

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF INDIANA  
INDIANAPOLIS DIVISION

U.S. AUTOMATIC SPRINKLER, CO.,	)	
	)	
Plaintiff,	)	
	)	1:07-cv-00944-SEB-TAB
vs.	)	
	)	
THE RELIABLE AUTOMATIC	)	
SPRINKLER CO., and FERGUSON FIRE	)	
& FABRICATION, INC., f/k/a THE	)	
CLARK GROUP, INC.	)	
	)	
Defendants.	)	

**ORDER ADDRESSING MOTIONS TO EXCLUDE**

This cause is before the Court on Defendant, The Reliable Automatic Sprinkler Company’s (“Reliable”), Motion to Exclude Testimony of George Langford, Ph.D [Docket No. 104], filed on July 10, 2009; Defendant Ferguson Fire & Fabrication, Inc.’s (“Ferguson”) Motion to Exclude Testimony of Dr. George Langford for Trial [Docket No. 106], filed on July 10, 2009; and Ferguson’s Motion to Exclude Testimony of Dr. George Langford for Summary Judgment [Docket No. 113], filed on July 20, 2009.

Although filed separately, each of these motions seeks substantially the same result: the exclusion of Plaintiff’s proffered expert testimony, on both admissibility and procedural grounds. For the reasons detailed in this entry, these motions are GRANTED in part and DENIED in part.

## *Background*

Plaintiff U.S. Automatic Sprinkler, Co. (“USAS”) installed a sprinkler system at a project in Greenwood, Indiana (“Greenwood Project”) using sprinkler heads manufactured by and purchased from Reliable, as well as “female” weld-o-lets purchased from Ferguson. After this installation had been completed, leaks began to occur. Although these leaks were promptly fixed, soon thereafter leaks began to occur with increasing regularity. Eventually, USAS was forced to undo and reinstall each sprinkler head, a process that included the replacement of the original sealant with a more expensive sealant.

Because of the high costs incurred in connection with resolving this problem, USAS hired Dr. George Langford to test the sprinkler heads and weld-o-lets USAS had originally installed to determine whether, in his opinion, these products were correctly manufactured, and whether a defect in their manufacture was the possible proximate cause of the leaks that occurred at the Greenwood Project. With regard to the Reliable sprinkler heads, Dr. Langford concluded that, in some cases, the heads incorporated what he referred to as “drunken threads,” which is a variation in the helix angle of the threads. He also determined that some of the weld-o-lets were “out-of-round,” a physical irregularity that can affect the performance of the threads during installation.

Dr. Langford’s conclusion, which Plaintiff proffered in its summary judgment briefing and intends to offer at trial, was that the leaking at the Greenwood Project occurred during installation and was caused by this combination of mechanical

irregularities. According to Dr. Langford, when the “drunken” sprinkler heads were mated with the “out-of-round” weld-o-lets, gaps occurred that created the potential for the type of leaking experienced at the project.

### *Discussion*

Defendants seek to exclude the expert testimony of Dr. Langford. The admissibility of expert testimony is governed by the framework set out in Federal Rule of Evidence 702 and Daubert v. Merrell Dow Pharms. Inc., 509 U.S. 579 (1993). Applying this framework, courts must undertake:

a three-step analysis: the witness must be qualified “as an expert by knowledge, skill, experience, training, or education”; the expert’s reasoning or methodology underlying the testimony must be scientifically reliable; and the testimony must assist the trier of fact to understand the evidence or determine a fact in issue.

Ervin v. Johnson & Johnson, Inc., 492 F.3d 901, 904 (7th Cir. 2007) (quoting Fed.R.Evid. 702); see also Kumhoe Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 141 (1999) (extending the Daubert admissibility framework to expert testimony in the social sciences). “The Daubert standard applies to all expert testimony, whether it relates to an area of traditional scientific competence or whether it is founded on engineering principles or other technical or specialized expertise.” Smith v. Ford Motor Co., 215 F.3d 713, 719 (7th Cir. 2000) (citing Kumho, 536 U.S. at 141).

*I. Dr. Langford's Qualifications*

We begin by examining Dr. Langford's expertise to determine whether he is qualified to perform the calculations and arrive at the conclusions contained in his report. "A court should consider a proposed expert's full range of practical experience as well as academic or technical training when determining whether that expert is qualified to render an opinion in a given area." Smith, 215 F.3d at 718. The "scientific knowledge" contemplated by Daubert "connotes more than subjective belief or unsupported speculation." Porter v. Whitehall Labs., Inc., 9 F.3d 607, 613-14 (7th Cir. 1993). To suffice, the proffered expert's knowledge must have "a grounding in the methods and procedures of science." Daubert, 509 U.S. at 590.

Defendants do not substantially challenge Dr. Langford's qualifications to testify as to this opinion. Dr. Langford possesses an undergraduate degree in metallurgy from the Massachusetts Institute of Technology and a Doctor of Science degree also from MIT. He has more than thirty-five years of experience as a metallurgist and has investigated hundreds of material-related problems in the areas of corrosion, mechanical and dimensional analysis, physical, mechanical, and chemical metallurgy, microstructural analysis, and optical and electron microscopy. He has consulted and testified in more than fifty cases involving insurance claims in the fire sprinkler industry. Dep. Of Langford at 8, 75. Based on this experience and knowledge, we find that Dr. Langford is fully qualified to testify as an expert on the issues presented in this case.

## ***II. The Reliability and Helpfulness of Dr. Langford's Testimony***

Even a “supremely qualified expert cannot waltz into the courtroom and render opinions unless those opinions are based on some recognized scientific method and are reliable and relevant under the test set forth by the Supreme Court in Daubert.” Clark v. Takata Corp., 192 F.3d 750, 759 n.5 (7th Cir. 1999). The testimony of a “well credentialed expert who employs an undisclosed methodology” or who offers opinions lacking “analytically sound bases” must be excluded. Tuf Racing Products, Inc. v. American Suzuki Motor Corp., 223 F.3d 585, 591 (7th Cir. 2000). Thus, although the Court’s role does not include an assessment of the credibility or persuasiveness of the proffered testimony, which factual issues are left for the jury to determine, Deputy v. Lehman Brother’s, Inc., 345 F.3d 494, 506 (7th Cir. 2003), the Court, “in its role as a gate-keeper,” must nonetheless determine if Dr. Langford’s opinions are based on reliable methodology, and whether they would be helpful to a jury. Winters v. Fru-Con, Inc., 498 F.3d 734, 743 (7th Cir. 2007).

Defendants challenge Dr. Langford’s methodology on the following grounds:

- (1) that he did not properly “test” his method;
- (2) that he sampled too few outlets to form a reasonably accurate opinion;
- (3) that his measuring methods were novel and unproven;
- (4) that his measuring equipment was tainted;
- (5) that he engaged in speculation rather than calculation at more than one juncture in his analysis; and
- (6) that his testimony is, at certain points, internally contradictory.

Defendants’ briefing, which is extensive, mounts numerous cogent and robust challenges to the accuracy and worthiness of Dr. Langford’s

methodology and conclusions. Among other specific challenges, Defendants point out that Dr. Langford made questionable assumptions,<sup>1</sup> failed to quantify numerous data that he collected,<sup>2</sup> failed to account for certain possible alternative explanations,<sup>3</sup> and failed to account for the different metallurgical properties of the components at issue.

Notwithstanding the force of these arguments, we find that by and large they go to the *weight* of the evidence Dr. Langford offers, rather than the admissibility of that evidence. “The trial court’s gatekeeper role . . . is not meant to supplant the adversary system, or the role of the jury: ‘[V]igorous 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.’ United States v. Grace, 455 F.Supp.2d 1148, 1153 (D. Mont. 2006) (quoting Daubert, 509 U.S. at 596). In essence, Defendants seek exclusion by subjecting Dr. Langford to a contest with the opinions offered by their expert and with hypothetical alternative methods and explanations for the facts presented in the case. This is not an appropriate approach to the Daubert inquiry.

Significantly, Dr. Langford subjected the evidence before him to multiple tests prior to arriving at the conclusions contained in his report. Whether the expert has

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<sup>1</sup> The most prominent of these is his assumption that the outlet threads were perfect when originally manufactured by a non-party. According to Defendants, making such an assumption is not appropriate.

<sup>2</sup> Specifically, Defendants contend that he failed to quantify the “drunkenness” and “out-of-roundness” of the allegedly faulty components as well as failed to statistically account for the role played by heat in the installation process.

<sup>3</sup> Here, Defendants detail at length the opposing theories offered by their expert.

subjected his theory to testing has been recognized as the most important reliability factor. Chapman v. Maytag Corp., 297 F.3d 682, 688 (7th Cir. 2002). In developing his testing methods, Dr. Langford clearly reviewed relevant studies related to similar experimentation undertaken by others in the field. Dep. of Langford at 142.<sup>4</sup> Furthermore, as part of the process he undertook to test the data, Dr. Langford employed various scientific controls, established an error rate, and repeatedly tested allegedly defective components to verify his results. Dep. of Langford at 51, 151, 155. Whether additional or alternative testing would undercut or support his testimony is a question of the weight to be given his conclusions, which shall be addressed at summary judgment or at trial. See Marvin Lumber v. PPG, 401 F.3d 901, 916 (8th Cir. 2005).

As acknowledged by Defendants' expert, the methodologies that Dr. Langford referenced in designing his method are accepted and recognized in the relevant scientific community. For all of these reasons, we conclude that Dr. Langford evaluated the data before him with a sufficiently reliable methodology to satisfy the standards outlined in Daubert.

We also find that Dr. Langford's testimony will assist the trier of fact. Dr. Langford was the only person, expert or otherwise, to conduct a detailed examination of

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<sup>4</sup>Dr. Langford documented his testing methods in detail, such that another expert with his notes at hand could replicate his work. Moreover, his methods reflected common approaches to problems such as those presented in this litigation. He took detailed measurements of the tapered threads in the sprinkler heads using tools such as a screw-cutting lathe with a taper attachment, dial indicators with a probe component, and a commercial data plotting program, all of which are commonly used in scientific measurements similar to those involved in the case at bar.

the sprinkler heads and weld-o-lets that are the subject of Plaintiff's claims in the case at bar. His expertise, coupled with his substantial personal knowledge, indicate that his proffered testimony will be helpful to the resolution of the factual issues at stake.

Dr. Langford's educational background, experience in conducting tests similar to those that formed the basis of his report, and the reliability of his method allow us to conclude with relatively little difficulty that his expert report and testimony are admissible under Daubert requirements. Defendants' extensive challenges to his methods are more appropriately adduced at the summary judgment phase of the proceedings; the Court will resolve those issues at that time. For all of the foregoing reasons, Defendants' motions to exclude, insofar as they relate to the standards set forth in Daubert and Rule 702, shall be denied.

### ***III. Dr. Langford's Newly Offered Affidavit***

Defendants also contend that Dr. Langford's recent affidavits (Docket Nos. 102-9, 103-9, 119-8, 120-8) contain conclusions and opinions that must be excluded because they were not contained within his original report and were filed outside the deadlines established by the Court. District courts are empowered with broad discretion to set and enforce deadlines, including those established for the disclosure of expert witness testimony. See, e.g., Bevolo v. Carter, 447 F.3d 979, 981 (7th Cir. 2006). According to Defendants, Dr. Langford's newly filed affidavits constitute an impermissible supplementation of Plaintiff's expert disclosures because those affidavits offer opinion

testimony that Plaintiff was required to disclose in the original expert report. Pursuant to Federal Rule of Civil Procedure 26(a), which governs the circumstances under which a party may offer such supplemental evidence, a party's right to file rebuttal and supplementary expert reports does not permissibly extend the disclosure deadlines or "give license to sandbag one's opponent with claims and issues which should have been included in the expert witness' report." In re Ready-Mixed Concrete Antitrust Litig., 261 F.R.D. 154, 159 (S.D. Ind. 2009).

Plaintiff rejoins that the late filing of these affidavits was justified because Defendants did not disclose that their expert would utilize the information upon which Dr. Langford's supplemental affidavits rely, referred to as the "ESI Report" as well as specific American National Standard Institute ("ANSI") standards. Plaintiff's argument is not, however, supported by the facts before the Court. From our review of the record, it is clear that Defendants discussed their use of this information in a timely fashion and placed Plaintiff on notice that this information would be used in the formulation of Defendants' expert evidence. Plaintiff and its expert were therefore responsible for being prepared to discuss the specific portions of the ANSI standards and the ESI Report in question. Plaintiff has provided no satisfactory reason for its failure to comply with the deadlines for the disclosure of expert witness testimony, as established by the Court's case management plan and Fed.R.Civ.P. 26. Permitting Plaintiff to sidestep its own error by now allowing Dr. Langford's additional, late-filed affidavits to be considered would unfairly prejudice Defendants. See Musser v. Gentiva Health Services, 356 F.3d 751, 757

(7th Cir. 2004). Accordingly, Defendants' motions are granted to this extent, and the subject affidavits shall be stricken.

**IV. Conclusion**

For the reasons detailed in this entry, Defendants' Motions to Exclude the Testimony of Dr. George Langford are GRANTED in part and DENIED in part.

IT IS SO ORDERED.

Date: 03/25/2010

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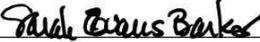
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