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THIRD JUDICIAL DISTRICT
SALT LAKE COUNTY, STATE OF UTAH

LOIS SMITH,

Plaintiff;

vs.

VOLKSWAGEN SOUTHTOWNE INC. et
al.

Defendants.

Opposition to Motion for
Summary Judgment on Causation

Case No. 130908362

Judge: Barry Lawrence

Summary

Factual Background

Lois Smith has suffered serious brain damage from carbon-monoxide poisoning due to the negligence and defective products of car-manufacturer Volkswagen and car-dealership SouthTowne.¹

On October 3, 2011, SouthTowne received a “Mandatory Stop-Sale Order” from Volkswagen. The Order informed SouthTowne that certain Volkswagen vehicles are subject to a

¹ In this brief, “Volkswagen” refers to the Defendants who designed or manufactured the car, namely: Defendants Volkswagen Group of America, Inc.; Volkswagen Auto Group; and Volkswagen de Mexico, S.A. DE C.V. Meanwhile, “SouthTowne” refers to the Defendant who sold the car, namely Volkswagen SouthTowne Inc.

safety recall involving defective fuel lines that leak fuel onto the engine. The Order states “DO NOT SELL, LEASE, OR DEALER TRADE ANY OF THESE VEHICLES.” It also states “Please keep any affected vehicle in a secure area where it cannot be made available for sale, lease, trade, or demo use until the recall repair has been performed.” Four days later, SouthTowne acquired the car at issue in this case, a 2011 Volkswagen Jetta SportWagen with a diesel engine. The car was subject to the recall.

Instead of obeying the “Mandatory Stop-Sell Order,” SouthTowne sold the car to 61-year-old Lois Smith and her elderly father on November 2, 2011.

In December 2011, Lois drove the car from Salt Lake City to Washington State to visit her family for the holidays. During the drive, Lois began smelling an unusual odor similar to fuel. She figured the odor was just a typical part of driving a diesel-engine car, which she had never before owned. However, by the time she reached La Grande, Oregon, on the evening of Friday, December 16, she was suffering headaches, extreme fatigue, and nausea. She pulled over in La Grande to get some food and saw a bunch of smoke coming from the engine. Not knowing what else to do, she found the phone number of the local LDS bishop and called him for help. He promised to send a friend over to look at the car in the morning, so Lois stayed the night in a motel in La Grande. When the friend arrived the next day, he opened the hood, and “oily stuff” was all over the engine. At the friend’s suggestion, Lois had the car towed to a nearby Volkswagen dealership called Overturf in Kennewick, Washington.

Since it was a Saturday, Lois had to wait until Monday for the car to be repaired, so she stayed the weekend in Kennewick. Lois continued to suffer headaches, extreme fatigue, and nausea. She could hardly get out of bed.

On Monday, the mechanic at Overturf (Guadalupe Mejia) looked at the car and saw a large puddle of diesel fuel leaking on the ground. Mejia looked at the engine and found a bunch

of leaked fuel pooled on the engine itself in an amount between a pint and a quart. Mejia discovered a defective fuel line that was leaking the fuel. He realized the car was subject to the recall, which should have been fixed before the car was ever sold to Lois and her father.

Lois continued to suffer headaches, extreme fatigue, and nausea. A few days after Overturf repaired the car, she went to a hospital in Tacoma, Washington, where the ER doctor diagnosed her with carbon-monoxide poisoning. Since then, Lois has undergone lots of testing and evaluations by other doctors who have confirmed that Lois has serious and permanent brain damage from carbon-monoxide poisoning.

Case History

Lois sued Volkswagen and SouthTowne for negligence and strict-product liability. During expert discovery, Lois had two key experts testify on her behalf. The first is Dr. Lindell Weaver (a Salt Lake City native) who is widely regarded as the top expert in the entire world on carbon-monoxide poisoning. After evaluating Lois in person and reviewing the other evidence in this case, Dr. Weaver concluded, to a reasonable degree of probability, that Lois's brain damage was caused by the carbon-monoxide poisoning she suffered while driving to Washington State in December 2011. Dr. Weaver made it clear that, in reaching this conclusion, it was not necessary for him to know the exact amount of a carbon monoxide that Lois inhaled. Her symptoms during the drive combined with all the other evidence in the case provided a sufficient foundation for his conclusion.

The second key expert is Peter Leiss, a vehicle engineer and accident reconstructionist. Leiss testified how the defective fuel lines in Lois's car caused carbon monoxide in the engine compartment, which then infiltrated the passenger compartment. His testimony included laboratory testing of carbon monoxide, in which small amounts of diesel fuel were placed on a

hot plate at engine temperatures. This testing showed that just 2 milliliters of leaked diesel fuel on an engine produces 295 parts per million of carbon monoxide, which is well above the threshold for poisoning. He testified that there is a reasonable probability the amount of diesel fuel that leaked onto the engine while Lois was driving was much more than 2 milliliters, given the deposition of mechanic Mejia who saw fuel pooled on the engine in the amount between a pint and a quart, as well as a large puddle of fuel beneath the engine. (1 pint = 473.176 milliliters; 1 quart = 946.353 milliliters). Leiss's testimony also included airflow testing in a Jetta similar to Lois's to show how carbon monoxide in the engine compartment infiltrates the passenger compartment. Leiss also produced several scientific articles that discuss research on this kind of infiltration.

This Motion

Here is the gist of Defendants' argument. Premise #1: Summary judgment is appropriate "only if there is no evidence upon which a reasonable jury could infer causation."² (We agree). Premise #2: Brain damage from carbon monoxide produced by leaky fuel lines is "beyond an ordinary lay person's knowledge," so Lois must present expert testimony on this point.³ (We agree). Premise #3: Nobody knows the *exact* amount of diesel fuel that leaked onto the engine while Lois was driving; so nobody knows the *exact* amount of carbon monoxide this leakage produced in the engine compartment; so nobody knows the *exact* amount of carbon monoxide that then infiltrated the passenger compartment. (We agree). Conclusion: Without knowing these *exact* amounts, it is impossible for "a reasonable jury to infer" that Lois suffered carbon-monoxide poisoning while driving the car, despite all the other evidence and expert testimony in

² *Kilpatrick v. Wiley, Rein & Fielding*, 909 P.2d 1283, 1292 (Utah Ct. App. 1996); .

³ *Fox v. Brigham Young Univ.*, 2007 UT App 406, ¶ 22, 176 P.3d 446.

the case. (We strongly disagree).

The expert testimony of Dr. Weaver and Engineer Leiss preclude summary judgment. As Dr. Weaver explained over and over again in his deposition, it is not necessary for him to know the exact amount of carbon monoxide that Lois inhaled during her drive. There is enough other information in the case for him to conclude that Lois's brain damage was caused by the carbon-monoxide poisoning she suffered while driving the car. And even though quantification is not necessary for Dr. Weaver's causation testimony, Engineer Leiss has testified that the defective fuel lines produced more than 295 parts per million of carbon monoxide in Lois's car, which is more than enough to poison someone. Therefore, there is plenty of evidence "upon which a reasonable jury could infer causation."

Besides being wrong, Defendants' you-must-know-the-exact-amount-of-poisoning argument is quite pernicious. Just consider its practical implications. It means that in any toxic-exposure case a plaintiff cannot survive summary judgment on causation unless she somehow happened to measure the exact amount of the chemical exposure while she was being poisoned. If that's true, then we all better start carrying around with us meters for carbon monoxide, meters for lead, meters for asbestos, meters for mercury, meters for arsenic, meters for benzene, meters for chlorine, meters for sulfur dioxide, and meters for a host of other toxic chemicals. Don't you dare go anywhere without them. Otherwise, if you get poisoned with these chemicals due to someone else's negligence, the law can't help you, regardless of what experts say on your behalf.

Thankfully, the law is not that useless. The law understands that justice always operates after the fact. By then, certainty is rarely, if ever, possible. So the law does not require an expert to have exact quantification. A "reasonable degree of probability" is good enough.

And as you will see, there is plenty of that kind of expert testimony on Lois's behalf.

Response to Statement of Material Facts

1. *On November 2, 2011, Robert Vogt purchased a 2011 Volkswagen Jetta Sportwagen equipped with a diesel engine (“subject vehicle”), for his daughter, Ms. Smith, from defendant SouthTowne. (Am. Compl., ¶¶ 19-22.)*

Response: Admit.

2. *In December 2011, Ms. Smith began driving the subject vehicle from Utah to Washington State for the holidays. (Id., ¶ 26.)*

Response: Admit.

3. *On December 15, she drove to Boise, Idaho, and spent the night. On December 16, when she stopped at a Wendy’s in La Grande, Oregon, Ms. Smith observed smoke coming from the vehicle. (Smith Dep., 68:24-71:10, Ex. A.)*

Response: Admit.

4. *Ms. Smith had the car towed to a VW dealership in Kennewick, Washington, which replaced a cracked #2 fuel line pursuant to an outstanding recall campaign. (Mejia Dep: 7:12-20, 14:24-15:6, Ex. B.)*

Response: Admit.

5. *Ms. Smith now claims her exposure “to fumes from the burning diesel fuel that had leaked onto the engine” caused carbon monoxide poisoning. (Am. Compl., ¶ 32.)*

Response: Admit.

6. *Ms. Smith retained Dr. Lindell K. Weaver, an internal medicine and hyperbaric specialist, to offer an opinion “that Lois Smith has been injured by carbon monoxide.” (Pla.’s Am. Expert Discl., at 2, Ex. C; Weaver Dep. 4:10-19, Ex. D).*

Response: Admit.

7. *During his deposition, Dr. Weaver indicated that he intended to opine at trial that “Lois Smith inhaled products of combustion while driving from Utah to ultimately Washington, and those products of combustion would have included hydrocarbons and carbon monoxide. And she certainly had symptoms consistent with inhalation of both hydrocarbons and carbon monoxide.” (Weaver Dep. 35:18-25, Ex. D.) Dr. Weaver did not testify that any combustion actually occurred, nor is there any other evidence to support that conclusion.*

Response: Objection. The term “combustion” is vague and ambiguous. If “combustion” means “the process of burning,” then there is evidence of combustion (*i.e.*, leaked diesel fuel smoldering on the engine), such as Lois’s testimony of seeing smoke coming from the engine and Peter Leiss’s laboratory testing. *See* Statement of Facts #3, above; Statement of Additional Facts ##29 and 55–68, below. If, however, “combustion” means something involving a fire, then we admit Lois did not see any fire in the engine. *See* Statement of Additional Facts #29. We admit that the quoted excerpt comes from Dr. Weaver’s deposition.

8. *Dr. Weaver also intends to offer an opinion “that [Ms. Smith] breathed carbon monoxide in excess and hydrocarbons, and that has caused many of the acute systems [sic] but has left her with brain damage.” (Id., 37:1-4.)*

Response: Admit.

9. *Dr. Weaver could not opine whether Ms. Smith had continuous exposure to carbon monoxide while traveling to Washington, and expressed frustration at being unable to reconstruct Ms. Smith’s travel based on her deposition testimony. (Id., 97:998:11.) He understood that Ms. Smith had “a multiday exposure of at least two days, maybe three” but he also acknowledged that he didn’t “know exactly when she started breathing [carbon monoxide.]” (Id., 49:19-50:5.)*

Response: Deny and objection. This mischaracterizes Dr. Weaver’s testimony and uses the phrase “continuous exposure” in a way that is misleading, vague, and ambiguous. In the cited excerpt, Dr. Weaver states that he does not know the exact amount of time Lois was exposed to carbon monoxide during her drive to Washington State. He does not know if the exposure occurred continuously throughout the entire 12–14 hour drive or if the exposure only occurred during a part of it. On page 100 of his deposition, Dr. Weaver states that the exposure could have been just on one day. As Dr. Weaver explains in both his deposition and declaration, it is not necessary to know the exact amount of carbon monoxide Lois was exposed to or the exact amount of time the exposure lasted. There is enough other information in the case for him to

conclude to a reasonable degree of probability that Lois was poisoned by carbon monoxide while driving to Washington State and that this poisoning damaged her brain. See Additional Statements of Fact ## 44–51, below.

10. *Dr. Weaver testified that, within those time assumptions, the minimum CO exposure required to generate the harmful effects or poisoning level allegedly experienced by Ms. Smith would be a continuous exposure of approximately 200 parts per million:*

A. [A] few hundred. I mean –

Q. A few hundred parts per million?

A. I think the level was going up and down, but a few hundred parts per million, a hundred and fifty, 200 PPM perhaps with episodes of 300 or so PPM. I mean, I doubt it was a continuous exposure to the same level, it was probably variable, but I think in the hundreds range.

Q. For that entire time?

A. Yes. Well, for at least much of that time, yes. (Id., 109:13-110:5.)

Response: Deny and objection. This mischaracterizes Dr. Weaver’s testimony and uses the phrase “time assumptions” in a way that is misleading, vague, and ambiguous. As Dr. Weaver explains in both his deposition and declaration, it is more likely than not that Lois’s threshold for carbon-monoxide poisoning was as low as 10–20% carboxyhemoglobin (a blood measurement). This threshold would be reached by exposure to carbon monoxide in as low a range as 150–200 parts per million (or higher) during “much of” her drive to Washington State. The higher the level of exposure (parts per million), however, the shorter the duration of the exposure (time) needed to reach the poisoning threshold. See Additional Statements of Fact ##44–51, below.

11. *Ms. Smith has also retained Peter Leiss, a vehicle engineering and accident reconstruction specialist, to opine on “how the defective fuel lines in [Ms. Smith’s] vehicle leaked fuel onto her engine, how that produced carbon monoxide, and how the carbon monoxide infiltrated the vehicle.” (Pl.’s Am. Expert Discl., at 3, Ex. C; Leiss Dep. 7:8-17, Ex. E.)*

Response: Admit.

12. *During his deposition, Mr. Leiss testified that he intended to offer the following opinion:*

“My first opinion is that there is a [sic] air path for engine bay air to enter the passenger compartment of a 2011 Jetta, similar to Ms. Smith’s, and that even absent combustion heated diesel fuel will cause amounts of carbon monoxide in excess of 300 parts per million. That Ms. Smith’s car did, in fact, have a defective Number 2 diesel fuel line that did crack and leak diesel fuel onto the engine, and that as a result of that leak, and the previously opined on airway path between the engine compartment and the . . . passenger compartment, that is responsible for Ms. Smith’s carbon monoxide poisoning.” (Leiss Dep. 19:19-20:7, Ex. E.) Mr. Leiss clarified that he was not offering an opinion that Ms. Smith actually experienced CO poisoning. (Id., 38:21-39:11.)

Response: Admit.

13. *Mr. Leiss based his conclusions about the possibility of carbon monoxide production on an experiment in which he dropped a few milliliters of diesel fuel onto a hot plate inside a ten-gallon fish aquarium, with no air exchange. (See id., 38:11-20.) He did not measure the production of carbon monoxide in the engine compartment of the subject vehicle or in any exemplar vehicle. (Id., 21:14-22.) He also did not measure surface temperatures of any engine components in the subject or any exemplar vehicle, and he did not know the volume of fuel that leaked or the rate of leakage in plaintiff’s vehicle. (Id., 31:15-32:16.)*

Response: Admit with three clarifications. First, the phrase “possibility of carbon monoxide production” is misleading. Leiss testified that when diesel fuel comes in contact with a hot surface, carbon monoxide is actually produced (not “possibly” produced). This testimony was based on a replicable test where 2 milliliters of diesel fuel were placed on a metal plate that was 350 degrees Fahrenheit. This produced 295 parts per million of carbon monoxide and smoke. Second, although Leiss did not measure temperatures of an engine as part of his work in this case, he didn’t need to do that because he already knew, based on his extensive background and training, that parts of the engine typically run at 350 degrees Fahrenheit or above. Third, although no one knows exactly how much fuel leaked onto the engine, Leiss relied on the deposition of the mechanic who repaired and cleaned the engine in Washington State, who testified that there was so much diesel fuel leaking that it formed a large puddle—approximately 12 inches in diameter—on the ground. The mechanic also saw leaked fuel pooled on the engine approximately the size of a pint or a quart. (A pint is 473 milliliters; a quart is 946 milliliters).

See Statement of Additional Facts ##38–43 and 55–68.

- 14.** *The car was moving at highway speeds, so air was entering the engine compartment through the grille and radiator. Mr. Leiss, however, could not testify to the percentage or ratio of carbon monoxide that mixed with other air in the engine compartment:*

Q. Do you have any opinions about that that you plan to express? The concentration in parts per million of CO within the engine compartment?

A. I'm going to say that from the testimony, there was likely very much more than two milliliters of diesel that was leaked --that had leaked from her fractured line, and that from that two milliliters, we already had almost 300 parts per million.

Q. In an aquarium?

A. Yes. In an aquarium. But again, that's two milliliters, and that's after one minute.

Q. But the aquarium wasn't in motion. There wasn't an exchange of air going on inside the aquarium, like there is in the vehicle, in the engine compartment of the vehicle. My question is, are you planning to express an opinion regarding the concentration in parts per million of carbon monoxide within the engine compartment of Lois Smith's vehicle?

A. Not beyond what I just explained to you, no. (Id., 75:8-76:3.)

Response: Objection. Defendants make a factual assertion (“air was entering the engine compartment through the grille and radiator”) without any citation to the record, which violates Rule 56(c)(1). Defendants also mischaracterize the portion of Leiss’s deposition that they cite to. However, we admit that Leiss did not quantify the percentage of carbon monoxide that mixed with other air in the engine compartment of Lois’s car. See Statement of Additional Facts ##55–68.

- 15.** *Mr. Leiss did not take into account any mixing of air when performing his aquarium test, specifically testifying that the “tank was upside down so that there is no air exchange.” (Id., 25:18-19.)*

Response: Objection. This statement is vague and ambiguous, and is not supported by the citation it provides. However, we admit that Leiss did not quantify the percentage of carbon

monoxide that mixed with other air in the engine compartment of Lois's car. *See* Statement of Additional Facts ##55–68.

16. *Next, Mr. Leiss testified that there was a way for under-hood air to bypass the gaskets that seal the engine compartment, through an opening in the right fender of the car that is approximately a two-square-inch opening. He based this opinion, however, on his observations of his own son's 2009 Jetta, not the subject vehicle or another 2011 Jetta, and he did not know if the 2011 was set up the same way. (Id., 36:10-13, 42:1-19, 71:5-7.)*

Response: Admit that Leiss testified that there was an airflow path in Lois's car for carbon monoxide to pass from the engine compartment to the passenger compartment. *See* Statement of Additional Facts ##55–68. Deny, however, that Leiss did not know whether the vehicle he examined was similar to Lois's vehicle in this regard. Leiss clearly testified to the contrary on page 36 of his deposition, stating that the Jetta he used for his airflow test had a similar engine bay and air intakes as Lois's Jetta. *See* Leiss Depo. (Ex. 9) at 36:14–16 (“So, what I was doing was verifying that the engine bay and air intakes were similar between the '09 sedan [Leiss's vehicle] and the 2011 sportback [Lois's vehicle], which I did.”).

17. *Mr. Leiss opined that any gases that managed to escape through the “bypass” would be able to mix with outside air being drawn into the car's HVAC system near the bottom of the windshield, assuming that the HVAC system was on, and enter the occupant compartment. (See id., 52:22-24.) He could not, however, quantify the carbon monoxide, if any, that might have been present in the alleged “bypass” or how that quantity would have changed by mixing with the outside air in front of the windshield. (Id., 79:23-80:5, 91:11-16.)*

Response: Objection. The citations given Defendants for this statement do not support it, which violates Rule 56(c)(1). The term “bypass” is vague and ambiguous. We admit, however, that Leiss did not quantify the percentage of carbon monoxide that mixed with other air in the engine compartment or the passenger compartment of Lois's car. *See* Statement of Additional Facts ##55–68.

18. *Mr. Leiss expressly acknowledged that he could not state how much carbon monoxide might have entered Ms. Smith's vehicle or the concentration of carbon monoxide in the passenger*

compartment:

A. *We have got 300 parts per million [in the aquarium]. Of course, there is going to be some mixing of the air, but not exactly, but we can say that there is going to be carbon monoxide in her cabin.*

[Counsel for Volkswagen]: But you can't say how much?

[Counsel for Plaintiff]: Object to the form of the question.

[Counsel for Volkswagen]: Can you say how much?

A. *No, I cannot.*

(Id., 28:14-19.)

Q. So you don't know the concentration of CO under the hood; right?

A. *That is correct.*

Q. No opinion on that. Then, of course, you can't know what the concentration of CO was that was being pulled into the HVAC system, because you don't know the first component of the question. You don't know what the concentration was that was being pulled out of the engine compartment; right?

A. *That is correct. But you know, again, given the fact that we know that this dripping diesel fuel can be heated and form CO, and there is an airway, air path, I find it likely that that is the source.*

(Id., 28:14-19, 77:20-78:7.)

Q. Can you quantify the parts per million within that pathway, yes or no?

A. *No, I cannot. Again, unless we were in the car with Ms. Smith, I don't believe there is a way.*

(Id., 79:23-80:1; see also id., 89:19-91:20.)

Response: We admit that Leiss did not quantify the exact amount of carbon monoxide that entered the passenger compartment of Lois's car. However, Leiss concluded that there is a reasonable degree of probability that the defective fuel lines in Lois's car created a level of carbon monoxide inside the passenger compartment greater than 200 parts per million, which is more than enough to poison someone. *See* Statement of Additional Facts ##44–68.

Statement of Additional Facts

The Defective Fuel Lines

19. On October 3, 2011, SouthTowne received a “Mandatory Stop-Sale Order” from Volkswagen.⁴

20. The Mandatory Stop-Sale Order informs SouthTowne that certain vehicles are subject to “Safety Recall 23J9” and states “DO NOT SELL, LEASE, OR DEALER TRADE ANY OF THESE VEHICLES” and “*By law, dealers must correct, prior to delivery for sale or lease, any vehicle that fails to comply with an applicable Federal Motor Safety Standard or that contains a defect relating to motor vehicle safety.*”⁵

21. The Mandatory Stop-Sale Order explains that Recall 23J9 involves fuel lines that “develop small cracks which could lead to fuel leakage.”⁶

22. The Mandatory Stop-Sale Order states the following: “Please keep any affected vehicle in a secure area where it cannot be made available for sale, lease, trade, or demo use until the recall repair has been performed.”⁷

23. SouthTowne acquired the vehicle at issue in this case on October 7, 2011.⁸

24. The vehicle was subject to Recall 23J9.⁹

25. More than three weeks later, on November 2, 2011, SouthTowne sold the

⁴ Mandatory Stop-Sale Order (attached hereto as “Exhibit 1”); *see also* Christoffersen Depo. 28:17–29:8 (attached hereto as “Exhibit 2.”).

⁵ Mandatory Stop-Sale Order (Ex. 1).

⁶ Mandatory Stop-Sale Order (Ex. 1).

⁷ Mandatory Stop-Sale Order (Ex. 1).

⁸ Christoffersen Depo. (Ex.2) 32:18–24.

⁹ Mejia Depo. (attached hereto as “Exhibit 3”) 14:24–15:8.

vehicle—without performing the recall—to Robert Vogt and his 61-year-old daughter Lois Smith.¹⁰

Lois’s Drive to Washington State

26. In December 2011, Lois drove the vehicle from Utah to Washington State to see family for the holidays.¹¹

27. At some point during the drive, before reaching La Grande, Oregon, Lois began noticing an unusual odor similar to fuel.¹²

28. By the time Lois reached La Grande, she was suffering headaches and “feeling tired like I wanted to go to sleep and ill kind of like sick like ‘throw up-ee.’”¹³

29. When Lois reached La Grande on Friday evening, she pulled over to get some food at a restaurant, and she noticed lots of smoke coming from the engine of her car, though she didn’t see any fire.¹⁴

30. Lois stayed the night (Friday, Dec. 16) in La Grande and had a friend of the local LDS bishop look at the vehicle the next morning (Saturday, Dec. 17).¹⁵

31. Lois and the friend “looked at the engine, [and] there was stuff all over, oily stuff.”¹⁶

¹⁰ Statement of Fact #1, above; *see also* Christoffersen Depo. (Ex. 2) 42:4–9.

¹¹ Statement of Fact #2, above; *see also* Lois Smith Depo. (attached hereto as “Exhibit 4”) 58:11–59:1.

¹² Lois Depo. (Ex. 4) 60:23–62:1.

¹³ Lois Depo (Ex. 4) 163:10–17, 72:13–21.

¹⁴ Lois Depo (Ex. 4) 68:24–69:24.

¹⁵ Lois Depo (Ex. 4) 74:19–75:16.

¹⁶ Lois Depo (Ex. 4) 79:25–80:10.

32. Lois noticed “there was something coming out of the bottom of the car that was in a big puddle all over”¹⁷ and it “looked kind of, like, oily, like shiny kind of.”¹⁸

33. At the friend’s suggestion, Lois had the vehicle towed to a nearby dealership called Overturf Volkswagen in Kennewick, Washington.¹⁹

34. Since it was Saturday, Lois had to wait until Monday (Dec. 19) for the car to be fixed.²⁰

35. Over that weekend, Lois continued to suffer headaches, nausea, and extreme sleepiness.²¹

36. Lois continued to feel ill with headaches and extremely sleepiness during the next week and finally went to St. Clare Hospital in Tacoma, Washington, on December 23, 2011.²²

37. The ER doctor at the hospital (Dr. Amy Calimlim) diagnosed Lois with carbon-monoxide poisoning.²³

Discovery of Defective Fuel Lines and Leaked Fuel

38. While the vehicle was at Overturf Volkswagen on Monday, December 19, 2011, it was worked on by a technician named Guadalupe Mejia.²⁴

¹⁷ Lois Depo (Ex. 4) 74:19-75:16.

¹⁸ Lois Depo (Ex. 4) 79:25–80:2.

¹⁹ Lois Depo (Ex. 4) 81:16–25.

²⁰ Lois Depo (Ex. 4) 83:11–84:21.

²¹ Lois Depo (Ex. 4) 87:7–24.

²² Lois Depo (Ex. 4) 96:14–99:17.

²³ Dr. Calimlim Depo. (attached hereto as “Exhibit 5”) 10:14–17.

²⁴ Mejia Depo. (Ex. 3) 9:24–10:15

39. Mejia testified that when he first saw the vehicle, it had leaked a puddle of diesel fuel 12 inches in diameter on the ground directly under the engine.²⁵

40. Mejia testified that he also saw leaked diesel fuel that had pooled on the engine itself in the amount “between like a pint and a quart.”²⁶

41. Mejia testified that the vehicle was subject to Recall 23J9.²⁷

42. Mejia testified that one of the purposes of Recall 23J9 was to prevent a fuel leak on the engine, specifically the engine parts called the turbo charger and the exhaust manifold, which would cause intensified odor and smoke.²⁸

43. Mejia testified that he performed Recall 23J9 on the vehicle which included replacing a defective fuel line.²⁹

Dr. Weaver’s Causation Opinion

44. Dr. Weaver is regarded in the medical community as the top expert in the entire world on carbon-monoxide poisoning.³⁰

45. In his deposition, Dr. Weaver repeatedly testified that the cause of Lois’s brain damage is the carbon-monoxide poisoning she suffered while driving to Washington State in

²⁵ Mejia Depo. (Ex. 3) 17:7–19:8.

²⁶ Mejia Depo. (Ex. 3) 18:10–19:8.

²⁷ Mejia Depo. (Ex. 3) 14:24–15:8.

²⁸ Mejia Depo. (Ex. 3) 11:4–12:14.

²⁹ Mejia Depo. (Ex. 3) 14:24–15:4.

³⁰ Dr. Foley Depo. 6:11–13 (attached hereto as “Exhibit 6”) (“Dr. Weaver is the world’s expert in carbon monoxide, hands down, and, yes, it’s very helpful to have his opinion on most cases.”); Dr. Weaver Depo. (attached hereto as “Exhibit 7”) 53:12–13 (“[T]here’s very few people in the world, if not no one else in the world, who have systemically studied carbon monoxide over the last 30 years as myself and our research group has done here in Utah.”).

December 2011.³¹

46. Dr. Weaver used the methodology of differential diagnoses to come to his conclusion about causation.³²

47. Dr. Weaver based his conclusion about causation in this case on the following facts and data:

- Dr. Weaver’s in-person evaluation of Lois in April 2014 that included a physical examination, interview about her medical history, various written questionnaires and assessments, as well as a neurological examination;
- brain imaging by Dr. William Orrison;
- a neuropsychological evaluation from Dr. Kimberly Sieber;
- a psychiatric evaluation from Dr. Trent Holmberg;
- a neurological evaluation and electroencephalogram by Dr. John Foley;
- a speed evaluation from Speech-Language Pathologist Heather Elwell;
- a cardiac-adenosine-stress MRI from Dr. Jeffrey Anderson;
- a neuro-optometric evaluation from Dr. Robin Price;
- an auditory and vestibular evaluation from Audiologist Rhoda Jenson;
- Lois Smith’s medical records;
- depositions and records of the following medical providers: Dr. Amy

³¹ Dr. Weaver Depo. (Ex. 7) 35:19–36:8 (“[I]t’s my opinion that Lois Smith inhaled products of combustion while driving from Utah to ultimately Washington, and those products of combustion would have included hydrocarbons and carbon monoxide. . . . [S]he has brain damage as a consequence of this poisoning.”), 37:1–4 (“[I]t’s my opinion that she breathed carbon monoxide in excess and hydrocarbons, and that has caused many of the acute systems [symptoms] but has left her with brain damage. Now, if you want me to continue, that brain damage has expressed itself with many things. It’s expressed itself with problems in multiple domains: neuropsychological, psychiatric, balance, neurological, and, of course, complemented by the testing with Dr. Price and by the brain MRI.”).

³² Dr. Weaver Depo. (Ex. 7) 46:15–16 (“So in terms of a differential diagnosis, the most likely cause is carbon monoxide poisoning.”).

- Calimlim, Dr. Kevin Walker, Dr. Richard Sharp, and Dr. Brent Muhlestein;
- the deposition of Lois Smith;
 - the First Amended Complaint (which describes the defective fuel lines); and
 - the Rule 35 examination and report of Dr. Sam Goldstein.³³

48. As Dr. Weaver explained numerous times throughout his deposition, in order for him to reach his conclusion about causation, it is not necessary to know the exact amount of carbon monoxide that Lois was exposed to.³⁴

49. Here's why: when someone is poisoned by carbon monoxide, the exact amount of the carbon monoxide does not correlate to the extent of the person's injury. What matters most is that the person's exposure crosses the threshold of poisoning, which may vary from person to person. The threshold of poisoning is defined by the point where the person suffers the onset of some of the following acute symptoms: headaches, nausea, dizziness, fatigue, sleepiness, coughing, lightheadedness, shortness of breath, etc. If acute symptoms and circumstances suggest carbon-monoxide poisoning, then doctors run a whole host of tests that will either support or discredit that suggestion.³⁵

50. Dr. Weaver testified that it can be inferred to a reasonable degree of probability that Lois crossed the threshold of carbon-monoxide poisoning during her drive to Washington State in December 2011, given her reports of symptoms of carbon-monoxide poisoning at that time combined with all the other facts and data Dr. Weaver reviewed, which corroborate her

³³ Dr. Weaver Depo. (Ex. 7) 54:19–24 (“Q. And your opinion of causation is based primarily on what you see after during your examination of her on April 11th? A. No. It’s everything. It’s her story, it’s the findings, it’s the reporting by others, it’s everything that I’ve had access to.”), 15:7–93:11, exhibit 5 at pages 11–12; *see also* Dr. Weaver Decl. (attached hereto as “Exhibit 8”) ¶¶ 3–9.

³⁴ Dr. Weaver Depo. (Ex. 7) 48:22–52:3, 97:9–100:17; *see also* Dr. Weaver Decl. (Ex. 8) ¶¶ 3–9.

³⁵ Dr. Weaver Depo. (Ex. 7) 48:22–52:3, 103:6–104:7; *see also* Dr. Weaver Decl. (Ex. 8) ¶¶ 3–9.

poisoning.³⁶

51. Dr. Weaver testified that, although quantification is not necessary for his conclusion about causation, it is more likely than not that Lois Smith’s poisoning threshold was as low as 10–20% carboxyhemoglobin because that is the threshold for most people. This threshold would be reached by exposure to carbon monoxide in the range of 150–200 parts per million (or higher) during her drive to Washington State. The higher the level of exposure (parts per million), the shorter the duration of the exposure (time) needed to reach the poisoning threshold.³⁷

Independent Expert Dr. John Foley

52. Dr. Weaver’s testimony is corroborated by Dr. John Foley, an independent neurologist who is not retained by any party in this case. Dr. Foley testified that “there’s an extremely high probability that [Lois] suffered with carbon monoxide injury”³⁸ and that the imaging of her brain damage “is almost pathognomonic of carbon monoxide intoxication.”³⁹ (“Pathognomonic” means a symptom is so characteristic of a disease that the symptom itself can be used to make a diagnosis).⁴⁰

53. Dr. Foley based this conclusion on two neurological assessments that he personally performed on Lois as well as brain imaging of Lois by Dr. William Morrison.⁴¹

³⁶ Dr. Weaver Depo. (Ex. 7) 49:17–52:3, 59:9–61:5; *see also* Dr. Weaver Decl. (Ex. 8) ¶¶ 3–9.

³⁷ Dr. Weaver Depo. (Ex. 7) at 103:6–104:7, 109:13–110:5; *see also* Dr. Weaver Decl. (Ex. 8) ¶¶ 3–9.

³⁸ Dr. Foley Depo. (Ex. 6) 45:3–5.

³⁹ Dr. Foley Depo. (Ex. 6) 30:13–31:9.

⁴⁰ <https://www.medicinenet.com/script/main/art.asp?articlekey=6386>

⁴¹ Dr. Foley Depo. (Ex. 6) 45:3–49:5.

54. Dr. Foley used the methodology of a differential diagnosis to come to his conclusion.⁴²

Corroboration of Causation by Engineering Testimony

55. Peter Leiss is an expert in vehicle engineering and accident reconstruction with 20+ years of education, training, and experience in that field.⁴³

56. Leiss testified that, to a reasonable degree of probability, the defective fuel lines in Lois's car created a level of carbon monoxide greater than 200 parts per million inside the passenger compartment during her drive to Washington State in December 2011.⁴⁴

57. The following are the most important facts and data that are the basis for this testimony:

- laboratory testing of carbon monoxide, in which small amounts of diesel fuel were placed on hot plates of various temperatures to measure the amount of carbon monoxide that was produced without combustion;
- field testing of airflow from engine compartment to passenger compartment in a Volkswagen Jetta similar to Lois's;
- the deposition of Dr. Lindell Weaver;
- the deposition of Lois Smith;
- the deposition of Guadalupe Mejia (the mechanic who fixed Lois's car);
- scientific articles produced with Plaintiff's Expert Disclosures that discuss the intrusion of gases, including carbon monoxide, from a vehicle's own engine into the passenger compartment; and
- Volkswagen's documents about Recall 23J9 that explain the defective fuel

⁴² Dr. Foley Depo. (Ex. 6) 30:13–18.

⁴³ Leiss Depo. (attached hereto as "Exhibit 9") 7:10–8:3.

⁴⁴ Leiss Depo. (Ex. 9) 87:19–22, 78:15–21, 76:17–24, 20:16–21:6; *see* also Leiss Declaration (attached hereto as "Exhibit 10") ¶ 3.

lines.⁴⁵

58. The purpose of the laboratory testing was to show that when diesel fuel comes in contact with a surface at engine temperature, carbon monoxide is produced.⁴⁶

59. The laboratory testing specifically showed that just 2 milliliters of diesel fuel, when dropped on a hot plate of 350 degrees Fahrenheit, produces 295 parts per million of carbon monoxide as well as smoke.⁴⁷

60. Leiss testified that many engine components reach temperatures of at least 350 degrees Fahrenheit when the car is running, particularly the turbo charger and exhaust manifold.⁴⁸ (These are the same engine parts identified by Mejia where the leaked fuel would go).

61. Leiss testified that, based on the deposition testimony he read about the amount of leaked diesel fuel on the engine of Lois's car (between a pint and a quart on the engine itself and a puddle 12 inches in diameter underneath the engine), there is a reasonable degree of probability that much more fuel than just 2 milliliters leaked onto the engine while Lois was driving.⁴⁹

62. As a fact for judicial notice, 1 pint equals 473.176 milliliters, and 1 quart equals 946.353 milliliters.⁵⁰

63. Leiss's testimony is also based on airflow testing he conducted using a

⁴⁵ Leiss Decl. (Ex. 10) ¶ 4; *see also* Leiss Depo. (Ex. 9) 76:17–77:5, 79:9–18, 21:11–25:6, 27:19–28:2, 31:18–32:6, 33:19–34:8, 35:21–36:4, 38:21–39:1 .

⁴⁶ Leiss Depo. (Ex. 9) 24:11–25:6.

⁴⁷ Leiss Depo. (Ex. 9) 23:4–25:6, 31:18–32:6, 74:4–75:15.

⁴⁸ Leiss Depo. (Ex. 9) 28:20–29:1, 34:15–35:2; 83:21–84:13.

⁴⁹ Leiss Depo. (Ex. 9) 31:18–32:6, 75:8–15.

⁵⁰ Utah Rule of Evidence 201.

Volkswagen Jetta similar to Lois's.⁵¹

64. This included installing a smoke generator in the part of the engine compartment where airflow is most difficult (to prove infiltration despite the worst possible condition) and operating the vehicle at a variety of speeds. Infiltration of this engine smoke into the passenger compartment was confirmed and recorded on a video.⁵²

65. The purpose of this airflow testing was to show how a gas like carbon monoxide infiltrates the passenger compartment from the engine in a similar vehicle to Lois Smith's.⁵³

66. "Carbon monoxide is almost the same density as air and distributes rapidly within spaces," according to Dr. Weaver's testimony.⁵⁴

67. Leiss's carbon-monoxide testing and airflow testing are replicable and thus reliable.⁵⁵

68. Besides his own laboratory and field testing, Leiss's testimony is also based on multiple scientific articles that were produced with Plaintiff's Expert Disclosure.⁵⁶ These articles discuss infiltration of carbon monoxide from the engine compartment to the passenger

⁵¹ Leiss Decl. (Ex. 10) ¶ 4; *see also* Leiss Depo. (Ex. 9) 44:10–55:6.

⁵² Leiss Depo. (Ex. 9) 59:11–60:14, 43:2–50:11.

⁵³ Leiss Depo. (Ex. 9) 54:24–55:6.

⁵⁴ Dr. Weaver's Depo. (Ex. 7) at exhibit 5, page 2 ("Carbon monoxide is a gas produced by incomplete combustion. It is colorless, tasteless, and odorless to human senses. It is almost the same density as air and distributes rapidly within spaces, such as rooms or apartments.").

⁵⁵ Leiss Depo. (Ex. 9) 38:15–20, 72:19–24.

⁵⁶ Leiss Decl. (Ex. 10) ¶ 4; *see also* Plaintiff's Amended Expert Disclosure and emails from Plaintiff's counsel to Defendants' counsel (attached hereto as "Exhibit 11") page 3–5 ("In forming his opinions, Leiss is expected to rely on a number of articles within his field that analyze how carbon monoxide is produced from diesel fuel and how gas can infiltrate the inside of the vehicle. . . . Here are the articles that our expert Leiss is expected to rely on for his testimony.").

compartment. As examples, two of these articles are attached hereto as “Exhibit 12”⁵⁷ and “Exhibit 13.”⁵⁸

Argument

To prevail on this Motion, Defendants must show that “there is no evidence upon which a reasonable jury could infer causation.”⁵⁹ Please remember to “view the facts and reasonable inferences . . . in a light most favorable” to Lois,⁶⁰ and that it “only takes one sworn statement under oath to dispute the averments on the other side of the controversy and create an issue of fact.”⁶¹ Please also remember that “[g]enerally, causation cannot be resolved as a matter of law”⁶² because “[c]ausation is a highly fact-sensitive element of any cause of action.”⁶³ “In other words, Utah litigants do not easily dispose of the element of causation on summary judgment.”⁶⁴

Defendants argue that there is no evidence to support causation. But that is wrong. The

⁵⁷ Ex. 12 page 1 (“Self-pollution, or the intrusion of a vehicle’s own engine fumes into the passenger’s compartment, has been reported to contribute to exposure inside various types of vehicles. Besides demonstrating the occurrence of CO self-pollution inside a passenger car using field-testing and mass balance simulation, [study] reported that ratios of in-vehicle to out-vehicle concentrations greater than unity were invariably attributed in the literature to the occurrence of a self polluting condition and the likely experience of a pollution source inside the vehicle.”).

⁵⁸ Ex. 13 page 9 (“[T]he recorded measurements support the occurrence of potential CO ingress into the cabin from engine combustion and/or exhaust return, an indication of a vehicle self-polluting condition.”).

⁵⁹ *Kilpatrick v. Wiley, Rein & Fielding*, 909 P.2d 1283, 1292 (Utah Ct. App. 1996); *Butterfield v. Okubo*, 831 P.2d 97, 106 (Utah 1992) (“Because proximate cause is an issue of fact, we refuse to take it from the jury if there is any evidence upon which a reasonable jury could infer causation.”).

⁶⁰ *Sur. Underwriters v. E & C Trucking, Inc.*, 2000 UT 71, ¶ 37, 10 P.3d 338.

⁶¹ *Holbrook Co. v. Adams*, 542 P.2d 191, 193 (Utah 1975).

⁶² *Kilpatrick v. Wiley, Rein & Fielding*, 909 P.2d 1283, 1292 (Utah Ct. App. 1996).

⁶³ *Kilpatrick v. Wiley, Rein & Fielding*, 909 P.2d 1283, 1292 (Utah Ct. App. 1996).

⁶⁴ *Kilpatrick v. Wiley, Rein & Fielding*, 909 P.2d 1283, 1292 (Utah Ct. App. 1996).

testimony of Dr. Weaver and Engineer Leiss is more than enough evidence to establish causation.

But if it's really that simple, then what's all the fuss about in the 17-page Motion? Answer: ~~Defendants are throwing a Hail Mary before trial.~~ Defendants are hung up arguing about the persuasiveness of these testimonies. Defendants don't think these testimonies are persuasive because nobody knows the exact amount of carbon monoxide that Lois inhaled. Defendants try to add emphasis to this point by chopping it up into "four links": (1) the exact amount of diesel fuel that leaked out of the defective fuel lines and onto the engine, (2) the exact amount of carbon monoxide thus produced in the engine compartment, (3) the exact amount of carbon monoxide that infiltrated the passenger compartment from the engine, and (4) the exact amount of carbon monoxide that stayed in the passenger compartment rather than being ventilated out.⁶⁵

But the only way anybody could know this information is if numerous highly sophisticated measuring devices had been inside the car while Lois was driving. And even then, links 1–4 would not be good enough (according to Defendants' logic) because we still wouldn't know the exact amount of carbon monoxide in the passenger compartment that Lois actually inhaled (Defendants ignore this final link in their Motion). The only way to know that is if Lois had been wearing measuring devices in her nose and mouth.

So is Lois just out of luck because she didn't have all this stuff available while she was being poisoned? Absolutely not. Dr. Weaver and Engineer Leiss have testified that Lois suffered brain damage by carbon monoxide from the defective car, so she has the right to have a

⁶⁵ Motion 13–14.

jury decide her case.⁶⁶

Quantification of Carbon Monoxide Is Not Necessary

Throughout their Motion, Defendants mischaracterize Dr. Weaver's testimony. They have to; otherwise, their Motion doesn't have any chance to succeed. Here is one particularly egregious mischaracterization:

Yet, despite her own expert's [Dr. Weaver] acknowledgement of the critical importance of demonstrating the required concentration of CO in the passenger compartment, Ms. Smith has not identified an expert capable of offering an admissible opinion establishing a causal connection between the defect and injury. The problem is not only that plaintiff cannot establish Dr. Weaver's "few hundred parts per million" threshold. The problem is that plaintiff cannot put any number at all on the concentration of CO to which she was allegedly exposed without speculating at every one of the four steps listed above.⁶⁷

This is wrong, frustratingly wrong.⁶⁸

Dr. Weaver never acknowledged "the critical importance" of quantifying carbon monoxide in this case. To the contrary, Dr. Weaver repeatedly explained to defense counsel throughout his deposition that quantification was not necessary for his opinions; he is still able to make his causation conclusion based on Lois's symptoms while driving and all the other evidence in the case (*e.g.*, brain imaging, multiple neurological evaluations, physical evaluations, etc.).

Here's why: When someone is poisoned by carbon monoxide, the amount of the carbon monoxide does not correlate to the severity of the person's injury. What matters most is that the

⁶⁶ *Kilpatrick v. Wiley, Rein & Fielding*, 909 P.2d 1283, 1293 (Utah Ct. App. 1996) ("In sum, because proximate cause is an issue of fact, we refuse to take it from the jury if there is *any evidence* upon which a reasonable jury could *infer* causation.") (emphasis in original).

⁶⁷ Motion 14–15.

⁶⁸ "Falsehood flies, and truth comes limping after it." –Jonathan Swift.

person's exposure crosses the threshold of poisoning. The threshold of poisoning is defined by the point where the person suffers the onset of some of the following acute symptoms: headaches, nausea, dizziness, fatigue, sleepiness, coughing, lightheadedness, shortness of breath, etc. If acute symptoms and circumstances suggest carbon-monoxide poisoning, then doctors run a whole host of tests that will either support or discredit that suggestion.⁶⁹

A whole host of evidence supports Lois's poisoning. Just a few days after her exposure, an ER doctor diagnosed her with carbon-monoxide poisoning. Later on, an independent neurologist who is not retained by any party in this case, Dr. Foley, evaluated Lois on two separate occasions and testified that "there's an extremely high probability that [Lois] suffered with carbon monoxide injury" and that imaging of her brain damage "is almost pathognomonic of carbon monoxide intoxication." ("Pathognomonic" means a symptom is so characteristic of a disease that the symptom itself can be used to make a diagnosis). If you want to hear all the other supporting evidence, just read Dr. Weaver's deposition.

But let's assume, just for the sake of argument, that Dr. Weaver is wrong—quantification is necessary for him to make a causation conclusion. Lois would still prevail. Lois's poisoning threshold, according to Dr. Weaver, was as low as 10–20% carboxyhemoglobin (a blood measurement). Lois would reach this threshold by an exposure to carbon monoxide in the range of 150–200 parts per million or higher during her drive to Washington State. The higher the level of exposure (parts per million), the lower the duration (time) needed to reach the poisoning threshold. So the magic number (if Defendants insist on having one) is 150–200 parts per

⁶⁹ Although not necessary, quantification can be helpful in making a diagnosis. When doctors suspect carbon-monoxide poisoning, they can test the blood for elevated levels of carboxyhemoglobin. However, the half-life of carbon monoxide is so short that carboxyhemoglobin will return to normal levels within a very short time of exposure. *See* Dr. Weaver Depo. (Ex. 7) 80:1–81:8.

million.

What evidence is there to show that the defective fuel lines caused at least this amount of carbon monoxide in Lois's car? Enter Peter Leiss.

Expert Engineering Testimony

Leiss is an expert in vehicle engineering and accident reconstruction with 20+ years of education, training, and experience in that field. He testified that, to a reasonable degree of probability, the defective fuel lines in Lois's car created a level of carbon monoxide greater than 200 parts per million inside the passenger compartment during her drive to Washington State in December 2011. The following are the most important facts and data that are the basis for this testimony:

- laboratory testing of carbon monoxide, in which small amounts of diesel fuel were placed on hot plates of various temperatures to measure the amount of carbon monoxide that was produced without combustion;
- field testing of airflow from engine compartment to passenger compartment in a Volkswagen Jetta similar to Lois's;
- the deposition of Dr. Lindell Weaver;
- the deposition of Lois Smith;
- the deposition of Guadalupe Mejia (the mechanic who fixed Lois's car);
- scientific articles produced with Plaintiff's Expert Disclosures that discuss the intrusion of gases, including carbon monoxide, from a vehicle's own engine into the passenger compartment; and
- Volkswagen's documents about Recall 23J9 that explain the defective fuel lines.

The purpose of the laboratory testing was to show that when diesel fuel comes in contact with a hot surface without combusting, carbon monoxide is produced. The laboratory testing specifically showed that just 2 milliliters of diesel fuel, when dropped on a hot plate of 350 degrees Fahrenheit, produces 295 parts per million of carbon monoxide. Leiss testified that

many engine components—such as the turbo charger and exhaust manifold—reach temperatures of at least 350 degrees Fahrenheit when the car is running. (These are the same engine parts that mechanic Mejia testified the leaked fuel would go on). Leiss testified that, based on the deposition testimony he read about the amount of leaked diesel fuel on the engine of Lois’s car (between a pint and a quart on the engine itself and a puddle 12 inches in diameter underneath the engine, according to Mejia), there is a reasonable degree of probability that much more fuel than just 2 milliliters leaked onto the engine while Lois was driving. (1 pint equals 473.176 milliliters, and 1 quart equals 946.353 milliliters).

Leiss’s testimony is also based on airflow testing he conducted using a Volkswagen Jetta similar to Lois’s. This included installing a smoke generator in the part of the engine compartment where airflow is most difficult (to prove infiltration despite the worst possible condition) and operating the vehicle at a variety of speeds. Infiltration of this engine smoke into the passenger compartment was confirmed and recorded on a video. The purpose of this airflow testing was to show how a gas like carbon monoxide infiltrates the passenger compartment from the engine in a similar vehicle to Lois Smith’s. Carbon monoxide is almost the same density as air and distributes rapidly within spaces.

Leiss’s testimony is also supported by the scientific articles produced with his expert disclosure. These articles discuss infiltration of carbon monoxide from the engine compartment to the passenger compartment. As examples, two of these articles are attached as Exhibit 12 and Exhibit 13.⁷⁰

⁷⁰ Ex. 12 page 1 (“Self-pollution, or the intrusion of a vehicle’s own engine fumes into the passenger’s compartment, has been reported to contribute to exposure inside various types of vehicles. Besides demonstrating the occurrence of CO self-pollution inside a passenger car using field-testing and mass balance simulation, [study] reported that ratios of in-vehicle to out-vehicle concentrations greater than unity were invariably attributed in the literature to the occurrence of a

So how do Defendants deal with Leiss’s testimony in the Motion? They mischaracterize it (just like they did with Dr. Weaver’s): “*He could not testify as to how much carbon monoxide would, could, or did enter Ms. Smith’s vehicle.*”⁷¹ Wrong. “[H]is analysis answers none of the quantitative questions.”⁷² Wrong, also. He “cannot demonstrate that the fuel leak could have generated any CO at all in the vehicle environment.”⁷³ Wrong, again. He did not “investigate whether there was any way for the leaked fuel to have come into contact with a surface hot enough to raise the fuel temperature to 350°.”⁷⁴ Still wrong.

Here’s the take-away point: If Defendants want to attack the credibility of Dr. Weaver and Engineer Leiss for not knowing the exact amount of carbon monoxide in the car, then they will have their opportunity to do so during cross-examination at trial.⁷⁵ But it is not appropriate to do so now at this stage.⁷⁶ Summary judgment is not about the persuasiveness of evidence. It’s about the existence of evidence.⁷⁷ As the Utah Court of Appeals has stated: “Although at

self polluting condition and the likely experience of a pollution source inside the vehicle.”); Ex. 13 page 9 (“[T]he recorded measurements support the occurrence of potential CO ingress into the cabin from engine combustion and/or exhaust return, an indication of a vehicle self-polluting condition.”).

⁷¹ Motion at 15.

⁷² Motion at 15.

⁷³ Motion at 3.

⁷⁴ Motion at 3.

⁷⁵ *Majors v. Owens*, 2015 UT App 306, ¶ 13, 365 P.3d 165 (“Indeed, vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”).

⁷⁶ *Singleton v. Alexander*, 431 P.2d 126, 128 (Utah 1967) (“The court cannot consider the weight of testimony or the credibility of witnesses in considering a motion for summary judgment.”).

⁷⁷ *Butterfield v. Okubo*, 831 P.2d 97, 106 (Utah 1992) (“Because proximate cause is an issue of fact, we refuse to take it from the jury if there is any evidence upon which a reasonable jury could infer causation.”); *see also Thompson v. Ford Motor Co.*, 395 P.2d 62, 63 (Utah 1964)

this stage of the litigation plaintiffs' causation theory may appear somewhat strained, it is the province of the jury to determine whether the causation theory is fatally attenuated.”⁷⁸

Admissibility Is Not An Issue

That’s not say, of course, a party cannot challenge the admissibility of expert testimony during summary judgment. That’s fair game under Utah Rule of Evidence 702. But Defendants haven’t even attempted to do that. For good reason: Dr. Weaver and Engineer Leiss are indisputably qualified to offer their opinions, and those opinions indisputably satisfy the “basic foundational showing” of Rule 702.⁷⁹ To their credit, Defendants spared us all a futile fight about that.

But it sure puts their Motion into a conundrum. How does one argue that there is no evidence to support causation without also trying to exclude Lois’s expert testimony on this point? Defendants’ solution—obfuscate causation with a bunch of engineering vernacular, throw in the word “speculation” over and over again, and hope with fingers crossed the Court takes the bait to second-guess the world’s top expert in carbon-monoxide poisoning.

(“On summary judgment the adversed party is entitled to have the court survey the evidence and all reasonable inferences fairly to be drawn therefrom in the light most favorable to him.”).

⁷⁸ *Kilpatrick v. Wiley, Rein & Fielding*, 909 P.2d 1283, 1292 (Utah Ct. App. 1996).

⁷⁹ *Majors v. Owens*, 2015 UT App 306, ¶ 12, 365 P.3d 165 (“[T]he threshold showing under rule 702(b) requires only a basic foundational showing of indicia of reliability for the testimony to be admissible, not that the opinion is indisputably correct.”); *Tingey v. Radionics*, 193 F. App’x 747, 764 (10th Cir. 2006) (“[A] plaintiff may establish causation circumstantially through the use of differential diagnosis.”); *Alder v. Bayer Corp., AGFA Div.*, 2002 UT 115, ¶ 62, 61 P.3d 1068 (“In the instant case, the district court summarily concluded that ‘Plaintiffs’ evidence is not based upon inherently reliable scientific or medical foundation as required under Rimmasch and Utah Rules of Evidence 702.’ To the contrary, however, differential diagnosis is one of the oldest and most widely used and recognized of all the methods. Historically and even presently, in many instances, differential diagnosis has been the only method available.”).

Case Law

The case law that Defendants use in the Motion does not help them at all. To the contrary, it exposes the fatal flaw in their Motion. They discuss three cases in detail (*Fox, Burns, Ladd*) and quote five others in passing (*Niemela, Clark, Mitchell, Hansen, Jenkins*). But in every single one of those cases, the plaintiffs tried to litigate complex personal-injury claims without having any expert testimony at all on causation.⁸⁰ So of course the claims were dismissed on summary judgment. Here, Lois is in the opposite situation. She's not asking the jury to

80 *Fox v. Brigham Young Univ.*, 2007 UT App 406, ¶ 25, 176 P.3d 446 (“The trial court did not err in dismissing the Foxes' negligence claim for failure to present expert testimony on the element of causation because the factors associated with Mrs. Fox's fall and injury were sufficiently medically complex to require such testimony.”); *Burns v. Cannondale Bicycle Co.*, 876 P.2d 415, 417 (Utah Ct. App. 1994) (“Defendants subsequently moved for summary judgment, claiming that Burns, as a matter of law, could not prevail on his claims because he lacked evidence of a defect that could have caused the accident. Burns admit[s] that he lacked such evidence. . . .”); *Ladd v. Bowers Trucking, Inc.*, 2011 UT App 355, ¶ 13, 264 P.3d 752 (“Without an expert witness designation, Ladd cannot establish causation.”); *Niemela v. Imperial Mfg., Inc.*, 2011 UT App 333, ¶ 18, 263 P.3d 1191 (“In addition, the court ruled, she failed “to provide expert or other testimony regarding the design of the handles/knobs of the mailboxes at issue.”); *Clark v. Farmers Ins. Exch.*, 893 P.2d 598, 601 (Utah Ct. App. 1995) (“[P]laintiff's own expert, Mr. Duvall, was asked in his deposition whether he would be able to determine the mechanism of plaintiff's injury without speculating or guessing. His response was ‘no’. . . . In light of the complete absence of evidence on causation, the trial court correctly granted defendants' motions for summary judgment.”); *Mitchell v. Pearson Enterprises*, 697 P.2d 240, 245 (Utah 1985) (“Certainly, ordinarily the issue of proximate cause is a matter to be submitted to the jury for its determination. However, in appropriate circumstances summary judgment may be granted on the issue of proximate cause. In this case, plaintiffs failed to make out a case based on the specific acts of alleged negligence because there is an absence of proof that the alleged negligence was the proximate cause of Mitchell's death.”); *Hansen v. Harper Excavating, Inc.*, 2014 UT App 180, ¶ 18, 332 P.3d 969 (“We determine that Hansen's negligence claims required expert testimony supporting the causation element, that Hansen did not designate any witnesses to provide such testimony, and that the district court therefore did not err in granting summary judgment in favor of Defendants due to Hansen's failure.”); *Jenkins v. Jordan Valley Water Conservancy Dist.*, 2013 UT 59, ¶ 22, 321 P.3d 1049 (“The court of appeals accordingly erred in concluding that the Jenkinss needed no expert testimony to establish a standard of care requiring replacement of the District's pipeline.”).

speculate about causation on all its own; she's asking the jury to believe her experts' testimony about causation.⁸¹

Why didn't Defendants cite to more applicable cases in which the plaintiff actually has expert testimony on causation? Well, it's because those cases make it obvious that their Motion fails. Here's one example.

In *Major v. Owens*, the plaintiffs asserted a personal-injury claim based on a car crash.⁸² They designated their treating physicians as experts on causation. After discovery, the defendants filed a motion for summary judgment and a motion in limine to exclude the expert testimony of the treating physicians. The defendants argued that the physicians' testimony "did not meet the threshold requirements for admissibility under rule 702" because "in reaching their causation opinions, the physicians simply make a temporal connection between the accident and the [plaintiffs] self-reported onset of symptoms."⁸³ The trial court agreed with the defendants and granted the motion in limine and the motion for summary judgment.

But the Utah Court of Appeals reversed the trial court's ruling. It held that the physicians' causation testimony satisfied Rule 702 because it was based on the plaintiffs' statements, "the temporal proximity between the collision and onset of symptoms," "their physical examinations and the imaging studies."⁸⁴ The physicians' testimony was expressed as

⁸¹ See Utah Model Jury Instructions, Second Edition, CV121 Believability of Witnesses ("Testimony in this case will be given under oath. You must evaluate the believability of that testimony. You may believe all or any part of the testimony of a witness. You may also believe one witness against many witnesses or many against one, in accordance with your honest convictions.").

⁸² 2015 UT App 306.

⁸³ *Id.* at ¶¶ 4–6.

⁸⁴ *Id.* at ¶ 20.

“a reasonable degree of probability,” so summary judgment was improper.⁸⁵ The Court of Appeals rejected the defendants’ argument that the “treating physicians were required to conduct an independent investigation to verify the [plaintiffs’] accounts of the collision and the onset of the symptoms.”⁸⁶ In fact, the physicians’ causation analyses did not even have to consider other potential causes.⁸⁷ “Certainly Defendants and the district court have identified weaknesses in the treating physicians’ expert opinions—the failure to consider other potential causes, for example—but Defendants will have the opportunity to expose and probe such weaknesses once the opinions are admitted at trial.”⁸⁸ Finally, the Court of Appeals issued this warning: “the Utah Supreme Court has cautioned that district courts ‘must be careful not to displace the province of the factfinder to weigh the evidence.’ . . . [T]he factfinder bears the ultimate responsibility for evaluating the accuracy, reliability, and weight of the testimony.”⁸⁹

Comparing *Major* to this Motion reiterates four points. First, the Motion fails on its face because Defendants have not filed a motion in limine to exclude Dr. Weaver’s causation opinion under Rule 702. Second, even if Defendants had done that, the motion in limine would undoubtedly fail because Dr. Weaver’s testimony has the same foundation as the causation testimony in *Major* (plaintiff’s own reporting, temporal proximity of injury and accident, a physical examination and imaging studies) plus much, much more.⁹⁰ Third, since Defendants

⁸⁵ *Id.* at ¶¶ 18 and 26.

⁸⁶ *Id.*

⁸⁷ *Id.* at ¶ 22.

⁸⁸ *Id.* at ¶ 24.

⁸⁹ *Id.* at ¶ 13 (quoting *State v. Jones*, 2015 UT 19, ¶ 26, 345 P.3d 1195).

⁹⁰ See Statement of Additional Facts #47. Plus, unlike the physicians in *Major*, Dr. Weaver did rule out other potential causes of Lois’s brain damage. See Dr. Weaver Depo. (Ex. 7) 46:6–47:20, 51:10–25.

haven't challenged the admissibility of Lois's expert testimony, it is improper at this stage to evaluate "the accuracy, reliability, and weight of the testimony." Fourth, Lois's expert testimony defeats summary judgment because it is based on "a reasonable degree of probability."

Conclusion

As shown above, Lois has plenty of evidence, including expert testimony, to support causation. Given this evidence, a reasonable jury could infer that the defective fuel lines in her car poisoned her with carbon monoxide during her drive to Washington State in 2011.

DATED this 16th day of February, 2018.

DEWSNUP KING OLSEN WOREL
HAVAS MORTENSEN

/s/ Ricky Shelton

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Certificate of Service

I certify that a copy of the foregoing was electronically filed with the Court on February 16, 2018, which constitutes service on the following parties:

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