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Child Laceration Injury in Restaurant

Nicholas S. Colanzi, MSCE, PE

Case Synopsis: Child sustained forehead laceration from contact with an interior means of egress door in a restaurant. Plaintiff argued door's safety glazing was not properly identified by a sticker or labeling in accordance with Pennsylvania statute and code regulations, and that the door frame was not properly maintained (sharp or dangerous) causing the child's injuries.

Expert Analysis: Defense expert's analysis showed that the Pennsylvania statutory provisions, relied upon by plaintiff's expert, were repealed years ago. Door assembly did comply with applicable provisions; however, the glass safety glazing material (tempered vision panel) was labeled (by etching), installed in a painted aluminum frame and further marked by the presence of panic door hardware separating the upper and lower vision panels. Multiple visual cues were provided alerting the public of the presence of this means of egress door. There are no requirements in past or current BOCA or ICC building code requirements, Pennsylvania Fire and Panic Act Regulations or Pennsylvania Uniform Construction Code Act 45 of 1999 (which adopted with modifications by the state the ICC international codes) that any sticker or additional labeling of the existence of this door's safety glazing material be installed. It was also shown that any sticker/labeling on the lower vision panel of this door is out of the area of the intended direct field of vision (i.e., panic door hardware) of most users. Child impact with part of the painted metal door frame was also inconsistent with any theory that stickers or other (additional) visual cues would have prevented this incident. The edge of the door frame was by manufacturer design and standard for the industry.

Result: Finding for defense.

When is Design Sight Distance not Sufficient?

Steven M. Schorr, PE

At daybreak, an eastbound (EB) passenger vehicle crested a hill on a two-lane, two-way country road that had no shoulders. Operator of the passenger vehicle encountered a stopped EB pickup truck, with an attached trailer, parked along the south side of the EB lane, partially in the lane and partially along the adjacent grass area. Operator of the passenger vehicle perceived, reacted, steered and braked but still struck the exposed left rear of the parked trailer. Within two minutes of the initial collision another EB vehicle crested the hill and struck the trailer and the newly disabled passenger vehicle in a remarkably similar fashion as the first collision.

There were many reconstruction issues including the speed of the vehicles, the propriety of parking the pickup truck and trailer such that it was partially within the EB lane; and the propriety of parking the trailer so close to the crest of the hill as to constitute a hazardous condition (sight distance). This summary deals only with the sight distance issue.

A high-definition-survey (HDS) laser scan of the roadway was completed to establish, to scale, a plan and profile of the roadway. Using field measurements, photographs and properly placed exemplar vehicles, the available sight distance as the vehicles crested the hill was computed and documented. Data clearly established that the sight distance from the crest of the hill to the trailer was sufficient to allow EB vehicle operators to perceive, react and safely maneuver around the stopped trailer. In fact, the sight distance exceeded all recommended highway safety guidelines. Despite this, there were two similar collisions within two minutes of one another.

Further analysis showed that at the time of the collision, the sun was just rising. The rising sun and the backdrop of trees and foliage combined to camouflage the trailer making it difficult to discern its presence despite the available sight distance. This confluence of events would occur only during the period when the sun was rising over the horizon. In this case, the sight distance met design criteria, but other factors prevented a reasonably prudent vehicle operator from avoiding the trailer.

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Laser Scanning & Animations

Steven M. Schorr, PE

Control Defects in Mixer Cause Worker Fatality, **Fredric M. Blum, CFEI, BSME**

Case Synopsis: Maintenance worker was killed in a plant that manufactures powdered cake mixes, when a large horizontal drum-type mixer started while he was inside. Worker was crushed by the slowly rotating, powerful mixing blades. Co-worker, on the platform beside the machine, shut off power as soon as he heard the worker yell, but the machine did not halt in time to avert injury.

Expert Analysis: Forensic investigation on behalf of the worker's estate revealed that the worker was inside the drum for a legitimate purpose, namely, to scrape residual product from interior surfaces before a different product was introduced. The mixer, situated on tall legs beside an elevated platform, features an electrically-operated hatch through which mixed product falls out when mixing is complete. The hatch is also used for waste disposal during internal cleaning. In the present case, mixer power was shut off and locked out before the worker entered the mixer. Shortly before the accident, as per standard procedure, the worker called out to the co-worker to unlock and turn power back on in order to open the hatch. Co-worker opened the hatch using a push-button on the control panel. Then, as the worker swept waste out the hatch, the co-worker leaned over the platform railing to check whether the waste was falling where intended. He happened to be standing at the control panel at the time and inadvertently depressed the "start" button as he leaned over. The fatal injury occurred a few seconds later.

Analysis revealed that two key factors led to the accident, both attributable to design defects in the machine. First, the only way to open the hatch was to turn power back on to the machine. It would be hazardous to leave the hatch open during the scraping process, so the hatch was properly kept closed until scraping was finished. Also, waste has to be manually swept to the hatch, so a worker has to be inside to do so. Because the need to open the hatch while a worker is inside the drum was foreseeable, the electrical design of the mixer should have provided a separate power circuit for the hatch so the hatch could be opened while the rest of the machine remained locked off. (A worker could climb out of the drum before a co-worker turned power back on and opened the hatch, then power could be relocked-out before a worker climbed back in to sweep the waste. However, this process would be cumbersome and would foreseeably be bypassed in the interest of efficiency. Hence, other safeguards were necessary.) Second, because unintended blade rotation was foreseeably dangerous in a variety of circumstances, the start button should have been shielded or otherwise protected to inhibit inadvertent actuation. Based on this analysis, the manufacturer of the machine was sued.

Result: Case settled favorably for the plaintiff.

Slip and Fall at Outdoor Swimming Pool, **Thomas Griffiths, Ed.D.**

Case Synopsis: **Adult attending family party at an outdoor pool slipped and fell while stepping on the white painted coping edge surrounding the small wading pool adjacent to the larger lap swimming pool. This "kiddie" pool, like many similar smaller pools, had the perimeter painted for good visibility and so that "No Diving" signs and depth of water can be painted directly on the edge of the pool deck with good visibility and contrast (red or black letters on a white background). The adult in this situation had left the large swimming pool and was walking hurriedly to his family on the other side of the kiddie pool. While attempting to take a short cut through the shallow water pool, his feet went out from under him in a forward direction. To break his fall, he extended his arms out to the side and slightly behind him with his hands hitting the water and bottom of the pool. His fall resulted in a major fracture to his wrist and significantly curtailed his duties as a police officer. Plaintiff contended that the painted edge of the pool created a slip hazard and sued for damages. Defense expert claimed that a non-slip paint was used and that contrasting edge created a "warning track" signaling guests of the upcoming pool and step down into the water.**

Expert Analysis: **Plaintiff's expert opined that the paint was slippery after analyzing the co-efficient of friction of paint samples taken from the coping edge. The painted edge should have been non-slip and warnings should have been posted. Defense expert opined, based on experience with a variety of floor treatments over the years at both indoor and outdoor pools, that the co-efficient of friction can be misleading without knowing the amount of water collected on the surface and the speed at which the plaintiff was walking. Also, defense expert noted that the short-cut taken through the shallow water pool was not a reasonably safe route to take and that lifeguards on duty warned patrons not to run on the pool deck. Additional testimony was provided that indicated the plaintiff was running, not walking. Furthermore, the pool edge in question was painted with a specialized commercial grade pool paint, specifically designed to produce non-slip pool surfaces.**

Result: **Defense verdict.**

Opposing Braking Systems
Ronald E. Tomasetti, CDS

Case Synopsis: While traveling North on SR 10, a tractor-trailer driver lost control of his trailer after applying his brakes on a downgrade on wet roads. The trailer swung into the southbound lane of SR10 impacting an automobile. The driver of the automobile tried to avoid the trailer swing by steering to the right onto and into a lawn next to the roadway. Trailer impacted the left driver's side of the automobile killing the driver and his son, who was riding in the back seat. The front right passenger (driver's wife) and right rear passenger (their daughter) received minor injuries.

Expert Analysis: Tractor-trailer driver testified he was operating in 4th gear, traveling at 40-mph as he approached the downgrade of the hill. Additionally, site inspection indicated that a speed limit (25-mph) and reduce gear sign 320 feet from the point of impact were clearly visible from the crest of the hill, as well as "winding road" sign 715 feet from the speed limit sign. Plaintiff's expert testified, having driven this type of tractor, (Freightliner, FLD120, equipped with a Detroit Diesel series 60, 370/430 engine, with an Eaton-Fuller 9-speed transmission) and having conducted vehicle performance analysis, and calculated various speeds and grade abilities through the gears, a speed of 40-mph is not attainable in 4th gear. Tractor trailer driver testified that as he was going through the curve (turning right); he tapped/applied his brakes twice. The trailer brakes locked up causing the trailer to jackknife (swing into the southbound lane) as the tractor's ABS system worked keeping the tractor straight. The trailer was not equipped with ABS system causing a mis-match between the tractor and trailer braking systems. In this case the tractor brakes pulsated and the trailer brakes locked up because it didn't have an ABS System. Driver was not aware that he had two different brake applications and didn't know what would happen when he applied his brake on wet roads. Company never informed the driver or trained him with regard to operating a tractor which had ABS System and connected to a trailer without an ABS System and what may happen when he applied his brakes. Plaintiff's expert testified that the driver was operating his vehicle too fast for conditions, applied incorrect braking techniques, and the company failed to properly train and/or instruct the driver with regard to brake application when the tractor has ABS system and the trailer doesn't.

Result: Expert testimony led to a settlement against the trucking company.

"The Expert's Guide to the Legal Galaxy
Going Beyond Daubert"

David J. Schorr, PE

According to the Courts, 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, if (1) the testimony is based upon 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 facts of the case. However, from a practical sense, the dilemma of assessing how "expert" the expert actually is, and will this expert's testimony meet the level of admissibility (the Daubert-challenge) has remained an issue.

This task has now become easier. On February 19, 2007, the Forensic Specialties Accreditation Board (FSAB), formed by the American Academy of Forensic Sciences (AAFS) with substantial support from members of the National Institute of Justice (including a judge and legal advisor) to evaluate and accredit forensic organizations, approved and accredited the International Institute of Forensic Engineering Sciences (IIFES), an independent organization that tests and board-certifies engineering science experts. The complex task of putting together a specialty organization which would be able to select, through application and examination, engineers and scientists who would meet the high standards set by the court, was started 17 years ago by IIFES. The certification of IIFES by the FSAB marks the first engineering science organization to be accredited. Diplomate members of the IIFES are to be experienced, technically-qualified, have ethically-immaculate practices and capable of withstanding a Daubert challenge.

DJS Associates, Inc. is pleased to announce that both **Steven M. Schorr, P.E.** and **David J. Schorr, P.E.** are board-certified, charter members of IIFES, indicative of their high levels of expertise and integrity. For more information, please feel free to contact our office, or contact IIFES at: IIFESboard@aol.com.

Brain Food

- #1. You drive to the store at 20 mph and return by the same route at 30 mph. Discounting the time spent at the store, what was your average speed?**
- #2. Arrange the numbers 1 through 9 on a tic tac toe board such that the numbers in each row, column and diagonal add up to 15.**
- #3. If a boy and a half, can eat a hot dog and a half in a minute and a half, how many hot dogs can six boys eat in 6 minutes?**

Case Synopsis: **Company produces custom molded rubber products with hydraulically powered machines originally manufactured almost fifty years ago. The molding process requires the machine operator to reach between the molds in order to remove finished parts and to clean mold cavities between cycles. The incident machine was originally equipped with a control configuration including hard-wired pushbuttons and limit switches that regulated the molding cycle and effectively protected workers from injuries.**

Company hired firm to update the machine by replacing the original molding machine control configuration with a programmable system. A machine operator was severely injured several months after the control system was updated. The operator pressed a pushbutton to open the molds, but the molds unexpectedly closed and amputated his arm. The machine operator was following standard operating procedures when the accident took place.

Expert Analysis: **Engineering evaluation determined that the updated control system did not provide the same level of operator protection as the original configuration. The machine was originally equipped with an operator pushbutton for opening the molds and a separate operator control for closing the molds. The original control configuration was a failsafe design that effectively prevented the molds from closing unexpectedly. Updated control system replaced the mold open pushbutton and the mold close control with a single operator pushbutton. Computer program determined whether pressing the pushbutton would cause the molds to open or close based on input from a single proximity sensor. In essence, the operator pressed the same pushbutton to either open or close the molds and relied upon the updated control system to ensure the machine performed properly. Accident occurred when a misaligned sensor provided an erroneous signal to the computer program, which caused the molds to close instead of open when the machine operator pressed the pushbutton. Accident occurred because the updated control system was not designed in accordance with fundamental engineering principles. The updated control system should have been designed to prevent unexpected mold closure due to a single component error or failure. The control system should also have been equipped with two hand controls to prevent the operator from reaching between the molds while they are closing.**

Result: **Case resolved in favorable manner for plaintiff.**

Seminars: Past, Present & Future

Gloucester County Bar Association, NJ. Steven M. Schorr, P.E. (President, DJS Associates, Inc.), R. Scott King, BSME (Automotive Consultant, Expert Network), on: **Technological Advances in Accident Reconstruction, Automotive Investigations, High-Definition Surveying (HDS) Laser Scanning Technology.**

Ace Insurance, DE. Steven M. Schorr, P.E. (DJS) on: **Technological Advances in Accident Reconstruction and High Definition Surveying.**

State Bar of Nevada, NV. Steven M. Schorr, P.E. (DJS), R. Scott King, BSME (EN), David Goldstein, C.O., I.C.S. (Slip & Fall/Inspections Expert, EN) on: **Technological Advances in Accident Reconstruction, Automotive Investigations and High-Definition Surveying; and, Slip, Trip & Fall: Use of the Expert.**

Harleysville Insurance, NJ. Steven M. Schorr, P.E. (DJS) and R. Scott King, BSME (EN) on: **Technological Advances in Automotive Investigations and Accident Reconstruction.**

Association of Trial Lawyers, NJ. Steven M. Schorr, P.E. (DJS) and R. Scott King, BSME (EN) on: **New Technology in the Evaluation of Vehicular Collisions and Automotive Investigations.**

The Distraction Theory with a Basketball Court
Thomas W. Bowler, CPSI, NPPS SAFE Certified

Case Synopsis: Plaintiff, age 15 at the time of the incident, was playing "three on three" full-court basketball on an outdoor court at a playground. The defendant city had superimposed the markings of a standard volleyball court inside the perimeter of the basketball court. In addition, the defendant city had permanently placed 3.5 inch diameter metal volleyball poles into the blacktop surface. Thus, the volleyball poles were inside the playing court for basketball. While playing basketball the male plaintiff came in contact with one of the metal volleyball poles receiving injuries to his neck, head, back, and other soft tissues of his body.

Expert Analysis: As their defense, the city argued that the volleyball pole was "open and obvious" to the users. Certainly, the participants had a knowledge of the poles being placed there; however, in the context of any game situation, the participant would be "distracted" and the "distraction theory" or "exceptional theory" would apply to the plaintiff party. Certainly, no one anticipates playing basketball with obstacles within the confines of a court. If the city desired a dual function of the court, metal sleeves/caps in the ground for removable standards would have been the best option. When the court wasn't utilized for volleyball, the removable poles could be stored. To permanently place volleyball poles within the confines of a basketball court ignores the basic concepts of safety. The imminent danger posed by the volleyball poles should have been obvious to any competent park and recreation official.

Result: Case settled.

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James A. Stavros, CPA, MBA

Case Synopsis: Long-time contractor, doing mostly residential home improvements, injured in a car accident, subsequently claimed he was unable to work for a period of time, incapable of performing some of the higher skilled, precision work of his craft. Claim of over \$400,000 for lost earnings and net income from the business was made for the contractor's remaining worklife, approximately 15 to 20 years. During his deposition, Plaintiff indicated he had not filed federal income tax returns for the past several years. However, subsequent to the deposition, Plaintiff filed five years of tax returns, all on the same day, creating a tax liability, with interest and penalties of over \$60,000. Tax returns filed were used by the Plaintiff's economist to calculate the contractor's future earnings loss. Tax returns are an important source in determining an individual's employment and earning's history and capacity. Tax returns are usually viewed as the "ultimate" source since they are being reported to a third party (i.e., the IRS) and the risk is typically underreported income.

Expert Analysis: There were ample clues in the Plaintiff's deposition, among other discovery documents, indicating the tax returns may not have been legitimate. Copies of the contractor's tax return were independently obtained from the IRS, using Form 4506 (the IRS form authorizing the release of tax returns to a third party), and compared with copies provided in discovery. Discrepancies were found in the returns filed with the IRS compared to those independently obtained.

Based on these discrepancies, among others, the backup used to prepare the contractor's tax returns was requested. It was found that the contractor, with the assistance of his lawyer's accountant, prepared the tax returns. The accountant did not sign the tax return as preparer, instead they were signed by the contractor, which is another indicator or reason to be skeptical. Additionally, provided for review were boxes of the contractor's receipts, invoices, bank statements, letters and opened and unopened mail from state and local government agencies, among other documents. Documents were analyzed to determine the support for the revenues and expenses claimed on the returns for each year. Very little support for the revenue and expense amounts claimed was found; however, other interesting information that affected the contractor's ability to work was unveiled, such as he had lost his driver's license, owed thousands in fines and penalties (for driving infractions), was involved in another legal action, his credit was bad and he had no annual records for receipts and disbursements claimed on his tax returns.

Utilizing statements, the contractor's revenue and disbursements for a period of time was recreated. This approach is recognized by the IRS as a valid method in determining net income for a business in the absence of other records. The estimated net income from these bank statements resulted in a decrease of approximately 80% from the amount claimed each year in the returns. The Plaintiff was claiming the business earned approximately \$25,000 to \$45,000 in net income for five years (which is the amount taxed by the IRS as income); the records and analysis showed that he only earned \$5,000 to \$9,000 per year. It was surmised that the inflated tax returns were filed solely to support the Plaintiff's earnings loss under the assumption that the greater the annual income, the greater the annual loss and greater recovery in the lawsuit.

Result: Expert analysis and testimony resulted in a significant reduction of the Plaintiff's claim. While federal income tax returns are a standard document in establishing the earning histories of individuals and companies, they should always be corroborated with other facts and sources, if possible. If several tax returns are ever back-filed on one day for the purpose of litigation, then the actual support should be sought for these tax returns and you should have a healthy dose of skepticism.

New Seminars

- **2007 Update: Latest Technology for Accident Reconstruction and Automotive Investigations**
- **From Beaches to Pools: Keeping Afloat with the Aquatics Expert**
- **The Role of the Expert Witness in Playground, Sports and Physical Education Litigation**
- **Driver Distractions, Cell Phones and In-Car Devices: Fact v. Fiction**
- **Tractor-Trailer Accidents: The Driver, The Road, The Big-Rig**
- **High-Definition Surveying: From Documentation to Demonstrative Evidence: Making Technology Work for You**
- **Residential and Commercial Building Collapses: Use of the Expert**

Large Loss Building Fire
Kenneth A. Kandrac, CFI

Case Synopsis: Large loss building fire affecting multiple tenants destroyed a major section of a mixed use and occupancy structure in New Jersey. Plaintiffs argued (among other factors) that improper termination of the central station service monitoring of the building's automatic fire alarm system and a delay in reporting the fire by tenant restaurant personnel contributed to the fire's destruction. Plaintiff's expert determined that 'long term burning' had occurred within a first floor area of the complex causing partial collapse shortly after fire department arrived.

Expert Analysis: Defense expert, for the central station service and (later) the tenant restaurant, established a detailed timeline using 9-1-1 taped recordings, recorded interviews and deposition testimony showing that the building's automatic fire alarm system had activated and the system (siren) was sounding during the initial 9-1-1 phone call. This call was made by another tenant prior to the fire's discovery by restaurant personnel. The fire burned and spread undetected within the building's construction void spaces and balloon construction, traveling upward following the paths of least resistance (construction voids and natural drafting). Deposition testimony of upper level tenants showed that wooden structural framing of the building's upper floors had been involved by hidden vertical fire spread at the time of the building's fire alarm system activation. The balloon type and windowless basement level construction created additional problems for firefighters. Building ownership/management was responsible by NJUFC and NFPA National Fire Code requirements (not the tenant or central station service under the facts of this case) to maintain the fire alarm system's equipment and central station monitoring of the building's automatic smoke detector system.

Result: Central station service was dismissed from the case. Case against the defendant restaurant settled favorably.

Defective Towing Operations Lead to Fire
R. Scott King, BSME

Case Synopsis: **Aircraft refueling truck was severely burned and damaged while being towed to a local NASCAR racetrack in support of helicopter refueling operations. Due to limitations on the truck's insurance policy, the damage was not covered. As a result, the owner alleged liability against the towing company claiming that defective towing operations caused the fire. However, the towing company denied responsibility claiming the fire was a result of a defect within the truck. Both parties hired independent investigators to determine the fire's cause and origin.**

Expert Analysis: **After his inspection, the towing company's expert concluded the fire was most likely the result of a defect within the truck's electrical system. Plaintiff's expert, however, made a different determination. In particular, plaintiff's expert identified extensive mechanical damage to the truck's transmission. This damage included melting, cracking, and burning of most of the internal and external components of the rear-most portion of the transmission. Further, there were copious metallic shavings on the vehicle undercarriage, consistent with extreme heat and wear. Finally, several of the transmission friction plates, seen through holes and cracks in the transmission casing, were severely worn and burned. This evidence indicated that the transmission was subjected to a catastrophic and abusive event. Specifically, the investigation revealed that the fuel truck had been towed with the rear wheels on the ground and the driveshaft in place. A review of the truck operator's manual clearly indicated that, when towed in this manner, the driveshaft must be removed. Failing to do so could, according to the manual, result in extreme and damaging heat build-up within the transmission. Heat and burn patterns on the truck were consistent with the fire originating near the transmission, and thus cemented the cause and origin analysis.**

Result: **Plaintiffs recovered costs resulting from loss.**

Who Crossed The Centerline? **James R. Schmidt, BSME**

Case Synopsis: Three vehicle daytime collision occurred in dry/clear conditions on a 2-lane State highway. First, head-on crash occurred between southbound vehicle 1 and northbound vehicle 2. Then, substantial second collision occurred between vehicles 2 and 3, as vehicle 2 was pushed back into vehicle 3 following the first collision. Vehicle 3 had been travelling NB behind vehicle 2 prior to the occurrence. All of the physical evidence and available data, including witness testimony and State Police investigation, indicated that vehicle 1 crossed the centerline. Operator of vehicle 1, who was found guilty of driving on the wrong side of the road, filed suit claiming operator of vehicle 2 was the one who crossed the centerline.

Expert Analysis: Plaintiff's expert performed a computer simulation analysis, omitting the effect of the 3rd vehicle's involvement in the crash on the post-impact movement and rest position of vehicle 2. Defendant's expert, on the other hand, analyzed the physical evidence, including all of the tire, gouge, and fluid marks on the roadway, the damage to the vehicles, and the effect of the 3rd vehicle on the overall crash dynamics. Defendant's expert then demonstrated the results of that analysis via 3-dimensional animation.

Result: Trier of fact found that the damage resulting from vehicle 3's collision with vehicle 2 was so substantial that it simply could NOT be ignored, thereby questioning the applicability of plaintiff's expert's "limited" analysis.

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Tractor-Trailer Rig's Nighttime Collision: Failure to Maintain a Lookout

Richard G. Pearson, Ph.D., CPE, F.ERG.S

Case Synopsis: **Driver of tractor-trailer operated for defendant encountered an icy patch on 4-lane divided roadway during the middle of the night and jackknifed. Tractor comes to rest on shoulder, facing oncoming traffic with its trailer blocking right lane. Several minutes later, operator (plaintiff) of second tractor-trailer collides with disabled trailer. Plaintiff sustains injuries.**

Expert Analysis: **Defendant's attorney retained human factors expert to address issues of plaintiff-driver attention, nighttime visual perception, reaction time and decision response. Expert analysis revealed that plaintiff failed (a) to exercise reasonable diligence in allocating attention to the driving task and (b) to take specific precautions considering adverse roadway conditions of which he had knowledge. Collision of plaintiff's rig with the defendant's trailer could have been avoided had he maintained a proper lookout. In terms of recognized highway design standards, there was ample time for him to have perceived and reacted to the presence of defendant's rig on the roadway ahead of him. Scene photographs and inspections of the site showed defendant's tractor and trailer were conspicuous and were discernable from a distance by a reasonable driver.**

Result: **Settlement favorable to the defense reached prior to trial.**

Biomechanical Consultation Effective in Evaluating Cases

Howard P. Medoff, Ph.D., P.E.

Case Synopsis: Recent jury verdicts for plaintiffs demonstrate the use of biomechanical engineering testimony in the evaluation of incident and injury causation. First case involved slip and fall spinal injuries on wet bathroom flooring. Second case involved severe crush injury (complex wrist fracture) when an employee team pushing a fully loaded trash container up an interior ramp lost control of the container.

Expert Analysis: Plaintiff's expert presented live testimony that the failure to warn (signage) of wet bathroom flooring (reduced slip resistance) due to facility cleaning provided a logical and scientifically plausible explanation for plaintiff's loss of balance and injuries. In the second case, videotaped testimony of plaintiff's expert showed that the increased rolling resistance of the fully loaded trash container was due to the deterioration/damage of dumpster wheel parts, and that the likely source of such damage (applying principles of material/mechanical engineering) was due to trash hauler (owner) handling and not as a result of user (plaintiff and co-workers) mishandling.

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Joy S. Falk, Director

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