

**United States Court of Appeals**  
**For the Eighth Circuit**

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No. 12-1451

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Randy Russell & Antoinette Russell

*Plaintiff - Appellee*

v.

Whirlpool Corporation

*Defendant - Appellant*

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Appeal from United States District Court  
for the Western District of Missouri - Springfield

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Submitted: September 19, 2012

Filed: December 17, 2012 (Corrected: 02/06/13)

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Before BYE, GRUENDER, and SHEPHERD, Circuit Judges.

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BYE, Circuit Judge.

A fire destroyed the home of Randy and Antoinette Russell. The Russells filed suit against Whirlpool, alleging the fire was caused by a defective refrigerator Whirlpool designed, manufactured, and sold. The jury found in favor of the Russells. Whirlpool appeals, contending the Russells' expert witness did not use a sufficiently reliable methodology, the Russells may not infer a product defect from circumstantial evidence under Missouri tort law, and the district court<sup>1</sup> erroneously allowed the Russells to introduce evidence of other Whirlpool refrigerator fires. For the reasons discussed below, we affirm.

## I

The fire started in the Russells' Iberia, Missouri, home on February 6, 2010. The Russells were in Cape Girardeau, Missouri, that day, and no witnesses to the fire were reported. Firefighters from the Brumley Volunteer Fire Department and the Iberia Fire Department responded to the scene. They tried to extinguish the fire but gave up after ninety minutes. Lieutenant Training Officer Tony Smoot, who supervised the fire response, did not call the State Fire Marshal to investigate the origin and cause of the fire because he believed the house was "too far gone." In fact, the fire at the Russells' home was a "total burn" because most combustibles were consumed in the fire and the fire eventually self-extinguished. J.A. 463.

The Russells retained Larry Giggy, a certified fire investigator in Missouri, to determine the origin and cause of the fire. Giggy interviewed Mr. Russell regarding several possible causes of the fire, including an external wood burning stove, the house's hot water system, Mrs. Russell's smoking habits, candles and other open flames, space heaters, and flammable chemicals. Giggy then walked around the house twice, taking photographs the second time. He examined the remaining studs

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<sup>1</sup>The Honorable Gary A. Fenner, United States District Judge for the Western District of Missouri.

left on the concrete wall in the basement. Noticing the studs in the middle part of the wall were more significantly burned than those on the sides, he believed the middle of the house was a "suspect area." He found and examined several appliances, including the backup electric furnace, washer and dryer, and air handling unit, but could not find any identifiable fire patterns. He noticed nothing unusual about the internal wiring in the house and eliminated the circuit breaker panel as a potential cause.

Giggy found the stove and microwave, and after examining them, noticed they were damaged more heavily on their left sides, as viewed from the front. He asked Mr. Russell what had been located to the left of the stove and microwave. Mr. Russell told him the refrigerator had been there. This suggested to Giggy the fire spread from the refrigerator to the adjacent appliances, burning their left sides first and thereby causing greater damage. He then located the refrigerator at the bottom of the debris, unlike the stove and microwave, which did not have debris on top of them. This difference led Giggy to believe the refrigerator fell through the floor prior to the time the stove and microwave fell through the floor. The only parts of the refrigerator Giggy could identify were some of the cooling coils, some parts of the frame, and the compressor, the pump that circulates refrigerant throughout the unit. The metal appeared thinner on the bottom part of the refrigerator frame, which would have been close to the compressor. He also noticed although the refrigerator was destroyed almost beyond recognition, the nearby appliances could still be recognized for their intended function and did not burn as significantly as the refrigerator. This indicated to him the refrigerator had burned longer and hotter than the other appliances. After considering all these factors, Giggy concluded the fire started in the refrigerator.

The Russells also retained Carl Martin, a registered professional engineer, to perform a cause investigation and engineering analysis. Martin relied on Giggy's determination of the refrigerator as the area of origin. Martin observed the surfaces

on the inside of the compressor compartment experienced great heat exposure and the compressor windings were not energized when the fire attacked the compressor. This suggested the compressor was not working at the time of the fire. Martin also noticed the side wall surfaces of the compressor had suffered substantial damage, which would not occur had the fire originated in some other source. These observations led Martin to conclude the fire was caused by an electrical malfunction inside the compressor.

The Russells filed suit against Whirlpool alleging a defective refrigerator designed, manufactured, and sold by Whirlpool caused the fire. Their claim did not identify a specific defect, but instead inferred the existence of a defect from circumstantial evidence. At the close of discovery, Whirlpool moved to strike the opinions of Larry Giggy and Carl Martin, arguing they did not meet the standard for admissibility the Supreme Court stated in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). The district court denied the motions, as well as Whirlpool's related motion for summary judgment. Whirlpool renewed its motion to strike shortly before trial and requested the district court hold a hearing pursuant to Federal Rule of Evidence 104(a) to resolve the preliminary question regarding Giggy and Martin's qualifications to testify. The court denied the motion and agreed instead to evaluate the reliability of expert witness testimony as it came in. At that time, Whirlpool also filed a motion in limine to prevent the Russells from offering evidence of other similar incidents of fires alleged to have started in or around Whirlpool refrigerators. The court granted the motion and required the Russells to approach the bench and receive permission before offering such evidence.

At trial, Giggy testified regarding his investigation of the fire scene, his conclusion, and his methods. During cross-examination, Whirlpool's attorneys questioned Giggy about the extent to which he had employed National Fire Protection Association (NFPA) 921, Guide for Fire and Explosion Investigations. The NFPA is a nonprofit organization dedicated to fire prevention, and NFPA 921 is a document

intended to "establish guidelines and recommendations for the safe and systematic investigation or analysis of fire and explosion incidents." NFPA 921 § 1.2.1. Whirlpool presented a transcript from a deposition Giggy gave in a different case in 2008 in which he stated NFPA 921 is the standard to which fire investigators are held. In his trial testimony in this case, however, Giggy maintained NFPA 921 is merely a guide for origin-and-cause investigations, rather than a standard. Whirlpool again renewed its motion to strike Giggy's opinion at the conclusion of his testimony. The district court stated it believed Giggy's qualifications under Daubert were "pretty shaky," but denied the motion.

Carl Martin also testified regarding his theory of the fire's origin. In response to a question regarding the significance of the lack of power in the compressor at the time of the fire, he stated, "It tells me that the fire originates within the compressor compartment and progresses outward from that location. And obviously it's not a big secret here. The theory is in the past there have been problems with the relay contactors." J.A. 590. Whirlpool immediately objected and argued the Russells had introduced similar incidents evidence in violation of the court's in limine order. Whirlpool moved for a mistrial, or in the alternative, to strike the comment and give a curative instruction to the jury. The court denied the motion for a mistrial but granted the motion to strike and instructed the jury to disregard Martin's comment.

At the conclusion of trial, the jury returned a verdict in favor of the Russells in the amount of \$1,377,550.00. Whirlpool filed a renewed motion for judgment as a matter of law, or in the alternative, for a new trial. It also moved once again to strike Giggy and Martin's testimony. The court denied the motions. Whirlpool appealed.

## II

Whirlpool argues Giggy's testimony is inadmissible, and the district court therefore erred by admitting it, for two reasons. First, Giggy's failure to employ NFPA 921 automatically subjects his expert opinion to exclusion. Second, Giggy's failure to use any scientific methodology for his origin-and-cause investigation makes his opinions unreliable.

"Decisions concerning the admission of expert testimony lie within the broad discretion of the district court, and these decisions will not be disturbed on appeal absent an abuse of that discretion." Peitzmeier v. Hennessy Indus., Inc., 97 F.3d 293, 296 (8th Cir. 1996). An abuse of discretion occurs when a district court: (1) does not consider a relevant factor that should have been given significant weight; (2) considers and gives significant weight to an irrelevant or improper factor; or (3) considers all and only proper factors but commits a clear error of judgment in weighing those factors. Dunn v. Nexgrill Industries, Inc., 636 F.3d 1049, 1055 (8th Cir. 2011). In the context of admitting evidence, an abuse of discretion occurs "only where the error is clear and prejudicial to the outcome of the proceeding." Torbit v. Ryder Sys., Inc., 416 F.3d 898, 903 (8th Cir. 2005).

### A. NFPA 921

Whirlpool argues Giggy's investigative methods deviated from NFPA 921 and that deviation required the district court to exclude his testimony. According to Whirlpool, Giggy acknowledged NFPA 921 is a mandatory investigative procedure in a 2008 deposition in an unrelated case in which he said NFPA 921 is "the standard of [sic] which, you know, you're held." J.A. 460. In his investigation of the Russells' home, Whirlpool contends Giggy did not take many of the actions NFPA 921 recommends, including considering and eliminating other potential causes of the fire, analyzing burn patterns to determine the area of origin, and investigating the way in

which the fire damaged the home's electrical circuits, a technique known as "arc mapping." Therefore, the district court should have excluded Giggy's testimony for his failure to comply with a mandatory procedure.

We disagree. Whirlpool does not accurately summarize our caselaw on this point. We have held NFPA 921 qualifies as "a reliable method endorsed by a professional organization," Fireman's Fund Ins. Co. v. Canon U.S.A., Inc., 394 F.3d 1054, 1058-59 (8th Cir. 2005), but we have not held NFPA 921 is the only reliable way to investigate a fire. Our NFPA 921 cases stand for the simple proposition an expert who purports to follow NFPA 921 must apply its contents reliably. Presley v. Lakewood Eng'g, 553 F.3d 638, 645 (8th Cir. 2009) (affirming the district court's exclusion of expert testimony because the expert "failed to follow . . . the standards he purported to follow"); Fireman's Fund, 394 F.3d at 1060 (affirming the district court's exclusion of expert testimony because the expert "did not apply the principles and methods of NFPA 921 reliably to the facts of the case"). Accordingly, Giggy's testimony can only be excluded on NFPA 921 grounds if he purported to follow NFPA 921 but did not reliably apply it to the remains of the fire at the Russells' home.

The record shows Giggy did not purport to apply NFPA 921. We take Giggy's 2008 deposition statement to mean only that NFPA 921 is a respected investigative method, not that it is a method an investigator must attempt to deploy in every case, including this one. Moreover, several aspects of Giggy's trial testimony indicate he did not purport to apply NFPA 921. Giggy bluntly and repeatedly stated NFPA is only a guide. J.A. 456-60. He also conceded he did not perform many of the steps NFPA 921 recommends a fire investigator take. Further, he testified NFPA 921 cannot be used when a fire leaves an insufficient burn pattern on the structure that sustained the fire. Id. at 502. A "total burn" fire does not leave sufficient burn patterns to use NFPA 921, id. at 506, and the fire at the Russells' home was a "total burn." Id. at 470. In other words, Giggy did not employ NFPA 921 because, given the extent of the destruction, he believed he could not apply the guideline. In light

of this evidence, we are convinced Giggy did not attempt to employ NFPA 921 in his investigation, and therefore, his testimony may not be excluded for failure to reliably apply its contents.

### B. Reliable Methodology

Whirlpool next argues Giggy did not use any scientific methodology whatsoever in his investigation. Instead, he simply "eyeballed" three appliances he identified in the debris and concluded the most severely burned was the area of origin. This technique renders Giggy's testimony little more than lay opinion "formulated merely upon general observations of the evidence and general scientific principles." Presley, 553 F.3d at 646. His testimony was therefore unreliable and the district court should have excluded it.

Federal Rule of Evidence 702 governs the admissibility of expert testimony. It provides:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed R. Evid. 702. "The main purpose of Daubert exclusion is to prevent juries from being swayed by dubious scientific testimony." In re Zurn Pex Plumbing Prods. Liab. Litig., 644 F.3d 604, 613 (8th Cir. 2011). The district court plays the role of a gatekeeper to "ensur[e] that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." Kumho Tire Co. v. Charmichael, 526 U.S. 137, 141 (1999) (quoting Daubert, 509 U.S. at 597). Although the district court is entitled



to "great latitude" in determining whether an expert meets these requirements, First Union Nat'l Bank v. Benham, 423 F.3d 855, 861 (8th Cir. 2005), the assumption of the gatekeeper role is mandatory, not discretionary. Daubert, 509 U.S. at 592-93. When making the reliability and relevancy determinations, a district court may consider: (1) whether the theory or technique can be or has been tested; (2) whether the theory or technique has been subjected to peer review or publication; (3) whether the theory or technique has a known or potential error rate and standards controlling the technique's operation; and (4) whether the theory or technique is generally accepted in the scientific community. Id. at 593-94. "This evidentiary inquiry is meant to be flexible and fact specific, and a court should use, adapt, or reject Daubert factors as the particular case demands." Unrein v. Timesavers, Inc., 394 F.3d 1008, 1011 (8th Cir. 2005). "There is no single requirement for admissibility as long as the proffer indicates that the expert evidence is reliable and relevant." Id.; see also Daubert, 509 U.S. at 594 ("The inquiry envisioned by Rule 702 is, we emphasize, a flexible one.").

In the context of fire investigations, we have held expert opinions formed on the basis of observations and experience may meet this reliability threshold. Shuck v. CNH America, 498 F.3d 868, 875 (8th Cir. 2007); Hickerson v. Pride Mobility Prods. Corp., 470 F.3d 1252, 1257 (8th Cir. 2006). In Shuck, we affirmed the admissibility of the testimony of a fire causation expert and a mechanical expert who ruled out oil starvation as the cause of a combine fire. The experts based their testimony on an inspection of the combine and observation of a dismantling of the combine's engine. The defendants argued the experts' testimony was not based on a reliable methodology because they did not test damaged combine parts, exemplar combine parts, or oil from the combine. We rejected that argument and held the experts used reliable methods when they "observed the relevant evidence, applied their specialized knowledge, and systematically included or excluded possible theories of causation." Shuck, 498 F.3d at 875. In Hickerson, the defendant challenged the plaintiff's expert's conclusion a motorized power scooter caused a

house fire as too speculative because the expert failed to eliminate other potential ignition sources. We found "nothing unreliable" in the expert's methodology, in which he considered burn patterns, identified a point of origin, and eliminated as many alternative causes of the fire as possible.<sup>2</sup> Hickerson, 470 F.3d at 1257. We have found reliability in these cases without insisting upon rigid adherence to the Daubert factors. As our prior caselaw instructs, we have reached these conclusions by examining the facts of each individual case, considering the Daubert factors to the extent they fit the facts. See Jarequi v. Carter Mfg. Co., 173 F.3d 1076, 1083 (8th Cir. 1999) ("[T]he district court must customize its [Daubert] inquiry to fit the facts of each particular case."). With this precedent in mind, we consider Giggy's methodology.

As noted, Giggy interviewed Mr. Russell and eliminated alternative causes, documented the scene, and identified a "suspect area" by examining burn patterns on the studs in the portion of the wall that survived the fire. He reviewed the burn patterns on the kitchen appliances and confirmed with Mr. Russell the placement of the appliances in the kitchen before the fire. Based on the burn patterns on those appliances, the near-complete destruction of the refrigerator, its position at the bottom of the debris, and the metal thickness variation at the bottom part of the refrigerator frame, Giggy concluded the fire started in the refrigerator. We believe Giggy's methods are sufficiently similar to the methods we found reliable in Shuck and Hickerson. Giggy did more than simply "eyeball" three kitchen appliances. He

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<sup>2</sup>Whirlpool attempts to distinguish Hickerson by arguing experts for the plaintiff and defendant agreed on the area of origin in that case. It further argues unlike Giggy, the plaintiff's expert in Hickerson analyzed burn and smoke patterns to determine the fire's place of origin. We are not persuaded. The Hickerson court made no mention of consensus among the experts as a sign of reliability. Instead, it examined the actual methods used by the expert, as we do here. Moreover, although the fire in the Russells' home was a "total burn," the record shows Giggy did examine burn patterns to the extent possible.

observed the relevant evidence, applied his specialized knowledge, excluded alternative causal theories, and reached a conclusion. These methods are more rigorous than the vague theorizing and *ipse dixit* logic we have rejected in the past. The analytical gap between the existing evidence and the opinion Giggy offered is not so great as to require exclusion.

Whirlpool's arguments are better addressed to the jury regarding the weight to be afforded Giggy's opinion, rather than to the district court on the question of admissibility. The Supreme Court has emphasized the usual tools to expose flaws in evidence remain available: "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." Daubert, 509 U.S. at 596; see also Olson v. Ford Motor Co., 481 F.3d 619, 626 (8th Cir. 2007). Whirlpool made good use of these tools. The jury weighed the conflicting evidence and credited Giggy's testimony, in spite of Whirlpool's challenges. We find no error in this exercise of the adversarial process. The district court did not abuse its discretion when it admitted the challenged testimony.

### III

Missouri law, which governs this diversity-based products liability action, see Pritchett v. Cottrell, Inc., 512 F.3d 1057, 1063 (8th Cir. 2008), permits a jury to infer a product defect and causation based on circumstantial evidence under a *res ipsa loquitur*-type theory. Aetna Cas. and Sur. Co. v. Gen. Elec. Co., 758 F.2d 319, 322 (8th Cir. 1985) (citing Williams v. Deere & Co., 598 S.W.2d 609, 612 (Mo. Ct. App. 1980)). To prove a product defect by circumstantial evidence, a plaintiff must offer evidence that:

- (1) tends to eliminate other possible causes of the injury or property damage,
- (2) demonstrates that the product was in the same basic

condition at the time of the occurrence as when it left the hands of the defendants, and (3) the injury or damage is of a type that normally would not have occurred in the absence of a defect in the product.

Hickerson, 470 F.3d at 1258 (citing Fain v. GTE Sylvania, Inc., 652 S.W.2d 163, 165 (Mo. Ct. App. 1983)). Whirlpool contends the inability of the Russells' experts to eliminate possible alternative causes of the fire precludes the Russells from proving the first of these three elements. Because the Russells' experts did not consider or could not eliminate other electrically-powered devices inside the Russells' home as causes of the fire, the Russells cannot show the evidence tends to eliminate *possible* causes other than the refrigerator.

Whirlpool made this argument in its motion for judgment as a matter of law. We review a district court's denial of a motion for judgment as a matter of law *de novo*. Battle v. United Parcel Service, Inc., 438 F.3d 856, 861 (8th Cir. 2006). Judgment as a matter of law is appropriate if there is "no legally sufficient basis" for a reasonable jury to find for the non-moving party. Fed. R. Civ. P. 50(a)(1). The court draws all reasonable inferences in favor of the non-moving party when making this determination. Webner v. Titan Distrib., Inc., 267 F.3d 828, 833 (8th Cir. 2001). Where conflicting inferences may be drawn from the evidence, "it is the role of the jury, not the court, to determine which inference shall be drawn." Hunt v. Neb. Pub. Power Dist., 282 F.3d 1021, 1029 (8th Cir. 2002). It is a "universally adopted standard that judges must be extremely guarded in granting judgments as a matter of law after a jury verdict." Ryther v. KARE 11, 108 F.3d 832, 844 (8th Cir. 1997) (*en banc*).

The elements a plaintiff must prove to infer a product defect from circumstantial evidence are intended to ensure the jury's verdict is free from speculation. The elements "amount to an assessment of the strength of the circumstantial evidence," Hickerson, 470 F.3d at 1259, and we have enforced these

limitations where the circumstantial evidence is not strong enough to free the jury's verdict from the realm of conjecture. See Ruminer v. Gen. Motors Corp., 483 F.3d 561, 565 (8th Cir. 2007) (holding circumstantial evidence did not allow the jury to determine whether failure of a car's seatbelt system was caused by product defect, product misuse, or some other condition arising after the vehicle left the manufacturer's control); Martin v. E-Z Mart Stores, Inc., 464 F.3d 827, 830-31 (8th Cir. 2006) (holding evidence was insufficient to allow the jury to infer a defect in a cigarette lighter). At the same time, however, we recognize "[a]n inference need not be justified beyond all doubt and is not precluded by a mere possibility that the contrary may be true." Fain, 652 S.W.2d at 165 (citing Scheele v. Am. Bakeries Co., 427 S.W.2d 361, 365 (Mo. 1968)). The question, then, is whether the circumstantial evidence, viewed in the light most favorable to the Russells, is strong enough to allow the jury to infer, without resort to speculation, that the refrigerator contained a defect at the time it left Whirlpool's control and that caused the fire.

We believe it is. The refrigerator was found at the bottom of the debris and was burned more significantly than any other appliance, suggesting it experienced the hottest and fastest burn. The side of the stove and microwave adjacent to the refrigerator was burned more substantially than the other side of those appliances, suggesting the fire spread to those appliances from the refrigerator. The metal in the compressor became very thin, a sign of extreme heat. In fact, the heat was so extreme that it burned completely through the steel in the compressor panel, but did not burn through the same panel nearer to the top of the refrigerator. Given the compressor's location in the interior of the refrigerator, it would have been protected from isolated heat exposure had the fire started outside the refrigerator. The power was off in the compressor compartment at the time of the fire, which is consistent with an electrical malfunction within the compressor compartment. The power to the other appliances, however, was on at the time of the fire, suggesting the fire did not begin in these appliances or the breaker panel. Finally, the Russells heard a strange noise emanating from the refrigerator in the days before the fire occurred. Although this evidence may

not compel the jury to find for the Russells, it is "strong enough to support reasonable inferences necessary to [the Russells'] case free from speculation." Hickerson, 470 F.3d at 1258. That is all Missouri law requires. To the extent Whirlpool argues the Russells cannot eliminate other possible causes of the fire, we believe it created a fact issue the jury resolved at trial, rather than an argument the Russells cannot prove an essential element of their claim as a matter of Missouri law. Id. at 1260. The district court did not err when it denied Whirlpool's motion for judgment as a matter of law.

#### IV

Finally, Whirlpool argues Martin violated the court's in limine order prohibiting evidence of other Whirlpool refrigerator fires when the following exchange occurred:

Q. What's the significance to you, if anything, that the power is off to the compressor when the fire gets there but it's on when the fire gets to the range? What's that tell you?

A. It tells me that the fire originates within the compressor compartment and progresses outward from that location. And obviously it's not a big secret here. The theory is in the past there have been problems with the relay contactors.

J.A. 590. According to Whirlpool, this comment primed the jury to think about the compressor as the cause of the fire, a disputed issue in the case. Thus, Whirlpool argues the district court's failure to grant a mistrial following Martin's remark constitutes prejudicial error.

We review a district court's decision not to grant a mistrial for abuse of discretion. Pullman v. Land O'Lakes, Inc., 262 F.3d 759, 762 (8th Cir. 2001). "In order for a violation of an order granting an in limine motion to serve as a basis for a new trial, the order must be specific in its prohibition and the violation must be

clear." Id. A party is entitled to a new trial only where the violation was prejudicial. Id. An error is prejudicial if it "in all probability produced some effect on the jury's verdict and is harmful to the substantial rights of the party assigning it." Id.

Any violation of the court's in limine order was neither clear nor prejudicial. First, Martin's statement is vague. Martin did not expressly mention other fires. Moreover, after Whirlpool objected and the district court dismissed the jury, Martin clarified his comment addressed circumstances from this case that supported his theory. The district court found this explanation satisfactory. Therefore, it was not altogether clear Martin was referring to other incidents. Second, the comment did not appear to be intentional, and there were no further references to other similar incidents during the trial. See id. at 762-63 (concluding appellant was not prejudiced by a single, unintentional remark). Third, after consulting with the parties and using the exact language Whirlpool suggested, the district court gave a curative instruction:

Ladies and gentlemen, the objection to the last statement was sustained by me, and I'm instructing you that you're to disregard Mr. Martin's last statement just before we took the break in this case.

J.A. 597. We have previously held a district court did not abuse its discretion by refusing to deny a mistrial for violation of an in limine order when, among other things, the court gives a prompt and clear curative instruction. Black v. Shultz, 530 F.3d 702, 707 (8th Cir. 2008); Harrison v. Purdy Bros. Trucking Co., 312 F.3d 346, 353 (8th Cir. 2002). Finally, Whirlpool offers no compelling explanation of how it was prejudiced or denied a fair trial by Martin's comment, and our review of the record reveals no unfairness. Therefore, we conclude the district court did not abuse its discretion when it denied Whirlpool's motion for a mistrial.

V

For the foregoing reasons, we affirm the judgment of the district court.

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