

**JUN 12 2000**

**PATRICK FISHER**  
Clerk

PUBLISH

**UNITED STATES COURT OF APPEALS**  
**TENTH CIRCUIT**

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RICHARD W. GOEBEL,

Plaintiff - Appellee,

vs.

No. 99-1143

DENVER AND RIO GRANDE  
WESTERN RAILROAD COMPANY,  
a Delaware corporation,

Defendant - Appellant.

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APPEAL FROM THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLORADO  
(D.C. No. 94-N-2206)

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Steven M. Weisbaum (and Lawrence M. Mann, Alper, Mann & Weisbaum,  
Washington, D.C. and Christopher B. Little, Montgomery, Little & McGrew,  
Englewood, Colorado, with him on the briefs), for Plaintiff - Appellee

James W. Erwin (and Thomas R. Jayne, Thompson, Coburn, St. Louis, Missouri,  
and Steven E. Napper, Union Pacific Railroad Co., Denver, Colorado, with him  
on the briefs), for Defendant - Appellant.

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Before **BALDOCK**, **KELLY**, and **BRISCOE**, Circuit Judges.

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**KELLY**, Circuit Judge.

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This case requires us to explore the gatekeeper function of the district

court in determining the admissibility of expert witnesses under Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). Appellant Denver and Rio Grande Western Railroad Company (hereinafter “Railroad”) argues that the district court erred in admitting the testimony of Dr. Daniel T. Teitelbaum, which purported to establish a causal link between Appellee Richard Goebel’s cognitive brain damage and exposure to diesel exhaust at high altitude. We reverse and remand for a new trial.

### Background

At the time of the incident giving rise to this case, Mr. Goebel was employed by the Railroad as a locomotive engineer. On January 5, 1994, he was instructed to operate two “helper” locomotives to help push a 5,900 foot long, nine locomotive train through the Moffat Tunnel (“Tunnel”) in Colorado. The Moffat Tunnel is 6.21 miles long and runs over the continental divide. At the West Portal, the Tunnel is 9,084 feet above sea level, rises to 9,239 feet at its apex, and then drops to 9,198 feet at the East Portal. The Tunnel is equipped with an automatic ventilation system designed to clear the diesel fumes and exhaust which accumulate with the passage of each train. There are also twenty-one numbered “refuges” in the tunnel – spaces where the walls have been widened to hold barrels containing emergency breathing equipment.

Mr. Goebel's helper units met up with the train late on the night of January 5 and were attached as the rear locomotives to assist in pushing through the Tunnel. Mr. Goebel was accompanied by Matthew Fletcher, a fireman/engineer. The train entered the Tunnel through the West Portal shortly after 1:00 a.m. on January 6, with all nine locomotives running full throttle in order to make it up the hill to the apex of the tunnel. At approximately 1:15 a.m., the train suddenly broke in half, the emergency brakes automatically applied, and the train came to a stop in the Tunnel.

Upon coming to a standstill, Mr. Goebel took a portable radio and left the cab to inspect the "helper" locomotives. The air in the tunnel was dark and smoky, but Mr. Goebel was able to determine that the locomotives were properly running in idle. He also noticed that the rear of the train had stopped near Refuge 5. Mr. Goebel went to the refuge to get the emergency breathing equipment, but was unable to get the barrel open. He returned to the locomotive cab after being outside between five to fifteen minutes. Mr. Goebel testified that by the time he returned to the locomotive he had a headache, tightness in his chest and nausea.

Meanwhile, Mr. Fletcher had been on the radio, attempting to determine the nature of the problem. After a few minutes of discussion, Mr. Goebel left the cab again to get breathing equipment from the refuge. This time he managed to

get the barrel open and returned to the locomotive with two Type “N” air respirators. On returning to the locomotive for the second time, Mr. Goebel said that his body was sore, his chest was tight and he was so disoriented that he could not read the instructions on the respirators. After donning the respirator, he went outside a third time in order to start one of the locomotives which had shut down. He then returned to the cab, the train started, and finally reached the East Portal around 2:07 a.m., almost one hour after entering the tunnel.

Both Mr. Goebel and Mr. Fletcher did not feel well enough to continue. They dropped off their helper locomotives at Rollins, Colorado and were picked up by an ambulance around 2:50 a.m. and placed on pure oxygen. They remained on oxygen until arriving at Lutheran Medical Center at 4:30 a.m. Blood tests for carbon monoxide poisoning conducted on both men around 5:07 a.m. revealed normal carboxyhemoglobin levels. Mr. Goebel and Mr. Fletcher were released that morning and instructed to return in 24 hours for a follow-up.

Mr. Fletcher received no further treatment and returned to work. Mr. Goebel, however, continued to complain of dizziness, headache, abdominal pain, and disorientation as a result of the incident. He was referred by his personal doctor to Dr. Teitelbaum, a medical doctor specializing in toxicology, on February 8, 1994. Dr. Teitelbaum reviewed Goebel’s medical history – including the blood tests done at Lutheran Medical Center – and conducted a traditional

physical examination. Based upon this examination, Dr. Teitelbaum wrote Mr. Goebel a May 24, 1994 letter explaining his findings: “My diagnosis is acute combustion products intoxication with a neuropsychological and neurological syndrome possible . . . .” Aplt. App. at 53.

When Mr. Goebel expressed concerns about his memory, Dr. Teitelbaum referred him to Dr. Frederick Kadushin, a neuropsychologist, for further testing. Dr. Kadushin determined that plaintiff had suffered cognitive deficits. This conclusion was reinforced by a speech pathologist who also confirmed that Mr. Goebel had cognitive deficits, probably from a mild brain injury. Mr. Goebel also was examined by a clinical psychologist who determined that plaintiff was suffering from severe depression and post traumatic stress disorder.

Mr. Goebel brought suit against the Railroad under the Federal Employer’s Liability Act, the Safety Appliances Act, and the Occupational Safety and Health Act, alleging that his personal injuries resulted from the Tunnel accident. <sup>1</sup> The district court granted summary judgment to plaintiff on the question of liability, limiting the trial to issues of causation and damages. At trial, Dr. Teitelbaum testified as to the causation of plaintiff’s injuries.

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<sup>1</sup>This was Count II of plaintiff’s complaint. Count I involved an injury to plaintiff’s back which occurred during a railroad switch throwing incident. That claim was tried to the jury, which returned a verdict in favor of the Railroad. Mr. Goebel does not challenge that verdict, and we deal solely with Count II on appeal.

I believe that the cause of Mr. Goebel's injury was his exposure to a unique environment, deficient in oxygen at low barometric pressure, contaminated with pulmonary irritants, which combined with the unique physiologic setting which takes place at high altitude produced an oxygen lack syndrome, which produced swelling in his brain, called cerebral edema, which resulted in small diffuse pressure injuries which resulted in his cognitive defect.

It's a complicated chain of events, but one which is relatively simple to explain on the basis of the fundamental physiology. All of these pieces have been looked at in separate events. In this gentleman, they occurred at the same time and produced this result.

2 R. at 386. The jury found in favor of Mr. Goebel and awarded him \$755,000 in damages for lost wages, pain and suffering, and loss of enjoyment of life. The district court denied the Railroad's motion for judgment as a matter of law, and this appeal followed.

#### Procedural Context

The Railroad argues that the district court improperly admitted Dr. Teitelbaum's testimony, which it characterizes as "junk science relying solely upon the ipse dixit of the expert." Aplt. Br. at 20. Defendant raised this issue on three separate occasions before the trial court. First, the Railroad brought a motion in limine seeking to exclude the testimony as unscientific and based solely upon possibilities. On the morning of trial, the district court orally denied this motion. We have no record of the district court's decision; the court minutes

indicate that no court reporter was present at the time the motion was denied. See Aplt. App. at 7; D. Ct. doc. 77 (noting denial of motion in limine). Second, when Dr. Teitelbaum was called during trial, defense counsel conducted voir dire and objected, “on the basis of Daubert.” 2 R. at 371. The trial court overruled the objection, simply stating: “I believe there is sufficient foundation here for the jury to hear this testimony.” 2 R. at 379.

Finally, the Railroad argued in a post-trial motion for judgment as a matter of law that Teitelbaum’s testimony should be stricken. This would consequently make judgment for defendant appropriate because “[t]he only evidence of a medical and scientific connection between the diesel fumes and Plaintiff’s condition was the testimony of Dr. Daniel T. Teitelbaum.” Aplt. App. at 179. The district court denied this motion in summary fashion. “The motion seeks to re-litigate an evidentiary issue concerning the qualifications of plaintiff’s primary expert witness. The issue was raised by motion in limine, and the court fully considered the matter when it denied that motion.” Id. at 310.

### Daubert Analysis

Daubert changed the law of evidence by establishing a “gatekeeper” function for trial judges under Federal Rule of Evidence 702. “Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the

outset . . . whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.” Daubert, 509 U.S. at 592. This gatekeeper function requires the judge to assess the reasoning and methodology underlying the expert’s opinion, and determine whether it is scientifically valid and applicable to a particular set of facts. See id. We review de novo the question of whether the district court applied the proper legal test in admitting Dr. Teitelbaum’s testimony, see Borawick v. Shay, 68 F.3d 597, 601 (2d Cir. 1995), and review the district court’s decision to admit the testimony under an abuse of discretion standard, see General Elec. Co. v. Joiner, 118 S. Ct. 512, 515 (1997).

It is within the discretion of the trial court to determine how to perform its gatekeeping function under Daubert. See Kumho Tire Co., Ltd. v. Carmichael, 119 S. Ct. 1167, 1176 (1999) (“The trial court must have [discretionary] latitude in deciding how to test an expert’s reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability . . .”). The most common method for fulfilling this function is a Daubert hearing, although such a process is not specifically mandated. See Hynes v. Energy West, Inc., No. 98-8023, 2000 WL 525961, at \*9 (10th Cir. May 2, 2000) (district court held hearing); see also United States v. Charley, 189 F.3d 1251, 1266 (10th Cir. 1999) (district court granted great latitude in “deciding whether to hold a formal

hearing.”); United States v. Call, 129 F.3d 1402, 1405 (10th Cir. 1997) (noting that Daubert does not require a hearing). The district court may also satisfy its gatekeeper role when asked to rule on a motion in limine, on an objection during trial, or on a post-trial motion so long as the court has sufficient evidence to perform “the task of ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand.” Daubert, 509 U.S. at 597.

While the district court has discretion in the manner in which it conducts its Daubert analysis, there is no discretion regarding the actual performance of the gatekeeper function. See Kumho Tire, 119 S. Ct. at 1179 (Scalia, J., concurring) (noting that the majority opinion “makes clear that the discretion it endorses – trial-court discretion in choosing the manner of testing expert reliability – is not discretion to abandon the gatekeeping function.”); see also United States v. Velarde, No. 99-2297, prop. op. at 12 (10th Cir. May 22, 2000) (Anderson, J.). For purposes of appellate review, a natural requirement of this function is the creation of “‘a sufficiently developed record in order to allow a determination of whether the district court properly applied the relevant law.’” United States v. Nichols, 169 F.3d 1255, 1262 (10th Cir. 1999) (quoting Call, 129 F.3d at 1405). See also Velarde, No. 99-2297, prop. op. at 12 (10th Cir. 2000) (noting that “the court must, on the record, make some kind of reliability determination.”); Dodge v. Cotter Corp., 203 F.3d 1190, 1200 n.12 (10th Cir.

2000) (urging the district court to “vigilantly make detailed findings to fulfill the gatekeeper role crafted in Daubert”); United States v. Lee, 25 F.3d 997, 999 (11th Cir. 1994) (encouraging district courts “to make specific fact findings concerning their application of Rule 702 and Daubert”). Without specific findings or discussion on the record, it is impossible on appeal to determine whether the district court “‘carefully and meticulously’ review[ed] the proffered scientific evidence” or simply made an off-the-cuff decision to admit the expert testimony. Call, 129 F.3d at 1405 (citation omitted).

A review of this case convinces us of the absolute necessity of district court findings on the record. There is not a single explicit statement on the record to indicate that the district court ever conducted any form of Daubert analysis whatsoever. The motion in limine was denied with no record of explanation; the objection at trial was overruled on the single statement that there was “sufficient foundation” for the testimony to go to the jury; and the post-trial motion for judgment as a matter of law was denied on the basis of the previous denial of the motion in limine. While we recognize that the trial court stated that it had “fully considered the matter when it denied [the motion in limine],” this single statement is insufficient as a basis for appellate review. We are unable to discern whether the court was referring to the professional credentials of the witness as opposed to assessing the reasoning and methodology relied upon by

the witness. It is axiomatic that an expert, no matter how good his credentials, is not permitted to speculate. See DePaepe v. General Motors Corp., 141 F.3d 715, 720 (7th Cir. 1998).

Our holding recognizes that the district court need not “recite the Daubert standard as though it were some magical incantation,” Ancho v. Pentek Corp., 157 F.3d 512, 518 (7th Cir. 1998), or apply all of the reliability factors suggested in Daubert and Kumho. The gatekeeper inquiry under Rule 702 is ultimately a flexible determination. Kumho Tire, 119 S. Ct. at 1175. But we specifically hold that a district court, when faced with a party’s objection, must adequately demonstrate by specific findings on the record that it has performed its duty as gatekeeper.<sup>2</sup>

Here, the trial court did not have the benefit of Kumho, but was specifically alerted to the need for findings given the objections on the record. In

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<sup>2</sup>If there is no objection to the expert testimony, the opposing party waives appellate review absent plain error. See Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1066 (9th Cir. 1996); see also Christopher v. Cutter Labs., 53 F.3d 1184, 1192 (11th Cir. 1995); McKnight v. Johnson Controls, Inc., 36 F.3d 1396, 1407 (8th Cir. 1994). But see Padillas v. Stork-Gamco, Inc., 186 F.3d 412, 417-18 (3d Cir. 1999) (holding that, in the context of a summary judgment motion, failure to hold in limine hearing to decide disputed questions of fact related to expert report, even when hearing was not requested, was abuse of discretion). When no objection is raised, district courts are not required to make “explicit on-the-record rulings” and, “we assume that the district court consistently and continually performed a trustworthiness analysis sub silentio of all evidence introduced at trial.” Hoult v. Hoult, 57 F.3d 1, 5 (1st Cir. 1995).

the absence of such findings, we must conclude that the court abused its discretion in admitting such testimony. See Velarde, slip op. at 15. Performance of the gatekeeping function on the record insures that a judgment in favor of either party factors in the need for reliable and relevant scientific evidence. It is not an empty exercise; appellate courts are not well-suited to exercising the discretion reserved to district courts.

There remains the question of the appropriate remedy. Several of our recent cases have considered a trial court's failure to make Daubert findings. In Velarde, we reversed and remanded for a new trial because the district court was specifically alerted to the need for such findings after Daubert and Kumho and declined to make them. See Velarde, slip op. at 12. In Kinser, we undertook a Daubert analysis based upon the whole record, relying upon a Fifth Circuit case indicating that the failure to make findings may be harmless error where the appellate court can perform a Daubert analysis on the pleadings. See Kinser, 184 F.3d at 1271(citing Tanner v. Westbrook, 174 F.3d 542 (5th Cir. 1999)). In Charley, the panel majority determined that the need for reliability determinations had largely been waived, 189 F.3d at 1264 n.11, but stated: "Even though the trial court in this case did not have the benefit of Kumho Tire's direction [and its abrogation of Compton v. Subaru of America, Inc., 82 F.3d 1513 (10th Cir. 1996)], its evidentiary decisions do not warrant reversal if it determined, in some

apparent manner, that the expert testimony was reliable.” Charley, 189 F.3d at 1261.

Mr. Goebel asks us to hold that the admission of Dr. Teitelbaum’s testimony was harmless error. See Kinser v. Gehl Co., 184 F.3d 1259, 1271 (10th Cir. 1997) (holding that improper admission of expert testimony was harmless). We decline to do so. “Erroneous admission of evidence is harmless only if other competent evidence is ‘sufficiently strong’ to permit the conclusion that the improper evidence had no effect on the decision.” Lillie v. United States, 953 F.2d 1188, 1192 (10th Cir. 1992). Mr. Goebel argues that there was sufficient uncontroverted evidence of psychological injuries and post-traumatic stress disorder to uphold the judgment, regardless of the admissibility of Teitelbaum’s testimony. Aplee. Br. at 52. However, as the Railroad points out, evidence of psychological injury does not account for Mr. Goebel’s claims of physical injury, particularly organic brain damage. Dr. Teitelbaum’s testimony was a large part of plaintiff’s case because it helped to establish the medical causal link between the incident in the Moffat Tunnel and the alleged permanent brain injury. We are unable to say that Dr. Teitelbaum’s testimony had no effect on the decision of the jury in awarding damages for pain and suffering, and loss of enjoyment of life, and therefore remand for a new trial. We express no opinion on whether Dr. Teitelbaum’s testimony was admissible under Daubert

and Kumho.

Our remand in this case is limited. Mr. Goebel did not appeal the jury verdict as to Count I of his complaint (back injury from throwing railroad switches), and because Dr. Teitelbaum's testimony did not relate to that claim, remand is not necessary. Moreover, the district court's grant of partial summary judgment to Mr. Goebel regarding liability occurred before the decision on the Railroad's motion in limine, and we do not disturb that ruling.

REVERSED and REMANDED for a new trial in conformity with this opinion.