Aguilar and Loredo "cold broke" the heating coils, and there was "[n]o question about it." Fewell testified that "You can't hot-tap a pipe, period," and "[c]oils can never be cut by hot work."

Selvera testified that pipelines, as referenced in Bell's certificate, included heating coils like the ones at issue in this case. He knew that Bell's certificate meant that the heating coils on the barge had not been designated safe for hot work of any kind. He acknowledged that cold work means using tools that do not create a spark, and the reason

for performing cold work was to prevent a fire or explosion. Selvera testified that ISL trained its employees to use Sawzalls and that the use of Sawzalls constituted hot work. However, according to Selvera's understanding, a Sawzall, which constituted hot work, could be used to clean a tank, or pump out liquid. He believed that cold work was "just un-flanging or un-bolting, taking screws away." ISL's witnesses acknowledged that ISL had intrinsically safe, or non-sparking tools, such as non-sparking drill bits, hydraulic pliers, and air tools. However, ISL did not have an intrinsically safe, or non-sparking Sawzall, and Green was unaware that such a tool existed.

(15) ISL's Investigation

The day after the accident, Mata went into tank 2 and saw the Sawzall lodged in the heating coil. He did not see the drill that Aguilar and Loredo were using but explained that the tank had water in it. He used an air meter to check the air in the tank and did not obtain any dangerous readings. Green testified that immediately after the accident, ISL assumed that the accident was caused by a problem with the DBL 134's cargo system, which moves the cargo between the ship and the shore, and that one of the cargo pipes or flanges had a remaining product load in it. However, after hiring experts, ISL concluded that the heating coils contained trapped gasoline vapors and the tank walls were impregnated with remnants of gasoline.

After the accident, ISL obtained statements from various employees and reported the accident to its parent company. Aguilar's statement, provided on July 25, 2019, asserted that ISL did not conduct air monitoring on the barge on the date of the accident (misidentified in the statement as occurring on May 16, 2019), and he had not been issued

a personal air monitor that day. Aguilar stated that they followed the same procedures on the day of the accident that they usually did, and that ISL did not normally check the air quality. Aguilar and Loredo were taking turns cutting pipes, and "liquid was coming out of the tub[e]s (vapor and liquid was gray)." Aguilar stated that they were not informed that a black liquid had previously been found in the heating coils, and "[s]afety" had advised them that the vessel was ready to cut and clear. According to Green, Aguilar's statement was not accurate because he "made the statement when he was under duress[,] and he was still in pain from his injuries."

Pumping foreman Medina provided the following statement about the accident:

On 05-14-2019, I got to work at approximately 7:15 and I instructed [Loredo] and [Aguilar] to work on the DBL 134 barge to remove pipe flanges from the main deck. Around 9AM it started to rain[,] and management sent the ship cutters and fire watch home for the day. The reason I had the pumpers working on the main deck is because the ship cutters were making pre-cuts on tank 1-starboard and [I] did not want them to be in an area where they would come into contact with hot slag. After the . . . ship cutters left due to the rain, I instructed pumpers [Loredo] and [Aguilar] to go into tank 1starboard after safety tech [Selvera] cleared it with gas meter. I then proceeded to do an inspection with gas meter on the heating coils in tank 1 starboard. Both the readings did not detect any hazards both in the tank and the heating coils. Employees finished working in tank 1 starboard and then moved to tank 2 starboard. During lunch I asked employees if they were almost done in tank 1 starboard and their reply was that . . . they were finished in tank 1 starboard and that they had already started in tank 2 starboard doing the same task of cutting the heating coils on the floor. I asked if they had obtained a permit from safety prior to starting in tank 2 starboard. They informed me that safety tech [Selvera] had inspected the tank with gas meter and cleared it of any hazards and had issued [them with] a permit to enter. I had previously inspected the heating coil pipes in tank 2 starboard with a gas meter and cleared it of any atmospheric hazards before lunch. At approximately 12:30 one hour after lunch I heard a commotion on the radio that there had been an accident on the DBL 134 barge. When I arrived at the barge[,] I noticed that the employees had sustained severe burns to . . . numerous areas of the[ir] bod[ies].

Berry's statement regarding the date of the accident provided:

On 5-14-2019 following completion of the morning [safety] meeting conducted by [Banda], I informed ship cutting supervisor [Beltran] that no torch cutting operations would be conducted on DBL134 until the pumping crew had a chance to completely drain the heating coils inside cargo tank #1 & #2. At 9:00AM I decided to send the ship cutters home due to the raining conditions. The labor pumping department did not go home and were to continue their operations on the vessels. At approximately 12:30PM, [Mata] informed me that there was a lot of commotion over the radio and mentioned that there was smoke coming from DBL134. We then proceeded to go to the barge and that's when we noticed that two employees had been in a serious accident.

Mata prepared ISL's "trade entry" reporting the incident to European Metal Recycling, a parent company. This report stated, in relevant part:

On 05/14/2019 at approximately 12:32PM, two EMR employees were injured when they cut into a heating coil pipe located inside Kirby Barge DBL 134 Cargo Tank #2 STBD. This heating system uses a product called mobiltherm 603 during normal operation. The injured employees are [Aguilar] & [Loredo]. A fire ignited after [Aguilar] cut through half of a heating coil pipe using an electric saws-all, both employees then took a water break, when they returned to the work location (Approximately 10 minutes) [Loredo] started cutting with the saws-all and ignition occurred immediately. The product inside the heating coil had been identified by pumping foreman [Medina] on 05/13/2019 and [Medina] made the decision to cut these pipes saws-all rather than completing facility procedure for opening/drilling/inspecting fuel pipes using non-sparking tools. [Medina] states that he made this decision based on the fact that these heating coil pipes were not fuel pipes and what he discovered during initial inspection was water with a small amount of the mobiltherm 603 product. Kirby DBL 134 barge previously carried gasoline and ethanol as cargo. Purchase and sale agreement states that Seller agrees that the barge shall be delivered to Buyer cleaned of all chemicals, petroleum products and sludge." Marine Chemist gas free certificate dated April 11, 2019 was provided by Seller prior to purchase. Upon arrival all cargo tanks were opened/inspected by our safety team, shipyard competent person and shipbreaking depot manager [Berry], Yard Supervisor [Beltran] and SBK Supervisor Rolando Ornelas. Certified Marine Chemist inspected and issued a certificate for "Shipbreaking Operations" on April 29, 2019.

Following investigation and interviews we have determined the root cause

of this incident to be intrusion of gasoline into the heating coil piping system. Intrusion occurred during gasoline cargo operations due to breaches in the heating coil piping system. This gasoline intrusion was not discovered during Cargo Tank #1 Port and STBD heating coil saws-all cutting operations. The heating coils inside Cargo Tank #2 STBD were cut in six places before the fire occurred. Cargo Tank #1 Port and STBD heating coil piping did not contain gasoline; only a water and mobiltherm 603 mixture.

Mata testified that ISL reprimanded Medina because, at that time, it believed he did not use non-sparking drill bits in the heating coils in tank 2-S.

(16) Subsequent Investigation

Craddock, a senior consultant with Engineering Systems, Inc., testified that he was a fire, explosion, and hazardous material investigator, and that he assisted in performing multiple inspections on the barge for Kirby after the accident. They tested approximately twenty-five samples taken from various places on the barge, all of which were positive for components of gasoline. Craddock testified; however, that the samples did not contain sufficient percentages of gasoline to engender sparking activity when mixed with water. Craddock nevertheless agreed that Kirby failed to comply with the agreement's language to deliver the barge free from all petroleum products.

In December 2019, the parties and various experts examined the barge and investigated the cause of the accident. They performed testing to determine what type of fissures or holes were involved in the piping, and injected water into the piping system, which was supposed to be closed off with a blank flange. However, one of the flanges for the system had been removed, and water traversed the system and shot out onto the deck. This incident set off the gas meters, the individuals evacuated the area, and ISL cleaned the area with a spill containment kit. According to Sheppard, this was a "very

dangerous incident" in which "pure gasoline" came out of the pipes and everyone on the vessel had to be immediately evacuated. Southern's marine safety expert Borison testified that during the investigation, "all the meters went off," they had a "hot situation," he "was scared to death," and he refused to go back on the barge "because it was a time bomb." Southern ultimately reported the incident to authorities as a release of twenty gallons of gasoline. Craddock, who was present during this incident, disagreed with the foregoing testimony regarding the severity of the incident.

(17) Disposal of the Barge

Southern asked Kirby to rescind the sale of the barge and remove it from ISL's premises, but Kirby refused, and Southern filed a motion requesting the trial court to compel Kirby to remove the DBL 134 from ISL's premises. However, on October 2, 2020, Southern ultimately sold the DBL 134 and Viking to Bay Bridge Texas, LLC, a shipbreaking company near Brownsville, Texas, for \$1.00. Sheppard testified that Southern sold the Viking, even though nothing was wrong with it, because Southern wanted to "wash our hands of anything to do with anything Kirby had given to us." Higginbotham testified that Southern did not employ the "discovery of any toxic or hazardous substances" provision in the parties' agreement with regard to this incident because ISL did not notify Southern that gasoline, fluids, or vapors had been found on the barge prior to the accident.

(18) Expert Opinions

(a) Montanti

According to marine chemist Montanti, ISL's discovery of oil and water in the

heating coils on the DBL 134 the day before the accident required ISL to remove its employees from the tanks until the matter was resolved after consultation with a marine chemist. Montanti testified that the DBL 134 had never carried water, so the presence of a thin liquid in the coils implied that something was wrong. Based on Bell's marine chemist certificate, and ISL's discovery of oil and water in the coils, Montanti testified that there was no justification for ISL to have been cutting heating coils with a non-intrinsically safe Sawzall. Montanti testified that, despite cleaning, whatever cargo the vessel had carried would have permeated the vessel and trace amounts would remain. Montanti explained that whether shipbreakers expect to find gasoline, or ethanol, "it's just common, good practice to proceed carefully, not with an electric Sawzall." According to Montanti, if there was a concern that the barge contained flammable material, as suggested by ISL's safety training meeting, it was not safe or reasonable to use a Sawzall or any spark-producing work. Montanti stated that working with a Sawzall on a heating coil that has not been cleared for hot work and not using a gas monitor would be "criminal negligence" and "asking for trouble."

Montanti testified that Kirby delivered the barge to Southern free from petroleum products to the best of its ability, and that if the marine chemist's directions had been followed, the accident would not have happened, "[j]ust like all the other hundreds of vessels that have been scrapped before with the same cleaning preparations."

(b) Mazerat

Fire safety expert Mazerat testified that the parties' investigation found gasoline in the heating coils and impregnated in the residue on the walls of the tank. According to Mazerat, an emulsion of oil and water was plugging or blocking sections of the heating coils and trapping pockets of gasoline inside; however, Mazerat acknowledged that he had not performed testing to confirm this hypothesis. In support of his theory, Mazerat noted that: (1) prior to the accident there was no sign of flammable vapors on the barge, through testing or otherwise; (2) workers had cut through multiple sections of heating coils without incident, and (3) Aguilar and Loredo had cut the heating coils within two to three feet of the location where the Sawzall ignited vapors. Mazerat testified that the ignition of the flammable vapors caused an additional fire in the "scaling" or residue on the walls of the tank.

(c) Borison

Borison provided testimony as a marine safety expert, although he acknowledged he lacked a college degree and lacked any professional safety certifications. Borison described himself as a "field safety man," and "not a pencil-head safety man." In cross examination, he conceded that he lacks experience in shipbreaking and ship cleaning. Borison testified that the events that precipitated the accident began with Kirby's maintenance of the barge.

According to Borison, in March 2017, after Kirby discovered leaking heating coils, Kirby should have removed the heating coils by cold cutting, and the cargo tank walls should have been hydro blasted or sandblasted to eradicate the old tank coatings. According to Borison, Barreiro's emailed comment to Fewell that the barge would have to be cleaned again if Clean Water blew the coils indicated that Kirby knew that the heating coils had perforated. Further, Borison opined that Kirby was, at the time of sale,

reserving the right to sell the barge in a foreign market, and so only cleaned the barge for lay-up, rather than shipbreaking, as an intentional cost-saving decision. According to Borison, the marine chemist certificates provided by Montanti and Bell were "null and void" because Kirby did not inform the chemists that the heating coils were leaking or that they contained gasoline. Borison stated that the printed qualifications on the marine chemists' certificates were "boiler plate CYA" and "[y]ou don't ignore it," but characterized the qualifications as "real estate small print."

Borison testified that ISL complied with all the chemists' requirements and its own internal policies and procedures in working on the DBL 134. According to Borison, a Sawzall does not always constitute hot work because it depends on the environment in which it is used. If the coils had been impermeable and contained only thermal heating fluid which is combustible at above 380 degrees, a Sawzall would have been safe to use. "You don't have anything to catch on fire, this is not hot work. If you have something to catch on fire, it is hot work." Borison thus testified that Aguilar and Loredo did not need to be provided with a fire watch because they were not performing hot work at the time of the accident. In short, Borison concurred with fire safety expert Mazerat's conclusion that gasoline was trapped in pockets inside the coils and between the flaking paint and steel on the tank walls. Borison ultimately testified that the cause of the accident was "[t]he presence of gasoline in [the] heating coil[s] in such an arrangement that it was incapable of being discovered."

(d) Scardino

Consultant Scardino, who has investigated approximately 2,000 fires, testified that

he investigated the DBL 134 with a team on June 18 and 19, 2019. During his investigation, he saw no evidence that Aguilar, Loredo, or Selvera had drilled any holes in the heating coils in the tank. Scardino testified that performing air monitoring from the deck or upper elevations, as Selvera did, would not be an effective method to test for flammable vapors because gasoline vapors are heavier than air. Further, he noted that ISL flushed the coils after the accident, which contaminated all the samples taken from the barge, and thus the sample testing that had been performed did not provide data from which a conclusion could be drawn that there was a sufficient quantity of gas to produce volatile vapors.

Scardino testified that the cause of a fire is determined by the "circumstances, conditions, and agencies that result in a fire or combustion." This causation analysis examines fuel, the ignition source, the oxidizer, and the circumstances bringing these factors together. Scardino testified that in terms of fire origin, the only viable ignition source inside the tank was the Sawzall. After examining the fire patterning, soot deposits, loss of mass, and destruction of materials in the tank, Scardino concluded that once the flash fire ensued at the heating coil where the Sawzall was stuck, the gaseous form of the fuel burned off, then the fire flashed back to a pool of liquid adjacent to the bulkhead. In contrast to others, Scardino saw no signs that the walls in cargo tank 2-S had caught fire, and Scardino explained that a short-event flash fire "cannot heat up the side walls of the tank . . . sufficiently to start volatilizing or liberating vapors off the walls that would be ignited." Scardino tested Mazerat's theory that the heating coils contained emulsions which trapped pockets of gasoline; Scardino concluded that any such occurrence could

not have caused the fire.

In the investigations of June 18 and 19, the parties and experts recovered various artifacts from the tank including melted safety glasses, remains of clothing, the heating coil that had the Sawzall blade in it, the Sawzall, and an extension cord. They did not recover a drill or personal air monitor. Scardino testified that Green ultimately provided the personal air monitor allegedly used by Aguilar to the Forensic Investigation Group in August of 2019. The chain of custody for the air monitor was otherwise unclear. Scardino discovered the existence of the air monitor in January 2021 and attempted to download the data from that meter; however, the data was corrupted. Scardino testified that the meter was greasy and dirty but did not appear to have been exposed to high temperatures, as it would have been if had it been involved in the accident.

Scardino testified that he had criticisms of Kirby insofar as gasoline had permeated the heating coils on the DBL 134; however, the gasoline in the coils was "not the cause for this event." He conceded that without fuel, there would have been no fire. However, according to Scardino, the accident would not have happened if ISL stopped work after the discovery of gasoline and vapors, or if its workers were performing cold work.

(e) Dupre

Dupre, testifying as an expert witness on shipbreaking, explained that he served as president of Southern from 2007 until he was terminated in 2015. He estimated that he had handled the shipbreaking process for hundreds of barges and fifty to sixty ships. Dupre testified that with regard to a vessel like the DBL 134, shipbreaking begins by proceeding from top to bottom and front to back. Working from top to bottom prevents

falling hazards and allows the vessel to be opened to the atmosphere, which is "primary" in shipbreaking to "get [the vessel] aired out." During the shipbreaking process, the vessel tilts backwards as work begins on the bow, and any materials left in the pipes and tanks shift. Because the marine chemist certificate lapses when the vessel moves or conditions change, the SCP is required to constantly monitor the vessel's air conditions during shipbreaking for noxious fumes, flammable vapors, and sufficient oxygen. Further, if a vessel previously carried a substance like gasoline, which is volatile, the shipbreakers must have a heightened awareness to watch for smells and substances which might be hazardous.

Dupre testified that ISL is an expert in shipbreaking and the best facility for shipbreaking in North America. However, according to Dupre, there was a breakdown in ISL's understanding of hot work versus cold work. According to Dupre, the ISL manual is clear and states that hand tools create sparks, and OSHA defines hot work as including riveting, cutting, welding, or any activity producing sparks or flames. Dupre testified that Bell's instructions that pipelines were to be broken by cold work meant that the pipes could not be cut or sawed but must have been sheared or taken apart by bolt. He disagreed with Green that removing the flanges resulted in a broken pipe such that hot work could ensue. Further, under ISL's definitions and policies, the heating coils constituted hollow structures lacking any sampling ports, so the correct procedure for dismantling the coils was drilling with an intrinsically safe tool, thus allowing for air sampling and testing, prior to further dismantlement. Dupre concurred with Scardino's assessment that air monitoring from the top of the tank would not have been effective

because the coils consist of individual environments.

Dupre testified that Aguilar and Loredo should not have been working in cargo tank
2-S at all on the day of the accident:

[There are] several pieces of evidence in this case that showed they may have been ahead of what they were authorized to be doing. The safety coordinator, their supervisor didn't know what they were doing. They weren't there. They were performing hot work without fire watch, which I have never seen [anyone] do anything like that. And I couldn't see any evidence of any testing going on.

According to Dupre, ISL should have waited to cut the coils until the deck was removed because it is safer and faster to do it that way, and he has never seen anyone cutting coils in a tank with the overlying decking in place. Ultimately, Dupre stated that previous cleanings, operations, and representations regarding a vessel's status are immaterial to a safe shipbreaking process, and ISL could not outsource its responsibilities to provide a safe workplace. Dupre opined that the accident would not have happened if ISL had followed its own practices and procedures at the time of the accident.

(19) Parties' Positions

Sheppard, Higginbotham, and Green testified that Southern and ISL were not at fault in the accident. According to Green, ISL's procedures do not anticipate that a ship owner would "intentionally hide a hazard" on a vessel that ISL is shipbreaking. Fewell testified that Kirby had no knowledge or reason to believe that there were holes in the heating coils when it sold the barge. Fewell expected the barge to be cleaned but stated that "[n]othing is ever a hundred percent safe" and "[h]eating coils are not possible to be cleaned." According to Fewell, it was customary for Kirby to leave oil in the heating coils, and that is how it had sold its barges in the past. During his testimony, Fewell

acknowledged that part of his compensation includes an incentive plan and that he makes bonuses based on profitability.

C. Analysis

We conclude that the evidence was both legally and factually sufficient to support Southern's zero damages award. In short, the jury had before it sufficient evidence to determine that Kirby's breach of warranty was not a substantial factor in bringing about the explosion, fire, and resultant damages, or that Kirby's breach of warranty merely furnished the condition that made the accident possible. See Mack Trucks, Inc., 206 S.W.3d at 582; Union Pump Co., 898 S.W.2d at 775; Lear Siegler, Inc., 819 S.W.2d at 472. As stated previously, under the jury's allocation of responsibility, Kirby was thirty-one percent responsible, and all other defendants were sixty-nine percent responsible. The record evidence supports the jury's determination.

Kirby agreed that the DBL 134 would be delivered to Southern "cleaned of all chemicals, petroleum products, and sludge." It was not. While Southern took the position that Kirby should have had the vessel cleaned for shipbreaking purposes rather than lay-

and factually sufficient evidence to conclude that Southern failed to mitigate its damages. The jury was instructed not to include any damages for "any amount" that Southern "could have avoided by the exercise of reasonable care." The doctrine of mitigation of damages, sometimes referred to as the doctrine of avoidable consequences, prevents a party from recovering for damages that could have been avoided by "reasonable efforts" on the part of that party. See Great Am. Ins. Co. v. N. Austin Mun. Util. Dist. No. 1, 908 S.W.2d 415, 426 (Tex. 1995); E.L. & Assocs., Inc. v. Pabon, 525 S.W.3d 764, 768 (Tex. App.—Houston [14th Dist.] 2017, no pet.). Southern contends that mitigation can only happen after the actionable conduct and cannot be part of the conduct that causes the injury. Thus, according to Southern, the mitigation of damages doctrine could not apply to reduce its damages because the events Kirby complains of occurred before the accident, not after. However, we note that the duty to mitigate damages is triggered by knowledge of the breach that ultimately caused the damages, not the damages themselves. See Pabon, 525 S.W.3d at 769–70 (collecting authorities).

up, it did not require Kirby to do so by contract. Given trial testimony indicating that a barge that had been cleaned for shipbreaking would be significantly more expensive, the jury may have inferred that Southern chose not to require its vendors to clean vessels for shipbreaking for economic reasons. Clean Water's efforts to clean the DBL 134 were extraordinarily lengthy and expensive; however, it did not blow or flush the heating coils. After Clean Water cleaned the vessel, Montanti inspected the vessel and issued a certificate stating that the vessel was safe for shipbreaking.

The parties' agreement required Southern to inspect the barge upon delivery, and provided that Kirby would "have no further obligation" to Southern with regard to the DBL 134 "except as provided" in the purchase agreement. Southern did not inspect the barge, as required by the purchase agreement, and instead delegated that task to ISL. Under the agreement, Southern specifically acknowledged that the barge was "sold 'as is, where is,' without warranty of seaworthiness, condition, fitness for purpose or other intended use, merchantability, or any other warranty whatsoever," except as otherwise specified in the agreement. "By agreeing to purchase something 'as is', a buyer agrees to make his own appraisal of the bargain and to accept the risk that he [or she] may be wrong." *Prudential Ins. Co. of Am. v. Jefferson Assocs., Ltd.*, 896 S.W.2d 156, 161 (Tex. 1995). ISL's team, led by Green, inspected the vessel, and found no deficiencies in the heating coils or cargo system. ISL retained Bell to inspect DBL 134, and Bell similarly concluded that it was safe for shipbreaking.

ISL's work on the DBL 134 failed to comply with Bell's instructions and its own internal policies and practices. ISL continued shipbreaking after an unknown fluid was

found in the heating coils and after it knew or suspected that gasoline was on the barge, proceeded with work in tank 2 even though the deck was intact and even though its employees saw thin fluids and vapors emanating from the coils, failed to provide Aguilar and Loredo with a safety standby person or a fire watch, and used hot work to break the coils. Based on ISL's practice of cutting and pasting competent person logs, the presence of two contradictory competent person logs on the date of the accident, and Aguilar's statement, the jury may also have reasonably inferred that ISL was not performing the required air monitoring. While ISL testified that its employees were drilling holes in the heating coils, inserting a tube to test for gases, and then cutting, the jury also heard that ISL did not perform this procedure in tank 1 and there was no evidence of it having occurred in tank 2.

Pursuant to the parties' purchase agreement, if Southern discovered "toxic or hazardous substances" on the barge, it was supposed to "immediately notify" Kirby, and Kirby was required to remove the substance, and if not, Southern could do so at Kirby's cost. Nevertheless, upon discovering liquids inside the coils, either on May 13 or May 14, ISL did not notify Southern, and thus Southern did not notify Kirby or request that Kirby remediate the problem.

D. Summary

While the record contained some conflicting testimony, we bear in mind that the jury was the sole judge of the witnesses' credibility and the weight to be given to their testimony. See Golden Eagle Archery, Inc., 116 S.W.3d at 761. Based on the foregoing, the jury had legally and factually sufficient evidence from which it may have reasonably

concluded that Kirby's breach of warranty did not proximately cause Southern's damages.

See Crosstex N. Tex. Pipeline, L.P., 505 S.W.3d at 613, 615. Accordingly, we sustain

that part of Kirby's sole issue which alleges that the jury's verdict is supported by legally

and factually sufficient evidence.

VI. CONCLUSION

The Court, having examined and fully considered the petition for writ of mandamus,

the response filed by Southern, and Kirby's reply, is of the opinion that Kirby has met its

burden to obtain mandamus relief. In short, the trial court's articulated reasons for

granting a new trial—that there is an irreconcilable conflict in the jury's answers and the

verdict is not supported by legally and factually sufficient evidence—are not supported by

the law and the record. Thus, having rejected both of the trial court's articulated reasons

for granting a new trial, mandamus relief is appropriate. See In re Toyota Motor Sales,

U.S.A., Inc., 407 S.W.3d at 761-62. Accordingly, we conditionally grant Kirby's petition

for writ of mandamus and direct the trial court to vacate its new trial order and to conduct

further proceedings in accordance with this memorandum opinion. The writ will issue only

if the trial court fails to comply.

GINA M. BENAVIDES

Justice

Delivered and filed on the 19th day of May, 2023.

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