This opinion is nonprecedential except as provided by Minn. R. Civ. App. P. 136.01, subd. 1(c).

STATE OF MINNESOTA
IN COURT OF APPEALS
A23-0307

Jon Huseth, et al., d/b/a Clay View Dairy, LLP,
Appellants,

vs.

Goodhue County Cooperative Electric Association,
Appellant on Related Appeal,

Kurt Emery,
Respondent,

DuraTech Industries International, Inc.,
Respondent,

Highline Manufacturing, Ltd.,
Respondent.

Filed March 11, 2024
Affirmed in part and reversed in part
Johnson, Judge

Goodhue County District Court
File No. 25-CV-18-715

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Considered and decided by Johnson, Presiding Judge; Larson, Judge; and John P. Smith, Judge.*

NONPRECEDENTIAL OPINION

JOHNSON, Judge

A Goodhue County dairy operation brought this lawsuit to recover lost profits and other damages arising from a decrease in its milk production. The dairy sued four defendants and alleged two different causes of harm. The dairy initially sued an electric utility, alleging that the utility caused its dairy cows to be shocked by stray voltage. The dairy later amended its complaint and sued three defendants who allegedly caused its dairy cows to ingest plastic netting that had been wrapped around hay bales and shredded into the cows' feed.

The district court denied the four defendants' motions for summary judgment, which asserted numerous arguments. The district court granted the net-wrap defendants'

*Retired judge of the Minnesota Court of Appeals, serving by appointment pursuant to Minn. Const. art. VI, § 10.

motion to exclude the dairy's expert evidence concerning the alleged herd-wide consequences of the cows' ingestion of plastic net wrap and, accordingly, dismissed the dairy's claims against the net-wrap defendants.

We conclude that the district court erred by denying the electric utility's motion for summary judgment because the dairy's stray-voltage claims against the electric utility are barred by a two-year statute of limitations applicable to improvements to real property. We also conclude that the district court did not err by granting the net-wrap defendants' motion to exclude the dairy's expert evidence and by dismissing the dairy's claims against the net-wrap defendants. Therefore, we affirm in part and reverse in part.

FACTS

Jon, Melissa, Ronald, and Diana Huseth are partners in a dairy operation, doing business as Clay View Dairy LLP (CVD). The Huseth family has operated a dairy near the city of Dennison for four generations. Before 2000, the Huseths managed a herd of approximately 220 dairy cows. In 2000, CVD purchased a 300-acre farm near the city of Goodhue and expanded its herd to approximately 600 dairy cows. Since then, the Goodhue farm has been CVD's primary milking facility, while the Dennison farm has housed calves and heifers. Between 2003 and 2013, CVD exceeded statewide milk-production averages.

In 2011 and 2012, CVD constructed two new barns at the Goodhue farm to support an expansion of its herd to more than 1,100 dairy cows. As part of that expansion, CVD's electric utility, the Goodhue County Cooperative Electric Association (GCCEA), installed a new 300 kilo-volt-amperes (kVA) transformer to service the increased electrical load. In approximately 2013, CVD noticed that the growth in its milk production was slowing and

that its herd was experiencing unexplained health problems. CVD became concerned about the possibility of stray voltage. The phenomenon of stray voltage has been described as follows:

> All electricity leaving an electrical substation must return to that substation in order to complete a circuit. Unless that circuit is completed, electricity will not flow. The current leaves the substation on a high voltage line which eventually connects to some electrical appliance. After exiting the appliance that current must return to the substation. The neutral-grounded network provides the returning current two choices. Either it can return via the neutral line, which accounts for the second wire on our electrical poles, or it can return through the ground. These two pathways comprise the grounded-neutral network. Electricity flows through the path of lowest resistance. If there exists more resistance in the neutral line than in the ground, the current will flow through the ground to return to the substation. Neutral-to-earth voltage or stray voltage will occur when current moves from either the neutral line to the ground or from the ground to the neutral line. It uses a cow as a pathway if that animal happens to bridge the gap between the two. A cow's hooves provide an excellent contact to the earth while standing on wet concrete or mud, while at the same time the cow is contacting the grounded-neutral system consisting of items such as metal stanchions, stalls, feeders, milkers, and waterers. The current simply uses the cow as a pathway in its eventual return to the substation.

Poppler v. Wright Hennepin Coop. Elec. Ass'n, 834 N.W.2d 527, 534 (Minn. App. 2013), (quoting *Kaech v. Lewis Cnty. Pub. Util. Dist. No. 1*, 23 P.3d 529, 533 n.3 (Wash. App. 2001)), *aff'd*, 845 N.W.2d 168 (Minn. 2014).

In 2015, CVD retained an electrician, Noble Salisbury, to test for stray voltage at cow-contact locations at the Goodhue farm. Salisbury detected elevated voltage levels at the Goodhue farm but was unable to determine the cause. In December 2015, Jon Huseth contacted GCCEA to report elevated voltage levels. GCCEA checked the service

connections and did not find any problems. In January 2016, CVD hired a different electrician, Lawrence Neubauer, to further investigate the possibility of stray voltage at the Goodhue and Dennison farms. After performing tests, Neubauer determined that CVD was experiencing "high levels" of stray voltage from GCCEA's electric-distribution system.

In January 2016, CVD requested that GCCEA make changes to its electric-distribution system at both of its locations to prevent stray voltage. After CVD's attorney exchanged several letters with GCCEA, CVD provided GCCEA with plans prepared by an electrical engineer. For the Goodhue farm, CVD requested the installation of a new 500-kVA transformer, the addition of an isolator, and the replacement of a single-phase line that extends from a three-phase line. For the Dennison farm, CVD requested the addition of an isolator and the replacement of a single-phase line with a three-phase line. In November 2016, CVD and GCCEA entered into a written agreement entitled "Redesign of the Distribution System and Testing," which obligated GCCEA to make the changes requested by CVD and obligated CVD to pay for some of the expenses of the work. The new equipment was installed in December 2016. Thereafter, CVD noticed an improvement in its cows' behavior, health, and productivity.

In March 2018, CVD commenced this action against GCCEA. CVD asserted claims of negligence and nuisance based on an allegation that GCCEA allowed stray voltage to emanate from its electric-distribution system and injure its herd of dairy cows, thereby causing a decrease in milk production.

Shortly thereafter, while investigating the herd's health issues, CVD's veterinarian, Curt Nelson, D.V.M., observed lameness and weight loss in the dairy's herd. Jeremy Schefers, D.V.M., Ph.D., a food-animal diagnostician at the University of Minnesota, performed necropsies on six cows. In three cows' digestive systems, Dr. Schefers discovered balled plastic. Dr. Nelson then performed necropsies on 131 cows, 69 of which had plastic in their digestive systems.

In March 2019, CVD served and filed a third amended complaint in which it asserted claims against Kurt Emery, a Goodhue County farmer; DuraTech Industries International, Inc.; and Highline Manufacturing, Ltd. (collectively, the net-wrap defendants). CVD asserted claims of negligence and breach of contract against Emery and claims of strict liability, negligence, consumer fraud, and false advertising against Duratech and Highline.

Emery had raised heifers for CVD since approximately 2004. For most of that time, Emery fed the heifers hay that had been baled and bound with plastic net wrap rather than twine. To remove the net wrap and shred the hay, Emery used bale processors manufactured by DuraTech and Highline. From 2005 to 2018, Emery did not manually remove net wrap from the bales before using bale processors because he believed that the processors would remove and retain all net wrap, which he occasionally removed from the machines. But subsequent testing of one of Emery's bale processors indicates that only 53 to 57 percent of the net wrap on hay bales were removed and that the remainder was mixed in with the hay that was used as feed and bedding for CVD's heifers.

In November and December of 2021, each of the four defendants filed a motion for summary judgment, and CVD filed a motion for partial summary judgment with respect to some of the defendants' affirmative defenses. In June 2022, the district court filed a 29-page order in which it denied all parts of all motions except that it granted Emery's motion with respect to CVD's breach-of-contract claim and granted CVD's motion with respect to GCCEA's affirmative defenses of failure of service of process and failure to file an affidavit of expert review.

One day later, the net-wrap defendants filed a joint motion to exclude CVD's expert evidence concerning the consequences of net-wrap ingestion by CVD's herd. The district court conducted a hearing on the motion in October 2022. Two months later, the district court granted the motion. Because CVD relied solely on expert evidence to prove that its cows' ingestion of net wrap caused financial damages, the district court *sua sponte* dismissed CVD's claims against the net-wrap defendants and also *sua sponte* dismissed GCCEA's cross-claims against the net-wrap defendants.

CVD filed a notice of appeal from the district court's December 2022 order excluding its expert evidence and dismissing its claims against the net-wrap defendants. GCCEA filed a notice of related appeal to challenge the district court's June 2022 order denying its motion for summary judgment as well as the part of the district court's December 2022 order that dismissed its cross-claims against the net-wrap defendants. Each of the net-wrap defendants filed a notice of related appeal to challenge the district court's June 2022 order denying its motion for summary judgment.

DECISION

I. Denial of GCCEA's Motion for Summary Judgment

We begin our analysis by considering GCCEA's appeal from the district court's denial of its motion for summary judgment.

A motion for summary judgment should be granted "if the movant shows that there is no genuine issue as to any material fact and the movant is entitled to judgment as a matter of law." Minn. R. Civ. P. 56.01. A genuine issue of material fact exists if, considering the record as a whole, a rational trier of fact could find for the nonmoving party. *Frieler v. Carlson Mktg. Grp., Inc.*, 751 N.W.2d 558, 564 (Minn. 2008). We apply a *de novo* standard of review to a district court's legal conclusions and view the evidence in the light most favorable to the nonmoving party. *Staub v. Myrtle Lake Resort, LLC*, 964 N.W.2d 613, 620 (Minn. 2021).

In the district court, GCCEA sought summary judgment on several grounds. The district court denied GCCEA's motion with respect to each issue. On appeal, GCCEA renews four of its summary-judgment arguments: that CVD's claims are barred by a two-year statute of limitations for improvements to real property, that CVD failed to apportion fault among the defendants, that CVD's alleged damages are not supported by existing law, and that CVD's non-compliance with the expert-review statute requires the dismissal of its claims.

A.

We begin with GCCEA's argument that CVD's claims are barred by a two-year statute of limitations for causes of action based on an allegedly defective and unsafe

condition of an improvement to real property. The relevant statute provides, in pertinent part:

> Except where fraud is involved, no action by any person in contract, tort, or otherwise to recover damages for any injury to property, real or personal, or for bodily injury or wrongful death, *arising out of the defective and unsafe condition of an improvement to real property*, shall be brought against any person performing or furnishing the design, planning, supervision, materials, or observation of construction or construction of the improvement to real property or against the owner of the real property *more than two years after discovery of the injury* . . . .

Minn. Stat. § 541.051, subd. 1(a) (2016) (emphasis added).

A different subdivision of the same statute contains an exception to this two-year statute of limitations, with the following language: "Nothing in this section shall apply to actions for damages resulting from negligence in the maintenance, operation or inspection of the real property improvement against the owner or other person in possession." *Id.*, subd. 1(d). A six-year statute of limitations applies to a claim of negligence in the maintenance, operation, or inspection of the real property improvement. Minn. Stat. § 541.05 (2016); *Johnson v. Steele-Waseca Coop. Elec.*, 469 N.W.2d 517, 520 (Minn. App. 1991), *rev. denied* (Minn. July 24, 1991).

In light of subdivisions 1(a) and 1(d), the duration of the statute of limitations on CVD's claims against GCCEA depends on whether CVD seeks to prove a defective and unsafe condition of an improvement to real property or seeks to prove negligence in the maintenance, operation, or inspection of the real property improvement. The supreme court has prescribed an evidentiary framework for this characterization. "Generally, a

party asserting a statute of limitation . . . as an affirmative defense bears the burden of proving all elements of the affirmative defense." *State Farm Fire & Cas. v. Aquila Inc.*, 718 N.W.2d 879, 885 (Minn. 2006). But if a party seeks an exception to a statute of limitations, that party bears the burden of proving the elements of the exception. *Id.* at 886. In this case, the parties' dispute focuses on the exception, an issue for which CVD bears the burden of proof. *See id.*

The district court's analysis of GCCEA's statute-of-limitations argument is as follows: "Plaintiffs' experts have presented reports that the stray voltage was the result of the negligence in the inspection and maintenance of their distribution system. Therefore, the 2-year statute of limitations would not apply, and summary judgment based on the 2-year statute of limitations is not appropriate."

GCCEA contends that the district court erred on the grounds that CVD's claims do not "truly implicate" negligent maintenance, operation, or inspection and that the district court's order does not identify any evidence of such a claim. In response, CVD contends that its claims against GCCEA are based on "GCCEA's service—not the design or build" of the electric-distribution system.

CVD's contention is inconsistent with its evidence. At oral argument, CVD's attorney stated that the nature of its claims can be determined by referring to the expert reports of Donald Johnson and Lawrence Neubauer. Our review of both experts' opinions shows that CVD is claiming that its dairy cows were shocked by stray voltage because GCCEA did not install the correct equipment, not because GCCEA did not properly maintain, operate, or inspect its equipment.

Johnson makes the following general statement in his expert report: "Stray voltage can come about due to a variety of failures on the part of utilities, including, but not limited to, undersized neutral lines, out-of-balance phases due to load imbalances over time, degradation of the utility neutral due to stretching, corrosion, line breaks, splices, and loose connections." Johnson further states in a rebuttal report that, in this case, the "primary electrical issues at [CVD] relate to the uneven load distribution and GCCEA's failure to balance their lines in the vicinity of [CVD]." But Johnson does not specifically state that load imbalances in GCCEA's electrical lines were caused by any act or omission of GCCEA with respect to maintenance, operation, or inspection of its electric-distribution system. Notably, Johnson does not state that stray voltage occurred at CVD's farms because of "degradation of the utility neutral due to stretching, corrosion, line breaks, splices, and loose connections." GCCEA submitted evidence that it checked the neutral lines and connections and "found nothing." CVD has not contradicted that evidence.

Neubauer's expert report similarly shows that CVD's claims are based on evidence that GCCEA did not install the correct equipment, not that GCCEA did not properly maintain, operate, or inspect its equipment. Neubauer opines generally that "high levels of primary neutral current emanating" from GCCEA's electric-distribution system accessed CVD's grounding system through its transformer, causing "high levels" of stray voltage at CVD's farms. Neubauer further states that "GCCEA's substation feeder servicing Clay View Dairy has almost continuously been significantly imbalanced since the substation was rebuilt in late 2012/early 2013, which coincides with the onset of electrical problems." Neubauer, like Johnson, attributes stray voltage to GCCEA's failure to balance its lines.

But Neubauer does not explain why imbalanced lines can be attributed to negligent maintenance, operation, or inspection.

It is apparent from CVD's evidence that it seeks to prove that the load imbalances identified in Johnson's expert report were caused by the design and construction of GCCEA's electric-distribution system. Stray-voltage problems arose after CVD built two new barns at the Goodhue farm in 2011 and 2012. CVD's expansion required the installation of new electrical equipment, such as a 300-kVA transformer. To resolve its stray-voltage issue, CVD asked GCCEA in early 2016 to make changes to its electric-distribution system by installing additional equipment—namely, an isolator and an isolation transformer—and by replacing a single-phase line with a three-phase line. CVD and GCCEA entered into a written agreement entitled "Redesign of the Distribution System and Testing." Pursuant to the agreement, GCCEA replaced or rerouted a single-phase line at both the Goodhue and Dennison farms. GCCEA also installed a 500-kVA special-order transformer at the Goodhue farm. CVD has stated in an interrogatory answer that it "noticed a difference in the cows' behavior, production and health once [GCCEA] replaced their defective transformer with the appropriate transformer effectively isolating the farm from harmful current from the primary system."

Thus, CVD does not have any evidence that GCCEA was negligent in maintaining, operating, or inspecting its electric-distribution system. Rather, CVD's evidence is capable of proving only that GCCEA was negligent by designing and installing an electric-distribution system that caused stray voltage. Such a claim is within the scope of

subdivision 1(a) of section 541.051 because it is a claim arising out of the defective and unsafe condition of an improvement to real property.

This case is similar to *Aquila*, in which the plaintiff made broad allegations in its complaint but, in summary-judgment proceedings, did not submit evidence to support its allegations. 718 N.W.2d at 887-88. The supreme court noted that a party opposing a summary-judgment motion "cannot preserve a right to trial on the merits merely by referring to unverified or conclusory allegations in the pleadings." *Id.* at 886 (quotation omitted). Consequently, the supreme court concluded that the plaintiff did not have sufficient evidence of negligent maintenance, operation, or inspection so as to trigger the exception in subdivision 1(d) to the general rule in subdivision 1(a). *Id.* at 885-88.

This case is unlike *Siewert v. Northern States Power Co.*, 793 N.W.2d 272 (Minn. 2011), in which the supreme court concluded that summary judgment was improper because the plaintiffs had sufficiently claimed negligent maintenance, operation, and inspection. *Id.* at 286-88. The supreme court made clear that the plaintiffs' claims were *not* based on "any particular defect relating to the system itself" but, rather, on "the way in which [the defendant] allegedly improperly operated the system" and the defendant's "role in maintaining and operating the multi-grounded system." *Id.* at 288. In short, *Siewert* is factually distinguishable.

Thus, the district court erred by applying a six-year statute of limitations instead of the two-year statute of limitations in section 541.051, subdivision 1(a).

Given a two-year statute of limitations, CVD's claims against GCCEA are time-barred. "The two-year limitations period under Minn. Stat. § 541.051 begins to run when

an actionable injury is discovered, or with due diligence, should have been discovered, regardless of whether the precise nature of the defect causing the injury is known." *Nolan & Nolan v. City of Eagan*, 673 N.W.2d 487, 497 (Minn. App. 2003) (quotation omitted), *rev. denied* (Minn. Mar. 16, 2004). CVD discovered its injury no later than January 2016, when Neubauer, CVD's electrician, conducted stray-voltage tests at the two farms. Later that month, CVD's attorney wrote to GCCEA to request changes to GCCEA's electric-distribution system. CVD commenced this action in March 2018, approximately two months after the two-year statute of limitations had lapsed.

B.

The district court reasoned in the alternative that CVD's claims against GCCEA are not untimely because of the continuing-tort doctrine, also known as the continuing-violations doctrine. The district court explained its reasoning as follows:

> Further, assuming Plaintiffs' facts as true, Plaintiffs' herd continued to be shocked on an ongoing basis. Minnesota has long recognized the continuing tort doctrine, which tolls the statute of limitations where there is a continuing negligence or trespass. *See Dalton*, 158 N.W.2d at 584; *Northern States Power v. Franklin*, 122 N.W.2d 26, 31 (Minn. 1963). When the continuing tort doctrine is applied, the final act is used to determine when the statute of limitations begins to run for the entire course of conduct. *Sigurdson v. Isanti County*, 448 N.W.2d 62, 66 (Minn. 1989). Therefore, assuming Plaintiffs' facts as true, the six-year statute of limitations began running in 2016 and summary judgment based on the statute of limitations is inappropriate.

GCCEA argues that the district court erred on the ground that the continuing-tort doctrine does not apply to this type of case. The supreme court recently observed that it has applied the continuing-tort doctrine in only "two contexts": a claim of a continuing

trespass and an employment-discrimination claim under the Minnesota Human Rights Act. *Ringsred v. City of Duluth*, 995 N.W.2d 146, 152-53 (Minn. 2023) (citing *Northern States Power Co. v. Franklin*, 122 N.W.2d 26, 30-31 (Minn. 1963), and *Abel v. Abbott Northwestern Hosp.*, 947 N.W.2d 58, 71 (Minn. 2020)). This court typically has declined to apply the continuing-tort doctrine in contexts other than the two identified by the supreme court. *See, e.g.*, *Wenigar v. Johnson*, 712 N.W.2d 190, 209 (Minn. App. 2006) (intentional infliction of emotional distress); *Lecy v. Burlington N. & Santa Fe Ry. Co.*, 663 N.W.2d 589, 594 (Minn. App. 2003) (Federal Employers' Liability Act); *Davies v. West Publ'g Co.*, 622 N.W.2d 836, 841-42 (Minn. App. 2001) (breach of fiduciary duty), *rev. denied* (Minn. May 29, 2001); *Francis v. Hansing*, 449 N.W.2d 479, 782 (Minn. App. 1989) (medical malpractice), *rev. denied* (Minn. Feb. 21, 1990); *cf. Lewison v. Hutchinson*, 929 N.W.2d 444, 449-51 (Minn. App. 2019) (applying doctrine to claim of dissemination of non-compliant campaign material).

More specifically, we previously have concluded (in a non-precedential but persuasive opinion) that the continuing-tort doctrine does not apply to a claim arising under the two-year statute of limitations in section 541.051, subdivision 1(a). *Geary v. Miller*, No. A08-1216, 2009 WL 1515505, at *3 (Minn. App. June 2, 2009), *rev. denied* (Minn. Aug. 11, 2009); *see also Minch Family LLLP v. Estate of Norby*, 652 F.3d 851, 859 (8th Cir. 2011) (following *Geary*). We reasoned in *Geary* that "the statute has specifically delineated exceptions to the time bars" such that "[i]t would not be reasonable to infer" an additional exception. 2009 WL 1515505, at *3. To apply the continuing-tort doctrine in this case would contradict the statutory provision that, in applying the two-year statute of

limitations to an action for injury to real or personal property (including a herd of dairy cows), "a cause of action accrues upon discovery of the injury." Minn. Stat. § 541.051, subd. 1(c).

Moreover, the supreme court has stated that the continuing-tort doctrine applies only if "a pattern of conduct constitutes a sufficiently integrated pattern to form, in effect, a single act." *Ringsred*, 995 N.W.2d at 152 (quotation omitted). "A mere continuing *effect* . . . will not extend the limitations period." *Franklin v. Evans*, 992 N.W.2d 379, 387 (Minn. 2023) (quotation omitted). As stated above, CVD's claims against GCCEA are based on the design and installation of an electric-distribution system between 2011 and early 2013, not on a continuing pattern of conduct. For all these reasons, the continuing-tort doctrine does not apply in this case.

Thus, the district court erred by denying GCCEA's summary-judgment motion to the extent that GCCEA argued that CVD's claims are barred by a two-year statute of limitations. In light of that conclusion, we need not consider GCCEA's other arguments for summary judgment. Likewise, we need not consider GCCEA's argument that the district court erred by *sua sponte* dismissing its cross-claims against the net-wrap defendants because GCCEA sought contribution and indemnification from the net-wrap defendants only if CVD's claims against GCCEA were successful.

II. Grant of Motion to Exclude CVD's Expert Evidence

We next consider CVD's argument that the district court erred by granting the net-wrap defendants' motion to exclude its expert evidence.

CVD seeks damages of $9,613,587, most of which is attributable to decreased milk production. CVD does not seek to prove damages on a cow-by-cow basis. Rather, CVD seeks to prove that both stray voltage and its cows' ingestion of plastic net wrap caused herd-wide injuries that resulted in lower milk production by all dairy cows.

Two of CVD's veterinary experts, Brian Gerloff, D.V.M, Ph.D., and Christopher Chase, D.V.M., Ph.D., conducted differential-diagnosis analyses and concluded that both stray voltage and net wrap contributed to the dairy herd's health problems and decreased milk production. In his expert report, Dr. Gerloff opines that net-wrap ingestion by CVD's heifers "exacerbate[d] negative health and disease problems in the herd and contribut[ed] to the elevated death and cull rates experienced." In his rebuttal report, Dr. Gerloff states that it is a "basic and obvious fact that consuming plastic is harmful to animals" and cites an academic article concerning net wrap consumed by beef cattle. Dr. Gerloff notes that "[d]airy cow anatomy is complex" and that determining the cause of their health-related conditions can be "uncertain." Notably, Dr. Gerloff's report does not cite any studies concerning the ingestion of plastic by dairy cows. Similarly, Dr. Chase opines that stray voltage and net-wrap ingestion "have worked together to significantly disrupt proper immune function" and are a "cause of loss of milk production, decreased herd health, increased mastitis, increased somatic cell counts, and increased culls for slaughter." Dr. Chase does not cite any source for his opinion that the ingestion of plastic causes decreased milk production in dairy cows.

The applicable rule of evidence states as follows:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise. The opinion must have foundational reliability. In addition, if the opinion or evidence involves novel scientific theory, the proponent must establish that the underlying scientific evidence is generally accepted in the relevant scientific community.

Minn. R. Evid. 702.

In light of this rule, expert evidence is admissible only if the proponent of the evidence satisfies a four-part test: "(1) The witness must qualify as an expert; (2) the expert's opinion must have foundational reliability; (3) the expert testimony must be helpful to the trier of fact; and (4) if the testimony involves a novel scientific theory, it must satisfy the *Frye-Mack* standard." *Doe 76C v. Archdiocese of St. Paul & Minneapolis*, 817 N.W.2d 150, 164 (Minn. 2012). As the supreme court has explained,

> All expert testimony must satisfy the first three parts of the Rule 702 test. It is only when the proponent offers "novel" "scientific" evidence that the fourth part of the test, the *Frye-Mack* standard, applies. When the *Frye-Mack* standard applies, it requires the proponent of novel scientific evidence to show that the evidence meets two additional requirements. First, the proponent of novel scientific evidence must prove that the science is generally accepted in the relevant scientific community. Second, the particular scientific evidence in each case must be shown to have foundational reliability. Under the *Frye-Mack* standard, foundational reliability requires the proponent of a . . . test to establish that the test itself is reliable and that its administration in the particular instance conformed to the procedure necessary to ensure reliability.

Id. at 164-65 (quotations and citations omitted).

In this case, the district court granted the net-wrap defendants' motion for multiple reasons. First, the district court determined that the scientific theories underlying CVD's expert evidence—that a dairy cow's ingestion of plastic causes a decrease in milk production—are novel. Second, the district court determined that the theories underlying CVD's expert evidence are not generally accepted in the relevant scientific community. Third, the district court determined that the particular scientific opinions in this case do not have foundational reliability. CVD challenges all three of these reasons. We need not consider CVD's arguments regarding novelty or general acceptance because our resolution of the issue of foundational reliability is dispositive.

A.

CVD argues that the district court erred by determining that the expert opinions offered by Dr. Chase and Dr. Gerloff lack foundational reliability.

"Foundational reliability is a concept that looks to the theories and methodologies used by an expert." *Kedrowski v. Lycoming Engines*, 933 N.W.2d 45, 56 (Minn. 2019). The party offering expert scientific evidence bears the burden of demonstrating the foundational reliability of the evidence. *Goeb v. Tharaldson*, 615 N.W.2d 800, 816 (Minn. 2000). A party does not satisfy its burden if "the opinion does not include the facts and/or data upon which the expert relied in forming the opinion, . . . it does not explain the basis for the opinion, or . . . the facts assumed by the expert in rendering an opinion are not supported by the evidence." *Mattick v. Hy-Vee Foods Stores*, 898 N.W.2d 616, 621 (Minn. 2017) (quotations omitted). Foundational reliability must be determined on a case-by-case basis. *Doe*, 817 N.W.2d at 167. We apply an abuse-of-discretion standard of review to a

district court's determination concerning foundational reliability. *Goeb*, 615 N.W.2d at 815.

The district court began its analysis of foundational reliability by reviewing simple data arising from the necropsies performed by CVD's expert Dr. Schefers and CVD's treating veterinarian, Dr. Nelson. The district court noted that, of the six cows necropsied by Dr. Schefers, only one had both net wrap in its digestive system and symptoms of poor health. The district also noted that, of the 131 cows necropsied by Dr. Nelson, fewer than 10 percent had both net wrap in their digestive systems and symptoms of poor health. The district court reasoned that the necropsy results could not be extrapolated to show "that the entire herd experienced adverse health effects from net wrap consumption."

The district court continued its analysis of foundational reliability by reviewing the differential analyses conducted by Dr. Chase and Dr. Gerloff. Ordinarily, a differential diagnosis employs a process akin to elimination to arrive at a diagnosis for a cause of a particular condition. *See, e.g.*, *McDonough v. Allina Health Sys.*, 685 N.W.2d 688, 695 n.3 (Minn. App. 2004). In this case, the differential analyses conducted by Dr. Chase and Dr. Gerloff "narrowed the field to two potential causes": stray voltage and the ingestion of plastic net wrap. The district court commented that "this differential diagnosis is not particularly informative for the purposes of linking net wrap consumption with decreased milk production." The district court stated that CVD's experts had provided "no substantive authority on actual harm to dairy cows stemming from [net-wrap] ingestion."

On appeal, CVD does not challenge the district court's analysis of the data arising from the necropsies performed by Dr. Schefers and Dr. Nelson. That portion of the district

court's analysis is logical and not erroneous in any way. CVD contends only that the district court erred by rejecting its experts' differential diagnoses. CVD cites *Kedrowski* for the broad principle that differential diagnoses are reliable. We do not doubt that a differential diagnosis may, in certain circumstances, establish foundational reliability. But, as stated above, foundational reliability must be determined on a case-by-case basis. *Doe*, 817 N.W.2d at 167.

In this case, Dr. Gerloff described a differential diagnosis as "a standard scientific technique of identifying the cause of a medical problem by eliminating the likely causes until the most probable *one* is isolated" and stated that the process "involves an investigation to determine all the potential causes of animal's symptoms and then eliminating the possible causes until reaching *one* that cannot be ruled out or determining *which of those that cannot be excluded is the most likely*." (Emphasis added.) But neither Dr. Chase nor Dr. Gerloff were able to isolate only one cause of harm to CVD's herd, nor were they able to conclude that either stray voltage or net wrap consumption was the more likely cause of CVD's harm. Dr. Gerloff states that "consuming plastic is harmful to animals," but he does not expressly state that net-wrap consumption by dairy cows leads to a decrease in milk production. Dr. Chase opined that CVD's herd experienced a variety of symptoms that were "causally related to stray voltage exposure *and/or* ingestion of plastic," including "loss of milk production." (Emphasis added.) Given what CVD seeks to prove, CVD's experts' differential diagnoses do not satisfy the foundational-reliability test because they cannot prove that CVD's decreased milk production was caused by a singular reason that would allow CVD to prove its case against the net-wrap defendants:

the ingestion of net wrap. *See McDonough*, 685 N.W.2d at 695-98 (concluding that expert's differential diagnosis lacked foundational reliability because it "did not rule out all other hypotheses, or at least explain why the other conceivable causes are excludable" and, thus, was "not sufficiently reliable to be used for the purpose of proving causation").

The district court's analysis of Dr. Chase's and Dr. Gerloff's differential diagnoses is supported by the record. Accordingly, the district court did not abuse its discretion by determining that CVD's experts' opinions lack foundational reliability.

B.

CVD also contends that the district court erred by not conducting an evidentiary hearing before excluding its expert evidence.

The district court addressed CVD's request for an evidentiary hearing in its order. The district court stated that it had reviewed the parties' submissions and had held a hearing at which the parties presented oral arguments. The district court noted that the net-wrap defendants had not requested an evidentiary hearing and that it had given the same weight to CVD's experts' reports and affidavits that it would give to sworn testimony. For those reasons, the district court determined that an evidentiary hearing was unnecessary.

CVD cites *State v. Roman Nose*, 649 N.W.2d 815 (Minn. 2002), in support of its argument. In that case, a criminal case, the district court conducted a pre-trial evidentiary hearing concerning the foundational reliability of a particular DNA testing method but not the general acceptance of the testing method in the relevant scientific community. *Id.* at 818. The district court admitted the expert evidence. *Id.* On appeal, the supreme court concluded that the district court erred by not holding an evidentiary hearing on the issue of

general acceptance and remanded the case to the district court for such a hearing. *Id.* at 818-23. In an opinion issued after *Roman Nose*, the supreme court clarified that an evidentiary hearing on the issue of foundational reliability is sometimes required but not required in every case. *State v. Berry*, 982 N.W.2d 746, 756 n.6 (Minn. 2022).

In this case, the district court conducted a motion hearing but not an evidentiary hearing. At oral argument before this court, CVD conceded that the district court was not required to conduct an evidentiary hearing on the issue of foundational reliability. Consequently, CVD's argument is that the district court erred by not conducting an evidentiary hearing on the issue of general acceptance. But we have concluded that CVD's expert evidence is inadmissible because foundational reliability is lacking. *See supra* part II.A. That conclusion is a sufficient and independent basis for affirming the district court's grant of the net-wrap defendants' motion. Accordingly, it is irrelevant whether the district court was required to conduct an evidentiary hearing on the issue of general acceptance. Any such error would be a harmless error because the resolution of CVD's appeal does not depend on the issue of general acceptance. *See State v. Garland*, 942 N.W.2d 732, 740-41 (Minn. 2020) (concluding that district court's error in not conducting evidentiary hearing on appellant's motion to exclude expert evidence was harmless error).

C.

CVD last argues that, after determining that its expert evidence is inadmissible, the district court erred by dismissing its claims against the net-wrap defendants. CVD does not challenge the premise that it needs expert evidence to prove its claims against the net-wrap defendants and that, if it has no expert evidence, its claims against the net-wrap

defendants must be dismissed. *See Gross v. Victoria Station Farms, Inc.*, 578 N.W.2d 757, 762 (Minn. 1998); *In re 3M Bair Hugger Litig.*, 924 N.W.2d 16, 24 (Minn. App. 2019), *rev. denied* (Minn. Mar. 27, 2019). CVD's argument is that the district court erred by dismissing its claims against the net-wrap defendants without considering whether CVD could rely on GCCEA's net-wrap expert, John Ryder, D.V.M., whose expert opinion was not challenged by the net-wrap defendants' motion. In response, the net-wrap defendants argue that CVD could not satisfy its burden of proof in its case-in-chief and, accordingly, could not withstand a mid-trial motion for judgment as a matter of law. *See* Minn. R. Civ. P. 50.01.

We assume that CVD would not call Dr. Ryder in its case-in-chief because CVD did not disclose him as one of its expert witnesses. In addition, we may not consider Dr. Ryder's expert opinion because the district court excluded "*any* expert witnesses concerning the impact of net wrap consumption on the health and milk production" of CVD's herd. (Emphasis added.) GCCEA challenged the scope of the district court's ruling in its principal brief, but we need not consider that argument because we have concluded that CVD's claims against GCCEA are time-barred, which means that GCCEA no longer is a defendant in the case. *See supra* part I. CVD has not argued on appeal that Dr. Ryder's expert opinion has foundational reliability. Accordingly, the district court did not err by ruling that CVD has no expert evidence to prove its claims against the net-wrap defendants.

Thus, the district court did not err by granting the net-wrap defendants' motion to exclude CVD's expert evidence and by dismissing CVD's claims against the net-wrap defendants.

Affirmed in part and reversed in part.