

Affirmed and Opinion filed March 29, 2016.



In The

Fourteenth Court of Appeals

NO. 14-14-00377-CV

VICTOR ALARCON, Appellant

V.

ALCOLAC INC. AND RHODIA INC., Appellees

**On Appeal from the 23rd District Court
Brazoria County, Texas
Trial Court Cause No. 76868-CV**

O P I N I O N

A Gulf War veteran sued a chemical manufacturer, alleging that during the Gulf War he suffered personal injuries as a result of exposure to mustard gas manufactured with a chemical precursor supplied by the manufacturer. In response, the manufacturer filed a no-evidence summary judgment motion, which the trial court granted. On appeal, the primary issue concerns whether the veteran presented more than a scintilla of admissible evidence that the manufacturer's chemical precursor was used in the mustard gas that allegedly injured him. In a cross-issue,

the manufacturer contends that the trial court erred in overruling its objections to the veteran's evidence. For the reasons explained below, we affirm.

FACTUAL BACKGROUND

Alcolac Inc., a Georgia chemical company, manufactured the chemical thiodiglycol (TDG). Alcolac International, Inc., a Baltimore company and wholly owned subsidiary of Alcolac, exported Alcolac's TDG under the brand name "Kromfax."¹ TDG is used commercially in textile and leather-dyeing processes and in the manufacture of ink. TDG can also be used as the primary chemical precursor in the production of the blister agent sulfur mustard, a chemical weapon commonly known as mustard gas.

During the eight-year Iran-Iraq War, which ended in 1988, Iraq used several types of chemical weapons against its enemy Iran, including mustard gas. Mustard gas can be made by using one ton of TDG for every ton of mustard agent manufactured.

In 1987 and 1988, Special Agent Daniel Bass, a criminal investigator for the United States Customs Service in Baltimore, began investigating violations of federal law and regulations relating to exports illegally shipped to certain countries, including Iran and Iraq. In the course of Bass's investigation, he discovered a violation based on a shipment of Alcolac TDG to Iran. Bass then ordered the seizure of Alcolac's documents to identify any and all TDG that may have arrived in Iran or Iraq. Because Alcolac's record keeping was "pretty bad," Bass decided to seize all the documents at Alcolac's offices so that he could personally examine Alcolac's invoices and shipping documents.

According to Bass, his review of the documents revealed that Alcolac

¹ Alcolac International, Inc. is not a party to this case.

engaged in four transactions in which its TDG was purchased by Nu Kraft Mercantile Corp., a company located in Brooklyn, New York, and illegally diverted to Iraq. As Bass testified before Congress, in numerous affidavits, and in this case, the four shipments were: (1) a shipment in October 1987 of 138 US tons; (2) a shipment in January 1988 of 138 US tons; (3) a shipment on February 4, 1988 of 131 US tons; and (4) a shipment on February 20, 1988 of 131 US tons.

Nu Kraft representatives, along with Frans Van Anraat, a Dutch national, were involved in making purchases and exports of TDG on behalf of the Iraqi government. Bass was later able to confirm the four shipments of Alcolac TDG and the tonnages when he obtained documents that the Swiss government had seized from Van Anraat's residence. Bass believed that, in total, 538 US tons (or 490 metric tons, the measurement Iraq used) reached Iraq.

In 1988, the United States Attorney's Office filed a charge against Alcolac International, Inc., alleging that the company:

Sold to Colimex GmbH & Co. KG approximately 120 tons of thiodiglycol, a chemical that is subject to the Export Administration Act and Regulations, with knowledge or reason to know that the ultimate destination listed on a Shipper's Export Declaration filed with the United States Customs Service in connection with the sale was not the intended destination, and in so doing facilitated the reexport of thiodiglycol to Pakistan and Iran.

Alcolac, International, Inc. pleaded guilty to participating in the single shipment that was diverted to Pakistan or Iran.²

The United States also indicted both Van Anraat and his associate, Charles Tanaka, a Japanese national, for multiple violations of the Export Administration

² The charge and subsequent plea by Alcolac International, Inc., was unrelated to any shipments allegedly diverted to Iraq, and there is no evidence in the record that the United State took any action against appellee Alcolac.

Act, making false statements to the U.S. Customs Service and Department of Commerce, and money laundering. At Tanaka's re-arraignment hearing to enter a guilty plea, he confirmed Bass's conclusions that through himself, Van Anraat, and Van Anraat's business entity, Companies, Inc., Iraq obtained four shipments of Alcolac TDG.³

Van Anraat had begun using Companies, Inc. in 1984 to procure chemicals for Iraq. From 1984 to 1986, Companies, Inc., through Van Anraat and Tanaka, arranged for fifteen shipments of TDG from Japanese chemical companies, ranging from 16 to 51 metric tons each, totaling at least 275 metric tons. In the summer of 1987, Van Anraat asked Tanaka to attempt to purchase TDG in the United States. Tanaka arranged for two additional shipments of TDG from Technalloy out of South Carolina totaling 234 metric tons.⁴ Shortly after that, Nu Kraft and Companies, Inc. began arranging the four shipments of Alcolac TDG.

On August 2, 1990, the country of Iraq, led by Saddam Hussein, invaded Kuwait, a sovereign Arab emirate. In condemnation of that action, the United Nations authorized a coalition force led by the United States to liberate Kuwait. The ensuing conflict took place between August 1990 and February 1991 (the Gulf War). United States armed forces took part in military campaigns known as Operation Desert Shield and Operation Desert Storm. During the Gulf War, Hussein's military employed various types of chemical weapons that were either deployed or detonated in the region, including mustard gas.

³ According to Bass's congressional testimony in 1991, the Nu Kraft officials pleaded guilty to violations of the Export Administration Act and Tanaka pleaded guilty to one count of money laundering. As of the date of the hearing, Van Anraat remained a fugitive.

⁴ The record shows that during Tanaka's re-arraignment hearing, the Assistant U.S. Attorney alleged that it would prove Tanaka's involvement in various activities, including participating in the shipments of TDG from Japanese companies and Technalloy. However, the record of the re-arraignment does not provide the ultimate destination of the shipments.

PROCEDURAL BACKGROUND

In 1994, Gulf War veterans sued Alcolac, Alcolac International, Inc., Rhodia Inc., and numerous other defendants, alleging that they suffered personal injuries as a result of exposure to the defendants' "chemical and biological reagents and their component parts" used during the Gulf War. Appellant, Dr. Victor Alarcon (Victor), intervened in the lawsuit in 2006. Victor, a United States Army veteran, alleged that he was exposed to mustard gas while serving in Iraq in 1991. According to Victor, Alcolac and its successor, Rhodia (collectively, Alcolac), manufactured the TDG used by Saddam Hussein's military to make the mustard gas.⁵

In 2011, Alcolac filed a no-evidence summary judgment motion on the specific causation element of Victor's negligence and strict liability claims. Alcolac asserted that Victor "has no competent evidence that mustard gas manufactured with Defendants' [TDG] specifically caused his damages."

Victor filed an initial response and several supplemental responses attaching hundreds of pages of exhibits. Victor argued that he had presented more than a scintilla of evidence that on February 25, 1991, he suffered serious and irreparable injuries as a result of exposure to mustard gas manufactured from TDG supplied by Alcolac while he was stationed as a combat field surgeon near Nasiriyah, Iraq.

Victor argued that his evidence and the reasonable inferences drawn from that evidence showed that: (1) Iraq had exhausted its mustard gas supply at the end of the Iraq-Iran War in August of 1988; (2) Iraq had to rely exclusively on its supply of Alcolac TDG to manufacture mustard gas munitions in 1988 and 1990;

⁵ In their fourth amended petition, Victor and the other intervenors alleged that Alcolac Inc. fraudulently transferred chemical plants and other assets it owned to Rhodia Inc. after the intervenors' claims arose. Alcolac, International, was no longer a party to the case, having been non-suited in 1998.

(3) Alcolac shipped 1000 tons of TDG to Iraq in 1987 and 1988, an amount equal to the amount of mustard gas weaponized or stored at the end of the Gulf War; and (4) mustard gas produced with Alcolac TDG in 1988 and 1990 was used to fill Iraqi munitions in existence before the Gulf War. Consequently, Victor argued, munitions made with Alcolac TDG were detonated or destroyed in the Gulf War, causing the release of mustard gas into the atmosphere that subjected American forces to exposure to lethal doses of the chemical weapon.

Alcolac responded to Victor's arguments with supplemental briefing and exhibits. Alcolac asserted that the admissible evidence did not support Victor's conclusion that Alcolac supplied all of the TDG used in Iraqi mustard gas. Alcolac argued that (1) Plaintiff's own expert witness testified, and independent testimony confirmed, that Alcolac made four shipments to Iraq totaling 538 US tons—not 1000 tons; (2) merely because Iraq received 1000 tons of TDG from its suppliers did not establish that Alcolac supplied 1000 tons of TDG; (3) Iraq acquired TDG from other suppliers beginning in 1984; and (4) Victor's arguments were based on impermissible inference-stacking and inadmissible evidence. Alcolac also objected to Victor's evidence as unauthenticated and inadmissible hearsay.

On May 9, 2013, the trial court granted Alcolac's interlocutory no-evidence motion for summary judgment, ordering that Victor take nothing against Alcolac. The trial court did not rule on Alcolac's objections to Victor's evidence.

Victor moved for reconsideration of the trial court's ruling or, alternatively, to reopen the record so that newly discovered evidence could be included. Victor's newly discovered evidence consisted of a video and still photographs taken from the video purporting to show an on-site inspection of a chemical weapons manufacturing facility in the Iraqi city of Fallujah. The video was titled

“UNSCOM 9, Inspection of the Chemical Facilities in Iraq.”⁶ A barrel of TDG labeled “Kromfax solvent” and “Alcolac” can be seen in the video. Victor also offered additional exhibits consisting of affidavits and deposition testimony.

Alcolac lodged objections to Victor’s new evidence and exhibits and requested a ruling on the objections. Alcolac also requested rulings on the objections it had previously made to Victor’s evidence but which were not ruled on when the summary judgment was granted.

On September 23, 2013, the trial court overruled all of Alcolac’s objections to Victor’s evidence. The trial court did not, however, alter its ruling granting Alcolac’s no-evidence summary judgment motion.

On March 28, 2014, Victor’s claims were severed from those of the other mustard gas plaintiffs, making the order granting summary judgment against Victor final. This appeal followed.

VICTOR’S ISSUES

Victor raises four issues on appeal: (1) the trial court erred by determining that Texas law should apply when Maryland has the most significant relationship to the case; (2) more than a scintilla of probative evidence shows that Iraq mustard gas containing Alcolac TDG is capable of generally causing Victor’s injuries; (3) more than a scintilla of probative evidence shows that Alcolac TDG used in Iraq mustard gas was a substantial factor in specifically causing Victor’s injuries; and (4) more than a scintilla of probative evidence shows Victor was exposed to mustard gas manufactured with Alcolac TDG.

As noted above, Alcolac moved for summary judgment on the ground that

⁶ UNSCOM is the acronym for the United Nations Special Commission on Chemical Weapons.

Victor had no evidence that his damages were specifically caused by Alcolac's TDG. In Texas, a plaintiff must establish that "the defendant's product was a substantial factor in causing the plaintiff's disease." *Bostic v. Georgia-Pacific*, 439 S.W.3d 332, 353 (Tex. 2014). On appeal, however, we need only address the narrow issue of whether Victor has presented more than a scintilla of admissible evidence that he was exposed to mustard gas that was manufactured with TDG supplied by Alcolac. Victor acknowledges that both Texas and Maryland law require a plaintiff to show some evidence that the defendant supplied the product that caused the injury. Because this issue is dispositive, we do not reach Victor's other issues or Alcolac's cross-issue.

ANALYSIS

Victor contends that "the overwhelming evidence identifies Alcolac as the sole product supplier of TDG in the years immediately preceding the Persian Gulf War." As noted above, the trial court admitted all of Victor's evidence over Alcolac's objections that some of the evidence was unauthenticated and inadmissible hearsay. Nevertheless, the trial court granted Alcolac's no-evidence motion for summary judgment. By way of a cross-issue, Alcolac contends that the trial court erred in overruling its objections to three exhibits crucial to Victor's case:

- a document titled "Full Final and Complete Disclosure of Iraq to the United Nations Special Commission Regarding Chemical Weapons 1998" (FFCD);
- a document titled "Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD With Addendums"⁷ (Survey Group Report); and
- a video displaying the title "UNSCOM 9, Inspection of the Chemical Facilities in Iraq, August 1991" and single frames taken from the video.

⁷ "DCI" is the abbreviation for Director of Central Intelligence and "WMD" is the abbreviation for weapons of mass destruction.

The FFCD purports to be a draft of a document authored by the Iraqi government in response to United Nations Resolutions 687 and 707, which directed Iraq to “provide full, final and complete disclosure . . . of all aspects of its programs to develop weapons of mass destruction and ballistic missiles with a range of greater than 150 km.” The sponsoring witness of the FFCD was Ambassador Richard Butler, a former Executive Chairman of the United Nations Special Commission on Chemical Weapons, or UNSCOM. The Survey Group Report, dated September 30, 2004, purports to be a report prepared by the Central Intelligence Agency (CIA) describing Iraq’s chemical warfare program. The video purports to have been prepared by UNSCOM and was obtained by Special Agent Bass in the course of his investigation. For purposes of our review, we will assume without deciding that the trial court did not err by admitting these exhibits.

On appeal, Victor makes four primary arguments in support of his claim that he was injured by mustard gas made with Alcolac’s TDG: (1) Alcolac was the only TDG supplier to Iraq from 1987–1990; (2) Iraq had no other sources of TDG; (3) Alcolac TDG was identified at all Iraqi weapons manufacturing facilities; and (4) munitions containing Alcolac TDG were destroyed or launched in the Gulf War. In essence, Victor argues that the evidence and reasonable inferences from the evidence raise a genuine issue of material fact that he was injured by mustard gas made with Alcolac TDG because all of Iraq’s supplies of mustard gas released during the Gulf War were made with Alcolac TDG. Alternatively, Victor contends that assuming Alcolac supplied only 538 or 559 tons based on the objective evidence, Victor still satisfies the “substantial contributing factor” requirement for causation under the Texas Supreme Court’s *Bostic* opinion. *See* 439 S.W.3d at 350 (holding that in absence of direct evidence of causation, establishing causation in fact requires scientifically reliable proof that plaintiff’s exposure to defendant’s

product more than doubled his risk of contracting disease).

A. Standard of Review

A trial court must grant a no-evidence motion for summary judgment if (1) the moving party asserts that there is no evidence of one or more specified elements of a claim or defense on which the adverse party would have the burden of proof at trial; and (2) the respondent produces no summary judgment evidence raising a genuine issue of material fact on each of the challenged elements. *See* Tex. R. Civ. P. 166a(i). We sustain a no-evidence summary judgment when (a) there is a complete absence of evidence of a vital fact; (b) the court is barred by rules of law or of evidence from giving weight to the only evidence offered to prove a vital fact; (c) the evidence offered to prove a vital fact is no more than a mere scintilla; or (d) the evidence conclusively establishes the opposite of the vital fact. *King Ranch, Inc. v. Chapman*, 118 S.W.3d 742, 751 (Tex. 2003).

Less than a scintilla of evidence exists when the evidence is so weak as to do no more than create a mere surmise or suspicion of a fact. *Id.* Conversely, more than a scintilla of evidence exists when reasonable and fair-minded people could differ in their conclusions based on the evidence. *Id.* To raise a genuine issue of material fact, the evidence must exceed mere suspicion. *Ford Motor Co. v. Ridgway*, 135 S.W.3d 598, 601 (Tex. 2004). “Evidence that is so slight as to make any inference a guess is in legal effect no evidence.” *Id.* In reviewing a no-evidence summary judgment, we review the evidence in the light most favorable to the non-movant against whom the summary judgment was rendered. *Id.*

B. Causation

Texas product-liability law requires that the plaintiff prove that the defendant supplied the product that caused the injury. *Gaulding v. Celotex Corp.*,

772 S.W.2d 66, 68 (Tex. 1989); *Georgia-Pacific Corp. v. Stephens*, 239 S.W.3d 304, 308 (Tex. App.—Houston [1st Dist.] 2007, pet. denied). It is not adequate to simply establish that “some” exposure occurred. *Stephens*, 239 S.W.3d at 312 (citing *Borg-Warner Corp. v. Flores*, 232 S.W.3d 765, 773 (Tex. 2007)). Nor is it enough that the seller merely introduced products of similar design and manufacture into the stream of commerce. *Spring Branch Indep. Sch. Dist. v. NL Indus., Inc.*, No 01-02-01006-CV, 2004 WL 1404036, at *2 (Tex. App.—Houston [1st Dist.] June 24, 2004, no pet.) (mem. op.). Instead, the plaintiff has the burden to present “evidence of probative force” that the defendant manufactured or distributed the injuring product. *See Welch v. Coca-Cola Bottlers’ Assoc.*, 380 S.W.2d 26, 30 (Tex. Civ. App.—Eastland 1964, no writ).

Maryland courts likewise require the plaintiff to prove that exposure to the defendant’s product was a substantial factor in causing the plaintiff’s injury. *See Lohrmann v. Pittsburgh Corning Corp.*, 782 F.2d 1156, 1162–63 (4th Cir. 1986) (applying Maryland law). “Maryland courts apply traditional products liability law which requires the plaintiff to prove that the defendant manufactured the product which allegedly caused the injury.” *Lee v. Baxter Healthcare Corp.*, 721 F. Supp. 89, 93 (D. Md. 1989). To satisfy this burden, the plaintiff “must link the defendant to the product.” *Scapa Dryer Fabrics, Inc. v. Saville*, 16 A.3d 159, 167 (Md. 2011). Thus, as in Texas, Maryland law requires a plaintiff seeking to recover for an injury by a product to demonstrate that the defendant manufactured the product at issue. *See Tidler v. Eli Lilly & Co.*, 851 F.2d 418, 424 (D.C. Cir. 1988) (applying Maryland law).

C. Victor’s Evidence and Inferences Based on the Evidence

Victor has no direct evidence that particular batches of mustard gas were manufactured from Alcolac’s product, were at specific locations, were released,

and then contacted him. The FFCD identifies at least four other TDG suppliers to Iraq responsible for supplying 1,875 tons of TDG to Iraq before 1987, and Victor's expert, Frank Parker, admitted in his deposition that Alcolac was not Iraq's only supplier. Victor likewise acknowledges Bass's testimony and the supporting evidence indicating that Alcolac supplied only four shipments of TDG to Iraq in 1987 and 1988, totaling either 538 or 559 tons.⁸ Victor contends, however, that because Iraq's earlier mustard gas supplies were "likely" exhausted by the end of the Iran-Iraq War, it is reasonable to conclude that Iraq's only available supply of TDG for use in manufacturing mustard gas between 1988 and 1990 came from Alcolac, and therefore more than a scintilla of evidence exists that, during the Gulf War, Victor was injured by mustard gas made with Alcolac TDG.

To raise a genuine issue of material fact that he was injured by mustard gas made with Alcolac TDG, Victor relies on both direct and circumstantial evidence. This evidence includes the four shipments and tonnages of Alcolac TDG in 1987 and 1988; Alcolac bills of lading and other evidence showing that Alcolac supplied TDG to both Companies, Inc. and another company known as Oriac; the FFCD's representation that Companies, Inc. and Oriac supplied 1000 tons of TDG to Iraq in 1987; and declarations in both the FFCD and the Survey Group Report that Iraq produced 774 tons of mustard gas in 1988 and 1990. Victor also relies on circumstantial evidence of the volume of mustard gas detonated or destroyed during the Iran-Iraq War and the lack of other identified suppliers in the years leading up to the Gulf War to support the inference that he must have been exposed to mustard gas made with Alcolac's TDG.

⁸ Victor apparently adds 21 tons to the 539 testified to by Bass based on Alcolac invoices in the record, apparently based on the affidavit of his expert, Frank Parker. In his brief, Victor states the number as 599 tons, but during oral argument Victor explained that this was a typographical error and the amount he claimed was actually 559.

Circumstantial evidence may be used to establish any material fact, but the circumstances relied on must have probative force sufficient to constitute the basis of a reasonable inference. *Suarez v. City of Texas City*, 465 S.W.3d 623, 634 (Tex. 2015); *Green v. Tex. & P. Ry. Co.*, 81 S.W.2d 669, 673 (Tex. 1935). An inference is not reasonable if it is premised on mere suspicion, as “some suspicion linked to other suspicion produces only more suspicion, which is not the same as some evidence.” *Suarez*, 465 S.W.3d at 634. Nor is an inference reasonable if it is susceptible to multiple, equally probable inferences, requiring the fact finder to guess to reach a conclusion. *Id.* at 634; *Smith v. Landry’s Crab Shack, Inc.*, 183 S.W.3d 512, 514 (Tex. App.—Houston [14th Dist.] 2006, no pet.). An inference stacked only on other inferences is not legally sufficient evidence. *Marathon Corp. v. Pitzner*, 106 S.W.3d 724, 728 (Tex. 2003).

The evidence on which Victor relies is explained and summarized in the opinions of Victor’s expert, Frank Parker.⁹ Parker is a certified industrial hygienist and safety professional who served in the United States Air Force, where his responsibilities included evaluating environmental hazards such as mustard gas contamination. Like Parker’s opinions, Victor’s appeal is based on three interdependent conclusions: (1) all of Iraq’s mustard gas supplies were completely exhausted by the end of the Iran-Iraq War; (2) Alcolac was Iraq’s exclusive supplier of TDG to Iraq from 1987 to 1990; and (3) all of Iraq’s mustard gas used during the Gulf War was made with Alcolac TDG. We consider the evidence and inferences drawn from the evidence supporting these conclusions to determine whether a genuine issue of material fact exists concerning whether Victor was injured by mustard gas made with Alcolac TDG.

⁹ Alcolac does not challenge Parker’s affidavit on appeal, but challenges all of the inferences drawn from the documents that we discuss. Alcolac argues that Parker’s affidavit only shows that it was “likely” that Victor was exposed to mustard gas made with Alcolac TDG.

1. *Victor failed to present some evidence that all of Iraq's mustard gas supplies were exhausted by the end of the Iran-Iraq War*

Victor's documents show that before 1987, Iraq obtained 1875 tons of TDG from several suppliers not associated with Alcolac. Then, in 1987 and 1988, Iraq obtained an additional 1000 tons of TDG from Companies, Inc. and Oriac, both of whom were alleged to have obtained supplies of TDG from Alcolac. To support Victor's argument that all of the mustard gas Iraq used in the Gulf War was made with TDG supplied by Alcolac, Victor must present some evidence that Iraq's pre-1987 mustard gas supplies were completely exhausted during the Iran-Iraq War, making Alcolac TDG supplied by Companies, Inc. and Oriac in 1987 and 1988 the only chemical precursor available for use in making new supplies of mustard gas ultimately released during the Gulf War.

According to Parker, the FFCD discloses that between 1983 and 1988, Iraq produced 1989 tons of mustard gas.¹⁰ Of that amount, Parker explains that the FFCD showed that 100 tons were "discarded or destroyed by Iraq," leaving 1889 tons, minus an unspecified quantity of precursor materials and mustard gas that was lost "as a result of transfer loss through use of an inefficient barrel pump." Parker contends that the FFCD's reported tonnage is "consistent" with the Survey Group Report's report that Iraq produced approximately 1800 tons of mustard gas. Based on the documentation, Parker opines that it is "reasonable to conclude" that Iraq's supplies were "completely exhausted" by the end of 1988.

Neither the FFCD nor the Survey Group Report expressly concludes that Iraq "completely exhausted" its mustard gas supplies by the end of the Iran-Iraq War. Parker's conclusion is based on Iraq's representations concerning the quantity

¹⁰ In his affidavit, Parker refers to both mustard gas and "mustard agent," but we use the term "mustard gas" for consistency.

of chemical weapons used during the Iran-Iraq War combined with Iraq's claim that it stopped producing chemical weapons after the war in 1988 and did not again resume production until 1990. Assuming Parker's conclusion is correct, however, it defeats Victor's argument, because Alcolac's last documented shipment of TDG to Iraq occurred in early February 1988, six months before the end of the Iran-Iraq war in August 1988. If Iraq's supply of mustard gas was exhausted by the end of the Iran-Iraq War, then a reasonable inference could be made that all of the mustard gas manufactured with Alcolac TDG was also exhausted.

Moreover, Parker's analysis contradicts his conclusion. Parker contends that the FFCD's reported tonnage of mustard gas consumed is "consistent" with the Survey Group Report's report of 1800 tons, but his analysis of the FFCD's data leaves a total of 89 tons of mustard gas (minus some unspecified amount) remaining in Iraq at the end of 1988. Therefore, Parker's conclusion that Iraq completely exhausted its supply of mustard gas by the end of 1988 is unreasonable because his own analysis of the data leads to a contrary conclusion. *See* Tex. R. Civ. P. 166a(c) (providing that expert testimony from an interested witness is competent summary judgment evidence if it is "clear, positive and direct, otherwise credible and free from contradictions and inconsistencies"); *Elizondo v. Krist*, 415 S.W.3d 259, 264 (Tex. 2013) (holding that an expert affidavit containing conclusory testimony is insufficient to create a fact question to defeat summary judgment and courts are not required to ignore fatal gaps in an expert's analysis or assertions).

Victor nevertheless insists that it is reasonable to infer that Iraq likely exhausted its existing supplies of mustard gas based on the sheer volume of chemical weapons deployed against both Iran and its own citizens. Victor points to the CIA's comment in the Survey Group Report that during the Iran-Iraq War, Iraq

was consuming chemical agents “as fast as [they] could be produced.” In the Survey Group Report, the CIA explains that according to Iraq, that country “consumed almost 19,500 chemical bombs, over 54,000 chemical artillery shells and 27,000 short-range chemical rockets between 1983 and 1988.” Victor also quotes a CIA intelligence update describing the toll of Iraq’s chemical weapons use:

Once the Iran-Iraq war was under way, Baghdad used lethal chemical weapons on a scale not seen in decades. . . . CW attacks against Iran increased until the conclusion of the Iran-Iraq war in 1988. In addition, Iraq used both CW and riot control agents against its own Kurdish population on several occasions during this time frame, including the including the infamous March 1988 attack on Halabja in which press reports claim 5,000 civilians died. UNSCOM has indicated that nearly 3,000 tons of Iraqi CW agents were “consumed” that is, used in battle from 1981 to 1988. Iraq used more than 100 tons of CW agents in some individual battles.

Based on the extent of Iraq’s documented use of chemical weapons, Victor argues that that it is “patently misleading” for Alcolac to suggest that Iraq’s exhaustion of its chemical weapons supply by 1988 is merely an “inference” when “Iraq was using chemical weapons on a scale not seen in modern times.”

But evidence that Iraq used large quantities of chemical weapons of all types—including mustard gas—during the Iran-Iraq War does not, without more, lead to a reasonable inference that Iraq exhausted its existing supply of mustard gas by the end of that war and so had to rely solely on TDG obtained from later suppliers associated with Alcolac to manufacture new supplies of mustard gas. *See Suarez*, 465 S.W.3d at 634; *Ridgway*, 135 S.W.3d at 601. Nor does Parker’s conclusory and internally inconsistent analysis of the findings and declarations contained in the FFCD and the Survey Group Report present evidence from which a reasonable inference can be drawn that Iraq exhausted its supplies of mustard gas

made with TDG from earlier suppliers. *See Elizondo*, 415 S.W.3d at 264.

Moreover, Victor presents no evidence that Iraq's procedures for manufacturing mustard gas required that the oldest supplies of TDG be used before any later-obtained supplies. Absent such evidence, it is equally probable that Iraq manufactured its mustard gas using whatever TDG was on hand at a particular facility at a given time, regardless of when it was obtained. *See Suarez*, 465 S.W.3d at 634; *Smith*, 183 S.W.3d at 514. Even assuming that the older supplies of TDG most likely were depleted before the later supplies obtained in 1987 and 1988 were used, similar reasoning has been rejected in a case in which the plaintiff argued that she was injured by a vaccine made by Wyeth based on the manner in which her local health agency scheduled its ordering and distribution of doses of the vaccine. *See Garcia v. Pfizer*, 268 Fed. Appx. 270, 274–75 (5th Cir. 2007) (holding that evidence of vaccine purchase orders and testimony about agency's inventory policies and "first-in first-out" policy was insufficient to show that Wyeth produced the vaccine). The *Garcia* court explained that, even if it were to infer that it was most likely that Wyeth produced the vaccine given to the plaintiff, "Texas law does not permit a plaintiff to prove product liability by contending that the product was most likely from the dominant supplier and Texas courts have rejected liability in similar circumstances." *Id.* at 275 (citing *Welch*, 380 S.W.2d at 30; *Spring Branch*, 2004 WL 1404036, at *4).

Viewing the evidence in the light most favorable to Victor, we conclude that Victor has failed to present more than a scintilla of evidence to support his assertion that Iraq's pre-1987 mustard gas supplies were completely exhausted during the Iran-Iraq War, making the TDG allegedly obtained from Alcolac in 1987 and 1988 the only chemical precursor available for use in making new supplies of mustard gas ultimately released during the Gulf War. *See Gauldin*,

772 S.W.2d at 68; *Stephens*, 239 S.W.3d at 308–09.

2. *Victor failed to present some evidence that Alcolac was Iraq's exclusive supplier of TDG from 1987 to 1990*

In addition to presenting some evidence that Iraq exhausted its existing mustard gas supplies by the end of the Iran-Iraq War, Victor's theory requires that he present some evidence that Alcolac was Iraq's exclusive supplier of TDG after that time. Victor's evidence consists of direct evidence that Alcolac TDG was shipped to Iraq in 1987 and 1988, and circumstantial evidence that, according to Victor, supports a reasonable inference that Alcolac TDG was the only available TDG precursor available to Iraq for the manufacture of mustard gas between 1987 and 1990.

Victor asserts that the following evidence supports his contention that Alcolac TDG was used to make Iraq's supplies of mustard gas: (1) Alcolac invoices of TDG sales to Companies, Inc. or the broker, Nu Kraft; (2) Special Agent Bass's testimony that four shipments of Alcolac TDG were sent to Iraq in 1987 and 1988; (3) a sworn offer of proof from the United States district attorney during Tanaka's re-arraignment hearing describing the chain of sale to Iraq; (4) eyewitness observations by UNSCOM inspection teams identifying Alcolac TDG at Iraq chemical weapons manufacturing facilities; (5) the UNSCOM video depicting Alcolac TDG at a Fallujah manufacturing facility; (6) the FFCD's references to the same letters of credit numbers as those in Alcolac's invoices; and (7) the FFCD's identification of Alcolac as the only manufacturer of the TDG obtained by Iraq's suppliers.

Victor acknowledges that the direct evidence shows that, at most, Alcolac supplied 559 tons of TDG to Iraq in four shipments made in 1987 and 1988, but he argues that "circumstantial evidence strongly suggests there were additional

shipments.” In support of Victor’s assertion, Parker explains that the UNSCOM video depicts the presence of Alcolac “Kromfax” TDG on site in Iraq at the Fallujah manufacturing plant during a UN inspection immediately after the war. Parker also explains that the FFCD reveals that Iraq received 1000 tons of TDG in 1987 and 1988 from two shipping agents, Companies, Inc. and Oriac, through the broker Nu Kraft, and a review of the Alcolac bills of lading indicate shipments of TDG to Iraq through both of these agents. Further, Parker relies on the FFCD’s representation that “the raw materials identified in the disclosures were received from no other sources other than what was reported in the disclosure” to conclude that the 1987 and 1988 shipments of TDG came from Alcolac.¹¹

Parker admits that “[t]here is variation in the actual tonnages reflected in the Alcolac bills of lading and the tonnage reported in the FFCD,” but he surmises that the variation “could be due [to] the fact that the Alcolac’s record keeping ‘was pretty bad’ at the time the Alcolac offices were searched by U.S. Customs Agents.” Parker opines that, because the evidence indicates that Companies, Inc. and Oriac were the only suppliers of TDG and that Alcolac was “the actual supplier” to these agents, “it is reasonable conclude that all of the tonnage sold to Iraq in 1987 and 1988 came from Alcolac.” Parker also explains that, based on the recipe for the production of mustard gas reported in the FFCD, one ton of TDG produces one ton of mustard gas. Because the FFCD reflects that Iraq produced 774 tons of mustard gas in 1988 and 1990, and also reflects that 1000 tons of TDG was received from Companies, Inc. and Oriac, Parker opines that “it is more likely than not that all of the 774 tons of mustard agent produced in 1988 and 1990 was produced with Alcolac thiodiglycol.” Parker acknowledges that Alcolac’s bills of lading reflect

¹¹ The FFCD’s explanatory notes include the following statement: “There were no chemical raw materials (precursor for CW agents) imported in production quantities other than those mentioned in declarations and as mentioned above.”

that Alcolac shipped at most “559.33 short tons” of TDG, but he again relies on Bass’s testimony that Alcolac’s records were in disarray, the FFCD’s declaration that Companies, Inc. and Oriac were the only identified TDG suppliers, and the United Nations’ inspection reports and video to support his conclusion. Based on his review of the evidence, Parker opines that “it is more likely than not that the mustard agent to which Dr. Alarcon was exposed was made with thiodiglycol manufactured by Alcolac.”

In response, Alcolac asserts that Victor’s conclusions are no more than inferences stacked on other inferences, and even Victor’s own expert, Parker, cannot conclude that Victor was exposed to mustard gas made with Alcolac TDG; instead, Parker can conclude only that it is “likely.” Alcolac argues that, in the twenty-five year history of this case, there has been no evidence, and no one has ever testified, that there may have been additional shipments of Alcolac TDG to Iraq; nor has there even by any evidence that Iraq acquired more than 538 US tons of Alcolac TDG. As Alcolac points out, both Bass and the United States district attorney at Tanaka’s re-arraignment hearing offered evidence that only 538 US tons of Alcolac TDG reached Iraq, and 538 tons is far less than 1000 tons.

Alcolac also correctly argues that the FFCD does not declare that Alcolac was Iraq’s only supplier of TDG, as Victor suggests. According to the FFCD, 650 tons of TDG were supplied by Oriac from “Alcolac”¹² and 350 tons were supplied by Companies, Inc. However, the FFCD does not indicate the source or sources of the 350 tons supplied by Companies, Inc. Further, Bass never stated that because of “pretty bad” record keeping at Alcolac, there were additional shipments that

¹² Elsewhere in the FFCD, notes on the procurement of supplies from other countries that Oriac’s 650 tons of TDG were obtained “from USA, N.U [sic] Kraft . . . “[w]hich purchased from the manufacture company called Alcolac in 1987-1988 in Paltimor [sic].” The FFCD also reflects that “Oriac purchased from United States Companies recommended by Mr. Tanaka.”

U.S. Customs missed. Rather, he explained that because Alcolac's record keeping was "pretty bad," Bass decided to seize "everything" at Alcolac's offices since he wanted to closely examine all of Alcolac's shipping documents. During his review, Bass discovered that Alcolac engaged in a total of four transactions resulting in shipments to Iraq. The four shipments and the tonnages of each were confirmed when Bass obtained corresponding documents that the Swiss government seized from Frans Van Anraat's residence. Likewise, Tanaka's re-arraignment hearing also confirmed the same four shipments and tonnages.

There is also some evidence that not all of the 350 tons allegedly supplied by Companies, Inc. in 1987 came from Alcolac. As discussed above, the United States district attorney explained at Tanaka's re-arraignment hearing that in 1984, Tanaka became a purchasing agent for Van Anraat, locating Japanese sources for the purchase of TDG and other chemicals by Van Anraat through Companies, Inc. Between 1984 and 1986, Tanaka arranged for fifteen shipments of TDG, ranging between 16 to 51 tons each, from Japanese chemical companies to Companies, Inc. Then, in the summer of 1987, Tanaka arranged for two shipments of TDG, totaling 234 metric tons, from the American company Technalloy, which shipped the TDG out of South Carolina. Although the U.S. attorney alleged that Van Anraat arranged for the Technalloy shipments to be re-exported to the Port of Aqaba in Jordan, he did not state the shipment's ultimate destination. However, the U.S. attorney stated that "the Port of Aqaba is a common transshipment point for shipments to Iraq," and Bass testified that the shipments of Alcolac TDG sent to Iraq went through Aqaba before reaching their ultimate destination in Iraq. Thus, contrary to Parker's assumptions, some evidence exists that Companies, Inc. may have obtained at least some of the 350 metric tons allegedly supplied to Iraq from sources other than Alcolac.

Although Victor has presented some circumstantial evidence that the majority of the TDG supplied to Iraq during the relevant time frame was shipped from Alcolac, that evidence is insufficient to raise a genuine issue of material fact that Victor was injured by mustard gas made with Alcolac TDG. *See Gaulding*, 772 S.W.2d at 68 (explaining that the plaintiff must prove that the defendant supplied the product that caused the injury); *Spring Branch*, 2004 WL 1404036, at *3–4 (holding that circumstantial evidence that a defendant was “virtually the sole supplier” of product that allegedly injured plaintiff was no evidence that plaintiff was injured by defendant’s product).

Further, Parker’s opinion that the variations between the tonnages identified in the FFCD and the four documented shipments from Alcolac “could be due” to Alcolac’s poor record keeping is merely a conclusion based on no evidence. Likewise, Parker’s reliance on the FFCD’s representation that Iraq’s raw materials were received from no sources other than those identified does not support his opinion, because the FFCD does not identify the source of the 350 tons of TDG that Companies, Inc. supplied to Iraq. Therefore, Parker’s conclusory opinions on these points, as well as his ultimate opinion that it is “more likely than not” that Victor was injured by mustard gas made with Alcolac TDG, is no evidence. *See Elizondo*, 415 S.W.3d at 264. Even if we discounted the evidence that Companies, Inc., may have obtained some of the 350 tons identified in the FFCD from Technalloy and concluded that a reasonable inference could be made that Alcolac was the exclusive supplier of TDG to Iraq from 1987 to 1990, that inference must be stacked with the inference that Iraq completely exhausted its mustard agent supplies by the end of the Iran-Iraq War, an inference we have already determined is unsupported by the evidence. *See Pitzner*, 106 S.W.3d at 728 (“[A]n inference stacked only on other inferences is not legally sufficient evidence.”).

Finally, Victor argues that Alcolac's bad conduct provides circumstantial evidence supporting his conclusion Alcolac actually supplied more than 538 or 559 US tons of TDG to Iraq. Victor contends that "it is likely that Alcolac did not produce all of its sales invoices, either to the United States Customs Office or to the parties in this case," given that "the U.S. Customs investigation revealed that Alcolac had actually destroyed documents and maintained very poor records." Additionally, Victor asserts that Alcolac was indicted for "violation of U.S. export regulations and falsifying statements during the U.S. Customs investigation" and an Alcolac employee admitted to both falsifying and fabricating documents to avoid indictment. According to Victor, "[t]he act of falsifying and fabricating records, freely admitted by Alcolac, should not go unnoticed" and "Alcolac's vigorous assertions as to the adequacy of its records ... is highly suspect."

But Victor offers no evidence to support any assertion that Alcolac has failed to produce any documents or otherwise engaged in discovery abuse in this case. Further, neither Alcolac nor Alcolac International, Inc. was charged with destroying documents. The Alcolac employee Victor refers to was apparently indicted for destroying or falsifying records in connection with Alcolac International, Inc.'s illegal shipment of TDG to Iran, not Iraq, and there is no evidence that the United States government ever brought criminal charges against Alcolac in connection with the shipments of Alcolac TDG to Iraq. Therefore, Victor's unsupported assertions of bad conduct by Alcolac cannot substitute for the requirement that Victor come forward with more than a scintilla of evidence that he was injured by mustard gas made with Alcolac TDG.

3. *Victor failed to present some evidence that all of Iraq's mustard gas used during the Gulf War was made with Alcolac TDG*

Finally, Victor contends that all of Iraq's supplies of TDG must have come

from Alcolac because there were no other sources of TDG available to Iraq between 1987 and 1990. Victor argues that the FFCD shows that Iraq tried and failed to obtain TDG from several other companies located in Argentina, Germany, Canada, Cyprus, and Italy. Victor asserts that this was “not unexpected,” given that Iraq’s use of mustard gas during the Iran-Iraq War caused many international businesses to cut ties with Hussein’s regime and that in 1984 a coalition of more than a dozen countries banned the sale of precursor agents to Iraq. Thus, Victor posits, “Alcolac was the only company willing to violate federal and international law and supply precursor TDG to Iraq and Iran.” To underscore his claim, Victor reiterates that the FFCD and post-war visual inspections identified no company other than Alcolac as a TDG supplier in 1987 and 1988.

Alcolac responds that the FFCD does not claim that no other entity would supply TDG to Iraq, but rather lists some entities from which Iraq claims that it could not obtain chemicals. In reply, Victor argues that the FFCD supports his assertion that Iraq received no shipments of TDG other than those identified in the FFCD before the Gulf War in 1991, pointing to the FFCD’s representation that “[t]here were no chemical raw materials (precursor for CW agents) imported in production quantities other than those mentioned in the declarations” and “no other company or country dealt with other than the above mentioned companies and countries ... stated in our declarations.” Again, even if we indulge all inferences in Victor’s favor to conclude that a reasonable inference may be made that Iraq had no other sources for TDG during the relevant time frame, that inference must be stacked on the previous two inferences, which we have determined are not reasonable because they are not supported by competent evidence. *See Pitzner*, 106 S.W.3d at 728.

D. Victor’s Evidence and the Inferences from that Evidence are Insufficient to Satisfy the Summary Judgment Burden

Although we must indulge all doubts and reasonable inferences in Victor’s favor, Victor’s interpretation of the evidence requires us to stack one inference on another: (1) all of Iraq’s mustard gas supplies were “completely exhausted” by the end of the Iran-Iraq War; (2) Alcolac was the only supplier of TDG to Iraq between 1987 and 1990; and (3) all of Iraq’s mustard gas released during the Gulf War was made with TDG supplied by Alcolac. But inferences stacked only on other inferences are not legally sufficient evidence. *Pitzner*, 106 S.W.3d at 728; *see also Schlumberger Well Surveying Corp. v. Nortex Oil & Gas Corp.*, 435 S.W.2d 854, 858 (Tex. 1968) (“A vital fact may not be established by piling inference upon inference”). Even if only one of these three inferences is unreasonable, Victor’s entire premise must fail because each is dependent on the others to raise a genuine issue of material fact concerning whether Victor was injured by mustard gas made with Alcolac TDG.

Viewing all of the evidence in the light most favorable to Victor, we must conclude that Victor cannot satisfy his burden to demonstrate that his injuries were caused by exposure to mustard gas that was made with Alcolac’s TDG. *See, e.g., Bostic*, 439 S.W.3d at 353; *Gaulding*, 772 S.W.2d at 68; *Stephens*, 239 S.W.3d at 308; *Lee*, 721 F. Supp. at 93; *Lohrmann*, 782 F.2d at 1162–63. Likewise, because Parker’s conclusions are not supported by the evidence, Parker’s opinions cannot defeat summary judgment. *See Bostic*, 439 S.W.3d at 359; *Elizondo*, 415 S.W.3d at 264. Therefore, the trial court did not err by granting Alcolac’s no-evidence summary judgment motion.

E. Victor’s Alternative Argument Also Fails

Victor also argues that, assuming Alcolac supplied only 538 or 559 tons

based on the objective evidence, Victor still satisfies the substantial contributing factor requirement for causation under *Bostic*. According to Victor, *Bostic* does not require a plaintiff to demonstrate that his injury was caused 100% by a defendant's product; instead, in cases of multiple exposures, the Supreme Court of Texas has held that the plaintiff is only required to establish "more than a doubling of the risk attributable to the defendant's product." See *Bostic*, 439 S.W.3d at 350. According to Victor, if Alcolac supplied 538 of the 774 tons of mustard gas Iraq manufactured, then that would amount to about 70% of the mustard gas manufactured by Iraq between 1988 and 1990—enough to demonstrate more than a "doubling of the risk." Consequently, Victor maintains, he is not required to disprove that the remaining balance caused Victor's disease.

Accepting that Iraq produced 774 tons of mustard gas between 1988 and 1990, Victor's theory is based on fundamental misunderstanding of the *Bostic* case. *Bostic* held that in a mesothelioma case involving a drywall worker's exposure to asbestos from multiple sources, it was sufficient that the plaintiff establish "substantial factor causation" without requiring the plaintiff to show that "but for" his exposure to the defendant's product, he would not have contracted mesothelioma. 439 S.W.3d at 346. However, the court also explained that proof of "any exposure" to the defendant's product was not sufficient; instead, the plaintiff was required to show a quantifiable dose of asbestos fibers to which he was exposed. *Id.* at 353. Additionally, the court held that "to establish substantial factor causation in the absence of direct evidence of causation, the plaintiff must prove with scientifically reliable expert testimony that the plaintiff's exposure to the defendant's product more than doubled the plaintiff's risk of contracting the disease." *Id.*

Victor appears to equate a doubling of the risk of injury to a doubling of the

probability that the plaintiff was exposed to the defendant's product. But that is not what *Bostic* holds. The *Bostic* court explains in detail that to satisfy the substantial causation requirement, the evidence must show more than a doubling of the risk of an injury or condition as a result of the exposure to a sufficiently quantifiable dose of the specific defendant's product—not a greater than 50% likelihood of exposure to one of several defendants' products. *See Bostic*, 439 S.W.3d at 346–52.

Indeed, such a theory runs counter to the requirement that “liability in tort must be based on proof of causation by a preponderance of the evidence.” *Id.* at 340. For this reason, both Texas and Maryland courts have rejected collective-liability theories like alternative liability, concert of action, enterprise liability, and market share liability. *See id.*; *Spring Branch*, 2004 WL 1404036, at *4; *Welch*, 380 S.W.2d at 30; *Reiter v. ACandS, Inc.*, 947 A.2d 570, 581 (Md. Ct. Spec. App. 2008), *aff'd sub. nom Reiter v. Pneumo Abex*, 8 A.3d 725 (Md. 2010); *Tidler*, 851 F.2d at 425 (discussing Maryland and District of Columbia law). Merely having some evidence that Alcolac was one of the manufacturers of TDG that ended up in Iraq is not enough—“there must be evidence of exposure to a specific product.” *Borg-Warner*, 232 S.W.3d at 769 (quoting *Lohrmann*, 782 F.2d at 1162–63). We therefore reject Victor's alternative theory.

Construing the evidence and every reasonable inference in Victor's favor, we conclude that there is no evidence from which a reasonable fact finder could conclude that Victor was exposed to mustard gas made with Alcolac's TDG. Because the evidence fails to raise a genuine and material fact issue concerning causation, we affirm the trial court's judgment.

CONCLUSION

We overrule Victor's fourth issue and do not reach his remaining issues. We affirm the trial court's judgment.

/s/ Ken Wise
Justice

Panel consists of Justices Christopher, Brown, and Wise.