

Using *Daubert*, if you can, to challenge the admissibility of “junk science” in stray voltage cases.



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What is *Daubert*?

- The United States Supreme Court has established the *Daubert* rule defining the court's gate keeping role of determining the admissibility of expert testimony in federal courts. *Daubert v. Merrill Dow Pharmaceutical, Inc.*, 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993).
- The policy rationale of *Daubert*.



Daubert's seven non-exclusive factors:

- Whether the theory can be (and has been) tested -- that is, whether the expert's theory can be challenged in some objective sense, or whether it is instead simply a subjective, conclusory approach that cannot reasonably be assessed for reliability.
- Whether the theory has been subject to peer review and publication.
- Whether, in respect to a particular technique, there is a high known or potential rate of error and whether there are standards controlling the technique's operation.



Daubert's seven non-exclusive factors:

- Whether the theory enjoys general acceptance within the relevant scientific community.
- Whether the expert's research is litigation-driven.
- Whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion.
- Whether the witness has adequately accounted for obvious alternative explanations.



Focus on general causation, “fit,” and specific causation.

- Is the level of voltage on the farm, and the exposure, capable of causing the specific harms alleged?
- Have other potential causes of the alleged harms been accounted for, ruled out—“differential diagnosis.”



“First, the level of exposure of plaintiff to the toxin in question must be determined; second, from a review of the scientific literature, it must be established that the toxin is capable of producing plaintiff's illness--called ‘general causation’—and the dose/response relationship between the toxin and the illness--that is, the level of exposure which will produce such an illness--must be ascertained; and third, ‘specific causation’ must be established by demonstrating the probability that the toxin caused this particular plaintiff's illness, which involves weighing the possibility of other causes of the illness—a so-called “differential diagnosis.”

Mancuso v. Consolidated Edison Co. of N.Y., 56 F. Supp. 2d 391, 399 (S.D.N.Y. 1999) *rev'd on other grounds*, 216 F.3d 1072 (CA. 2, 2000)(relying on the World Health Organization, the National Academy of Sciences and the *Reference Manual on Scientific Evidence*).



“‘Dose makes the poison’ and ... all chemical agents, including water, are harmful if consumed in large quantities, while even the most toxic substances are harmless in minute quantities.” *Mancuso*, 56 F. Supp. 2d at 403.



Test every step in the process or methodology used in reaching the opinion.

- “Any step that renders the analysis unreliable . . . renders the expert's testimony inadmissible. This is true whether the step completely changes a reliable methodology or merely misapplies that methodology.” *In re Paoli RR Yard PCB Litig.*, 35 F.3d 717, 745 (CA. 3, 1994).
- Test the reliability of the data underlying the opinion.



Preparation for the *Daubert* hearing should start when the case is filed.

- Put Court on notice early.
- Select appropriate defense experts.
- Counsel must know and understand the research.



Daubert must be focus of discovery.

- Precisely define the alleged stray voltage behavior and damages.
- Precisely define farm electrical situation and focus on cow contact exposures, specifics of measurements.
- Identify (pin down) plaintiffs':
 - General causation witnesses.
 - Specific causation witnesses.
- Define and exhaust opinions and grounds for opinions of plaintiffs' general causation, specific causation, electrical measurement, and perhaps damages witnesses.



File the motion for *Daubert* hearing early,
but after the depositions of plaintiffs'
experts if you can.

- Educate the court about *Daubert*, state law.
- Persuade court that *Daubert* hearing is necessary.



The *Daubert* hearing—
putting it all together.



Rules of the game:

- Proponent of the evidence (Plaintiff) has burden of proof.
- But the moving party (Defendant) should go first.
- The Rules of Evidence are not applicable.



Culmination of the work:

- Roadmap of recent stray voltage *Daubert* hearing in Michigan.



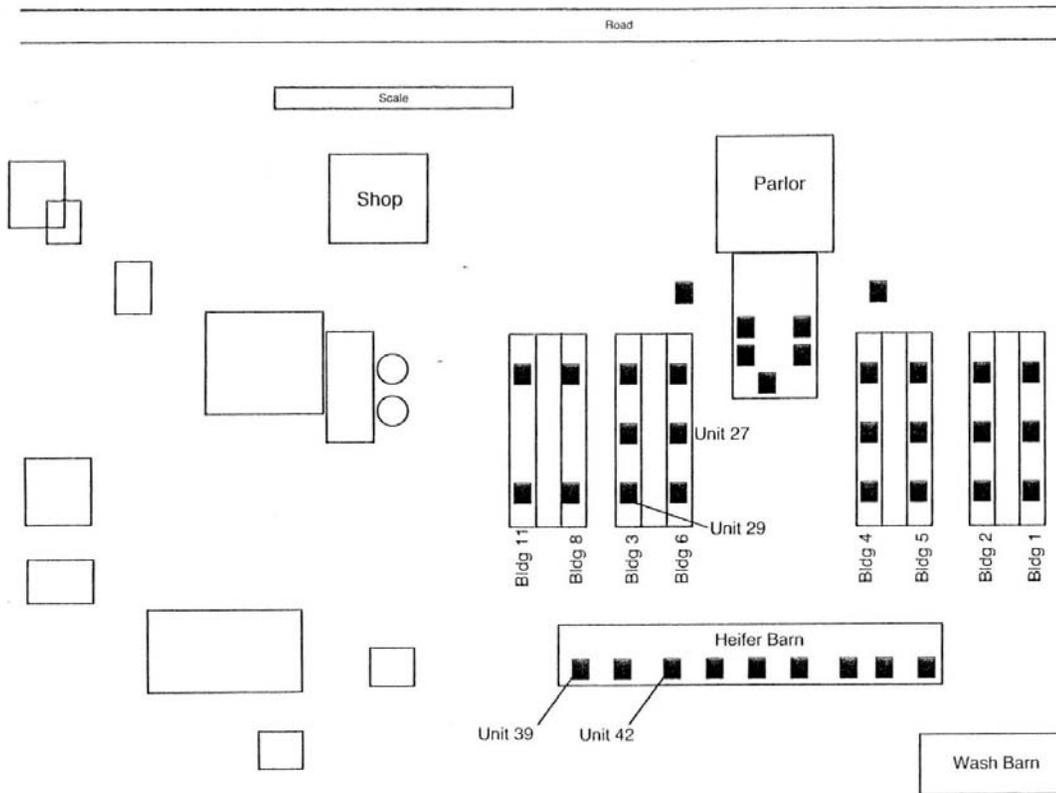
Explain stray voltage and key terms, *e.g.*:

- Voltage v. current.
- Steady state v. momentaries, Transients.
- RMS v. peak.
- Resistance and resistors
- Cow contact.



Precisely define the stray voltage exposure, and make reference to it thereafter.





Schaendorf Farm / Consumers Energy
Stray Electricity Investigation
Watering Unit Locator
DRAWING NUMBER: **PL-A-05J- E10**

Phasor Labs *cforster@phasorlabs.com*

Revised August 21, 2006



Explain scientific requirements for concluding cause/effect relationship—the rules of science, *e.g.*:

- Controlled research
- Statistical significance
- Repeatability
- Anecdotal evidence
- Survey evidence



Explain what the valid science shows is required for stray voltage to cause harm:

- Review history of the research
- Perception/behavioral v. measurable adverse effects
- Magnitude and duration of events
- Forced exposure/frequency of exposure.



Identify plaintiffs' experts' general causation opinions:

- What levels, duration, exposures cause harm?
- What harms caused?



Contrast plaintiffs' experts' opinions with the recognized science ("Fit").

- Apply *Daubert* criteria
- Lack of general acceptance
- Lack of peer review publication
- Unjustified extrapolation
- Ignore dose/response effect
- "Cherry picking" from the published research
- Reliance on anecdotal evidence and "field studies"
- Unjustified assumptions
- Failure to follow scientific method



Conclusion general causation—apply the scientific knowledge to facts of the case



Specific causation:

- Identify plaintiffs' experts' specific causation opinions—how they say stray voltage damaged the cows



Explain proper method of differential diagnosis.

- First identify problems versus non-problems
- Identify known causes of identified problems per standard references. (Note: Stray voltage generally is not on the list)
- Rank probability of known causes of identified problems
- Rule in/Rule out
- Confirmatory testing



Explain how Plaintiffs' experts did not follow proper differential diagnosis methodology



Explain results of proper differential diagnosis
— known reasons for actual performance of
COWS



Cross-examination of Plaintiffs' experts:

- General causation
- Specific causation
- Elicit *Daubert* admissions per deposition



Post-hearing briefing



Daubert in Michigan:

- History
- Recent Sea change in the law



M.C.L.A. 600.2955(1)(1995):

- In an action for . . . injury to a person or property, a scientific opinion rendered by an otherwise qualified expert is not admissible unless the court determines that the opinion is reliable and will assist the trier of fact. In making that determination, the court shall examine the opinion and the basis for the opinion, which basis includes the facts, technique, methodology, and reasoning relied on by the expert, and shall consider all of the following factors:



- (a) Whether the opinion and its basis have been subjected to scientific testing and replication.
- (b) Whether the opinion and its basis have been subjected to peer review publication.
- (c) The existence and maintenance of generally accepted standards governing the application and interpretation of a methodology or technique and whether the opinion and its basis are consistent with those standards.
- (d) The known or potential error rate of the opinion and its basis.



- (e) The degree to which the opinion and its basis are generally accepted within the relevant expert community. As used in this subdivision, 'relevant expert community' means individuals who are knowledgeable in the field of study and are gainfully employed applying that knowledge on the free market.
- (f) Whether the basis for the opinion is reliable and whether experts in that field would rely on the same basis to reach the type of opinion being proffered.
- (g) Whether the opinion or methodology is relied upon by experts outside of the context of litigation.



Revised M.R.E. 702, effective January 1, 2004:

- If the court determines that 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 if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the fact of the case.



Gilbert v. Daimler Chrysler Corp.,
470 Mich. 749, 781 (2004).

- “M.R.E. 702 has since been amended explicitly to incorporate *Daubert’s* standards of reliability.”



- “While we are not bound by [federal case law], we find it highly persuasive given our Supreme Court’s recognition of the applicability of *Daubert*.”

Scott v. Secura Ins., unpublished opinion per curiam of the Court of Appeals, decided July 20, 2006, 2006 WL 2035626, at *2.



- “While the exercise of the gate keeper role is within a court’s discretion, a trial judge may neither ‘abandon’ this obligation nor perform the function inadequately.”

Gilbert, citing federal *Daubert* case, *Khumo Tire* (1999).



- “I don’t really need to hear argument on the *Daubert* issue of whether or not you should have an evidentiary hearing on the foundational issues. I think you’re entitled to it without question.”

Judge Corsiglia at hearing on Motion asking for pre-trial *Daubert* hearing, February 23, 2006.



Daubert in other states:

- Wisconsin
- Iowa
- Minnesota
- North Dakota
- South Dakota



Wisconsin—fertile breeding ground for “junk science” and its advocates.



Three unpublished Court of Appeals stray voltage cases flatly reject *Daubert* or anything like *Daubert*.

- *Senn v. Buffalo Electric Cooperative*, 539 N.W.2d 135 (Wis. Ct. App. 1995).
- *D. S. Farms v. Northern States Power Company*, 539 N.W.2d 336 (Wis. Ct. App. 1995).
- *Muth v. Wisconsin Electric Power Company*, 715 N.W.2d 240 (Wis. Ct. App. 2006).



Let the jury sort it out.

- “The rule remains in Wisconsin that the admissibility of scientific evidence is not conditioned upon its reliability.” *D. S. Farms* at ***5.
- “Once the relevancy of the evidence is established and the witness is qualified as an expert, the reliability of the evidence is a weight and credibility issue for the fact finder and any reliability challenges must be made through cross-examination or by other means of impeachment.” *State v. Peters*, 534 N.W.2d 867, 873 (Wis. Ct. App. 1995).



Iowa—No reliability standard.

- *Martins v. Interstate Power Co.*, 2002 WL 534890 (Iowa Ct. App. 2002).
- “The analysis set forth in *Daubert* . . . is not required to be applied by the trial court when considering the admissibility of testimony of an expert” 2002 WL 534890, at *7.



North Dakota—No reliability standard



Minnesota has explicitly rejected *Daubert*.

- *No stray voltage appellate cases.*
- *Goeb v. Tharaldson*, 615 N.W.2d 800 (Minn. 2000).
- *State v. Traylor*, 656 N.W.2d 885 (2003).



Minnesota uses the Frye-Mack standard for the admissibility of scientific evidence.

- The technique (test) must be shown to be “generally accepted” as producing reliable results.
- And it must be shown the tests were actually conducted under appropriate standards and controls.
- Problem—applies only to “novel” scientific techniques.



South Dakota—ahead of the *Daubert* curve.

- Adopted the *Daubert* standard in 1994. *State v. Hofer*, 512 N.W.2d 482 (S.D. 1994).
- Applied *Daubert* to remand a stray voltage case to the trial court to determine whether Plaintiffs' experts' causation opinions were reliable.



Conclusions.

- *Daubert* can be a powerful, case-ending tool in stray voltage cases.
- If your state has not adopted *Daubert*, talk to your legislators.

