MEDICAL CAUSATION IN THE FIFTH CIRCUIT

The U.S. Fifth Circuit recently vacated a district court's dismissal of numerous refinery workers' suits and remanded them for trial, finding an abuse of the trial court's discretion in excluding plaintiffs' expert industrial hygienist on the issue of medical causation. The case, *Curtis v. M & S Petroleum, Inc.*,[i] is significant in that the same court only nine months earlier found no abuse of a trial court's discretion in excluding the opinion of a highly qualified pulmonary physician on the causal relationship between a plaintiff's exposure to industrial chemicals and his pulmonary illness.[ii] Analysis of the cases is therefore helpful in evaluating when a federal trial court's exclusion of an expert's medical opinion may abuse its considerable discretion.[iii]

The plaintiffs in *Curtis* were refinery workers and their wives who alleged they were exposed to excessive amounts of heavy aromatic distillate ("HAD"), a dangerous component more than 25 percent of which is benzene. A defendant, M & S Petroleum, Inc. ("M&S"), planned to process the HAD, a DuPont product, at a leased refinery which was not designed to handle highly toxic chemicals such as benzene. Immediately after M&S began processing HAD at the refinery serious problems erupted; workers became soaked in HAD daily while fixing clogged equipment and were continuously exposed to HAD fumes that possessed a very strong distinctive odor. These exposures contemporaneously caused the refinery workers to experience headaches, nausea, dizziness, diarrhea, and a lack of energy.

After conducting a hearing *in limine* shortly before trial, the district court excluded the proffered testimony of Dr. Frank Stevens, plaintiffs' expert industrial hygienist, on the issue of medical causation. The expert's opinion was that the plaintiffs' exposure to benzene caused their symptoms and that this exposure subjected them to known long-term health problems. Although the trial court found that plaintiffs' industrial hygienist had adequate support for his general causation opinion that exposure to benzene at levels of 200-300 ppm would cause the injuries suffered by plaintiffs, it excluded his testimony as unreliable since plaintiffs had not demonstrated the amount of benzene to which they were exposed. But the appellate court found ample evidence supporting the expert's finding that the refinery workers were exposed to benzene at levels several hundred times the permissible OSHA standard of 1 ppm. This was important since if his causation opinion was not based on sufficient information of the level of benzene to which plaintiffs were exposed, his methodology would not be reliable, rendering his causation opinion inadmissible.[iv] However, the law does not require plaintiffs to show the precise level of benzene to which they were exposed.[v]

The industrial hygienist's medical opinion was reliable since the facts adequately supported the expert's findings of the level of benzene to which the refinery workers were exposed. The court found sufficient support for Dr. Stevens's causation opinion for multiple reasons:

> First, Dr. Stevens found the symptoms experienced by the refinery workers to be extremely important. He testified that the cluster of symptoms that the refinery workers began experiencing shortly after HAD was introduced into the refinery -

> headache, nausea, disorientation, and fatigue - are well-known symptoms of overexposure to benzene. He concluded that these symptoms were all indications of exposure to benzene at levels of at least 200-300 ppm.
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> Dr. Stevens also relied upon the results of the Draeger tube tests performed by the refinery workers. The particular Draeger tubes used were designed to measure a maximum of 10 ppm based on twenty pumps. Because these tubes were only pumped twice before becoming saturated, measuring the maximum of 10 ppm, Dr. Stevens calculated that the refinery workers were exposed to at least 100 ppm. Additionally, Dr. Stevens relied upon the work practices at the refinery. The refinery workers were required to clean the strainers and the oily water separator, and gauge the tanks on a daily basis. All of these functions made exposure to high levels of benzene likely. Dr. Stevens was particularly impressed with the testimony of the refinery workers that they often became soaked in HAD when required to perform this work.
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> Finally, Dr. Stevens relied on the design of the refinery. Dr. Stevens testified during the *in limine* hearing and stated in his report that the refinery was not designed to process highly toxic chemicals such as benzene. Dr. Stevens testified that refineries that process benzene and other toxic chemicals are completely enclosed to eliminate the possibility that these toxic chemicals can escape into the environment.[vi]

Since the court viewed his causation opinion as based on scientific knowledge that would assist the trier of fact pursuant to Fed. R. Evid. 702, it should have been admitted by the trial court.

Nine months previously, in *Moore v. Ashland Chemical, Inc.,*[vii] the Fifth Circuit held that the district court did not abuse its discretion in excluding the opinion of a physician that the plaintiff's exposure to toluene and other chemicals caused his reactive airways dysfunction syndrome ("RADS"). Interestingly, a concurring opinion pointed out that it would not have been an abuse of the district court's discretion had it admitted the proffered testimony.[viii] Mr. Moore became exposed to toluene and other chemicals manufactured by Dow Corning, Corp. ("Dow") while cleaning up the spilled material in an enclosed 28-foot trailer for about an hour. He immediately sought emergency room treatment after the onset of respiratory distress which occurred less than an hour after his exposure. The Fifth Circuit found the exclusion of the plaintiff's highly qualified expert pulmonologist, Dr. Jenkins, acceptable since hd did not know what tests Dow had conducted in generating the MSDS and "perhaps more importantly, Dr. Jenkins had no information on the level of exposure necessary for a person to sustain the injuries about which the MSDS warned. The MSDS made it clear that the effects of exposure to Toluene depended on the concentration and length of exposure."[ix] The court in *Curtis* explained its exclusion of Dr. Jenkins in *Moore* as follows:

> In *Moore*, this Court discussed the admissibility of the proffered testimony of the plaintiff's expert on causation. After finding that the expert offered no scientific support for his general theory that exposure to Toluene solution at any level could

cause Reactive Airways Dysfunction Syndrome, the Court stated:

> Given the paucity of facts Dr. Jenkins had available about the level of Moore's exposure to the Toluene solution, his causation opinion would have been suspect even if he had scientific support for the position that the Toluene solution could cause RADS in a worker exposed to some minor level of the solution. Under *Daubert*, '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 R.R. Yard PCB Litigation,* 35 F.3d 717, (3d Cir. 1994) (emphasis in original).[x]

Since the "analytical gap" between Dr. Jenkins' causation opinion and the scientific knowledge and available data advanced to support that opinion was too wide, it was within the trial court's discretion to exclude his opinion.

At first blush, it's perplexing that the Fifth Circuit would require an industrial hygienist's causation opinion to be admitted in *Curtis,* yet allow the exclusion of a highly qualified pulmonologist's opinion as to the cause of a lung problem in *Moore.* A careful reading of both opinions leads one to the conclusion that the appellate court feels comfortable requiring admissibility when there is ample factual information about the exposure to a widely studied chemical, like benzene, as in *Curtis.* In *Curtis,* perhaps serendipitously, the safety manager, himself a later plaintiff, took Draeger tube readings for benzene when he became sick and personally convinced that his and other workers' symptoms were caused by chemical exposure. The employer, M & S, should have been regularly monitoring for benzene exposure pursuant to its agreement with Dupont and for compliance with OSHA standards. Since the employer did not perform monitoring, but an employee on his own did, there was additional information upon which the industrial hygienist could reliably estimate the benzene level. While the court did not specifically say so, the other factors relied upon by Dr. Stevens - well known symptoms of overexposure to benzene, work practices at the refinery and design of the refinery - probably were sufficiently reliable on their own to require admittance of his opinion. It would be perverse if a court denied a plaintiff the right to prove his case to a jury because a chemical company was grossly negligent and violated the law in not performing required monitoring.

The Fifth Circuit's finding of no abuse of discretion in excluding the pulmonologist's causation opinion in *Moore* seems grounded in this circuit's uncertainty about a chemical not studied much for its pulmonary effects, like toluene, and its reluctance to follow other circuits' holdings that a clinical medical physician's methodology of differential diagnosis is sufficiently reliable for a causation opinion. In other circuits it is sufficient for admission of a causation opinion that a medical expert use the methodologies by which doctors treat and diagnose their patients.[xi] In these circuits a differential diagnosis and sound clinical methodology mandate admission of a medical expert's opinion since it rests on a reliable foundation and is relevant.

i 174 F.3d 661 (5th Cir. 1999).

ii *Moore v. Ashland Chemical, Inc.,* 151 F.3d 269 (5th Cir. 1998), also authored by Judge W. Eugene Davis.

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Abuse of discretion is the federal standard of review to be applied to admissibility of an evidentiary opinion. *General Electric Co. v. Joiner,* 118 S.Ct. 512, 139 L.Ed.2d 508 (1997). The seminal case for admissibility of expert testimony is *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993).

iv The Supreme Court set out four non-exclusive factors to aid in the determination of whether the methodology is reliable. They are: (1) whether the theory or technique has been tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error of the method used and maintenance of standards controlling the technique's operation; and (4) whether the theory or method has been generally accepted by the scientific community. *Daubert*, 509 U.S. at 593-94, 113 S.Ct. at 2796-97.

v *Curtis,* 174 F.3d at 670, citing *Lakie v. Smithkline Beecham,* 965 F.Supp. 49, 58 (D.D.C. 1997).

vi *Curtis,* 174 F.3d at 671-672.

vii 151 F.3d 269 (5th Cir. 1998).

viii *Id.* at 279 (Benavides, J., concurring).

ix *Id.* at 278.

x *Curtis v. M & S Petroleum, Inc.,* 174 F.3d 661 (5th Cir. 1999).

xi *McCullock v. H.B. Fuller Co.,* 61 F.3d 1038 (2nd Cir. 1995); *Zuchowicz v. United States,* 140 F.3d 381 (2nd Cir. 1998); *Benedi v. McNeil-P.P.C., Inc.,* 66 F.3d 1378 (4th Cir. 1995); *In Re Paoli R.R. Yard PCB Litigation,* 35 F.3d 717 (3rd Cir. 1994); *Westberry v. Gislaved Gummi AB,* 98-1540 (4th Cir. 1999).