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Forensic Consulting, Technology & Animations



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Hotel Night-Drowning

Tom Griffiths, Ed.D. / Aquatic Safety Consultant

A teenage boy drowned at night in a swimming pool owned by a major hotel chain while attending a wedding reception. Although alcohol was involved, there were numerous violations to the standard of care for swimming pool operations, including:

- The hotel failed to secure the pool at night with locked doors and gates, even though the pool was closed during the evening hours.
- The hotel allowed guests to swim at night, after hours, as long as they were not loud and disruptive.
- The pool maintained an excessively deep end (12 feet deep), even though most hotel pools have a maximum depth of five feet.
 This made it extremely difficult to remove the victim from the swimming pool.

- The swimming pool underwater light was broken.
- The hotel did not attempt to curtail under-aged drinking, even though it was foreseeable.
- No one on the hotel staff had a pool operator certificate and no one on staff was ultimately in charge of the pool.
- Routine pool patrols were not conducted for safety, although regular checks for towels and cleanliness were performed.
- Safety signage, rescue and resuscitation equipment were lacking.

Because of the many and varied safety breaches at this hotel swimming pool, many of which were in volation of their company's written policies, a significant settlement was offered to the family.

Open with Caution

Robert J. Bockserman / Packaging Consultant

Plaintiff was in the process of opening an institutional-sized can of jalapeños when the juice of the jalapeño product came out of the can in a quick stream. The juice flowed upwards into her face, causing severe burns to both of her eyes and resulting in corneal damage.

Jalapeño juice is very irritating, especially to eye tissue, due partly to the acidic nature of the compound and mostly to the juice itself which is injurious to tissue.

In addition to the corneal damage, the plaintiff's tear ducts were affected and she suffers from a

medical condition referred to as "dry eye". Her sight is seriously affected and she will likely never have full sight capabilities.

There was no "warning statement" on the product label informing people who handle this product that extreme care must be exercised in the opening and handling of the product. The large diameter opening of this type of institutional can produces a very difficult procedure when a product must be poured from it, and should be labeled with appropriate warnings and instructions.

Criminal Rollover Case Steven M. Schorr, PE

Collision Reconstruction Engineer

Case Synopsis: An ATV being operated at night on a dark, dirt roadway in a mountainous area rolled over crushing and killing an occupant riding in the back of the ATV. The vehicle operator and the right front passenger survived with minimal injuries. The police opined that the vehicle rolled due to driver error, specifically excessive speed. The operator testified that his speed was limited and the rollover occurred when he had to steer to the left due to a deer. In doing so, he "caught" the right

front tire in a depression in the roadway. The police charged the vehicle operator with traveling at an excessive speed resulting in homicide by motor vehicle.

Analysis: The physical evidence left as a result of the collision included scraping to the ATV and a documented blood spot on the roadway. No other data was collected from the scene. The dirt roadway in the area of the blood spot was "pitted" and not smooth, showing numerous depressions and irregularities. Because of the limited data, a full engineering reconstruction of the collision based on physical evidence could not be completed. During the criminal trial, the defense re-

construction engineer explained to the jury that the necessary foundation for a reconstruction (i.e., the specific point of rest of the vehicle; markings on the roadway; the specific location where the vehicle began to roll; etc.) were not available in this case and any opinions with regard to the vehicle's speed would be purely speculative. Further, the engineer illustrated to the jury that while the physical evidence was inconclusive as to specifically how the collision occurred, the testimony of the defendant vehicle operator that he steered left, caught his tire in a depression and rolled the ATV over onto the passenger side was consistent with the applicable laws of physics.

Result: The jury found the defendant not guilty, citing a lack of foundation for the police opinions.

Out-of-Control Locomotive

Bob R. Tucker Railroad Operations

Case Synopsis: A locomotive engineer was called in to be the engineer for a very heavy coal train traveling across a high-percentage mountain grade en route to its final destination, a coal fire electrical generating facility. The train derailed on the downgrade side of the mountain, overturning several loaded coal cars and covering up an occupied home near the track resulting in the death of a 15 year old boy.

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Analysis: When the locomotive engineer was contacted by the railroad company, he advised the caller that he had not yet been qualified by the Supervisor of Train Operations to operate this type of train over this mountain range. His qualifications only allowed him to work in train terminals, as an engineer who operated a locomotive to move cars within the train yard. The railroad company caller advised him that if he did not perform the duties being asked, he would be fired. He then requested that a qualifying supervisor accompany him on the train. He was advised that no supervisor was available and that he must report for duty.

Under protest, he left the terminal to take the train across the mountain. During the descent down the mountain, he lost control of the train, causing several coal cars to derail on a slow speed curve. At the curve, the train's speed was several miles above authorized speed for the curve causing the cars to overturn and emptying 100 tons of coal, per car, on a two-story home. The boy, asleep on the lower floor, was smothered by the coal that came into the house.

Result: The accident was caused by operator error due primarily as a result of the railroad's insistence that the locomotive engineer must report for work and perform duties which he was not qualified to handle, a costly mistake resulting in a multi-million dollar settlement.



Fall From Bleachers

Johann F. Szautner, PE, PLS, NSPE / Civil Engineer

Case Synopsis: On a summer night, a spectator was seated in the bleachers of a race car speedway. There were no light fixtures above the bleachers while the racetrack itself was illuminated via pole-mounted lights. During a break, he walked down to a concession stand. As he stepped from wooden seat board to seat board, his left foot caught on a metal cleat which held the seat board to the metal support.

This cleat, which he couldn't see because of the lack of illumination, protruded above the seat board. This caused him to fall forward. He attempted to recover his balance by stepping with his right foot on the next lower seatboard. However, as this board had a broken end and did not extend all the way to the edge of the railing, his right foot found no support and grazed the bent down metal frame supporting the board. As he continued

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to fall forward, he grabbed the railing with his left hand, which caused his fall momentum to turn his chest towards the railing, hitting it with his right rib cage. Since the railing ended where the foot boards were four feet above the ground, and his body moved forward from his fall momentum, he fell to the ground, sustaining multiple injuries.

Analysis: We use bleachers for viewing sporting events, graduations, parades and many other activities. Unfortunately, each year thousands of people are seriously injured in falls from bleachers. Many of the bleachers in facilities today pose a fall hazard, especially to children, in part because these bleachers may have been built and installed when the building codes did not require guardrails and allowed openings that

were big enough to permit a child to fall through them. Moreover, when a jurisdiction adopts a new building code, existing bleachers are typically not required to comply, because most codes do not have provisions for existing structures that would enable the code to be applied retroactively. To prevent falls from bleachers, the U.S. Consumer Product Safety Commission (CPSC) recommends specific retrofitting measures. These measures

recommend details for railing arrangements to prevent falls in general, with emphasis of fall protection for small children.

Result: Had these recommendations been incorporated, in addition to providing adequate maintenance and illumination, this accident could have been prevented. Case settled through mediation.

Police Pursuit

Frank D. Wallace / Police Procedures Consultant

Case Synopsis: At approximately 12:14 pm, a police chase of a stolen vehicle was initiated by an unmarked police car equipped with lights and siren when the vehicle refused to stop on signal. Per policy, police communications was notified and proceeded to monitor the chase. This pursuit was discontinued by the initiating officers after three or four minutes when they lost the pursued vehicle. On this same date, at approximately 12:26 pm, some eight or nine minutes after the vehicle was lost, another officer operating a marked police car lost control of his vehicle, went up on the sidewalk, and seriously injured the plaintiff. The striking officer indicated that he was in pursuit of the stolen vehicle when another vehicle pulled from the curb directly in front of him causing him to take evasive action, and ultimately losing control of his vehicle. This "phantom" vehicle was never observed by any of the witnesses.

Analysis: The central question was whether or not the officer involved in this accident was involved in the pursuit, and was he in compliance with both the Attorney General's and

Police Department guidelines which, in New Jersey, would have shielded the officer and the City from liability. A review of the New Jersey "crash report," prepared by a fellow officer, did not say that this officer was involved in a police pursuit. This very important piece of information should have been prominent on the accident report. A review of depositions from officers who were either on the scene or participated in the pursuit showed numerous inconsistencies and, in some instances, false statements, which were designed to shield the striking officer from responsibility. A review of radio transmissions from that day indicated that the police vehicle driven by the striking officer never announced its entry into the pursuit.

Conclusion: After a thorough review of all of the evidence, it was concluded that the officer was not in compliance with either the Police Department or Attorney General guidelines regarding police pursuits, and therefore was not shielded from liability. After a week of testimony, an agreement was reached between the plaintiff's attorney and the City attorney.



Case of the Sloppy Horticultural Department

David Kaplan, MD, D.Sc.

Case Synopsis: The plaintiff, a 51 year-old female, was shopping for flowers in the garden department of a nationally-recognized supermarket chain in 2006. It was alleged by the woman that the technical staff were careless when they were watering the plants, as some fairly large puddles of water were created, making it hazardous for pedestrian traffic. Unfortunately, she did not see the puddle that awaited her and fell on her buttocks bruising her lumbosacral region. Since that time, plaintiff states she has developed worsening pelvic pain, spasms and dyspareunia (painful intercourse). Over the next 3 years, she underwent an exhaustive diagnostic workup which lead to several pelvic surgical procedures. These attempts were not completely successful and she continued to develop diffuse, refractory chronic pelvic pain. She states that at times it is incapacitating and often associated with intimacy difficulties with her husband. The plaintiff is holding the supermarket chain solely responsible for her injuries.

Analysis: An Independent Medical Examination (IME) was performed in 2010 which included Pudendal Nerve Conduction

Studies and Pelvic Floor Muscle Electromyography. These tests are state-of-the-art and the equipment required is not readily available. The studies revealed increased latencies in her pudendal nerve conduction as well as significant amplitude elevation spikes on pelvic EMG. The issue of "Hypertonic Pelvic Floor Muscle Dysfunction" is made and is consistent with her symptoms. However, after review of all of her medical records, it was noted that in the late 1980's she had an erosion of a foreign body through her uterus causing a dramatic scarring requiring multiple GYN surgical procedures to release the scar and relieve the pain. Consequently, the fall that occurred at the supermarket in April of 2006, although exacerbating her problem, cannot be implicated as the sole inciting "cause & effect" event.

Result: After uncovering her long history of pelvic inflammatory disease, which included uterine erosions, a cause and effect relationship could not be placed on the "fall" that took place in the supermarket. As a result, the supermarket chain was not held solely responsible and the case settled.

Headlight Electrical Fire

R. Scott King, BSME / Mechanical Engineer

The owners of a high-end, aftermarket automotive electronics installer were sued after a vehicle they previously customized sustained significant fire damage. The basis for the suit was difficulties encountered by the electronics installer while connecting a specialized High-Intensity Discharge headlight. The expert concluded that one of the headlight bulbs dislodged from its housing, but remained illuminated, and ignited nearby combustible components. His opinion was that the dislodged headlight was evidence of the installer's difficulty, and thus concluded the fire was the result of defective vehicle service and alterations. In response, the electronics installer retained their own expert to determine, if possible, the fire's cause and origin, and whether the fire was related to their work.

The investigation began with an interview of the employee that worked on the vehicle. He acknowledged experiencing difficulty, but added that he was unable to complete the procedure because his shop was not equipped with the spe-

cialized equipment required to remove certain body panels. They deferred that portion of the work to an authorized dealership body shop. This information did not appear in the opposing expert's report. Moreover, it became readily apparent during the subsequent inspection that the fire did not originate where previously indicated; rather, the fire originated approximately two feet behind the headlight area and was the result of a crushed wiring harness and electrical short-circuit.

The rebuttal report highlighted numerous errors and omissions in the plaintiff's expert report, including the fact that critical physical evidence of electrical arcing and beading pinpointing the fire's cause and origin were never uncovered during the original inspection. This omission/oversight, combined with the absence of any connection between this electrical short-circuit and the work performed by the installer, provided the basis for an opinion that the installer did nothing wrong. An arbitration panel agreed.

The Case of the Exploding Toilet

Marlin E. Buckley / Master Plumber

Case Synopsis: Two female co-workers were using the ladies' room near their office. The restroom had two cubicles adjacent to each other. The plaintiff alleged that the toilet in her cubicle suddenly exploded, hurling her into the partition door. Plaintiff's co-worker photographed the toilet wreckage with her cell phone. Physical injuries, loss of income, and a permanent fear of using public restrooms were claimed.

Expert Analysis: An investigation of the site was conducted with the aid of the chief building engineer. Upon entering the restroom, it was observed that the damaged toilet had been replaced. The engineer confirmed the replacement was of the same brand and model as the damaged fixture. In place was an American Standard wall-hung toilet with a motion activated Sloan flushometer; an arrangement common to many public restrooms. A janitor's closet containing a mop receptor was around the corner from the restroom. Water pressure readings at the faucet indicated 37 PSI (pounds per square inch). This was within normal operating parameters. Examination of the plaintiff's photographs revealed the caulking where the water closet abutted the ceramic tile wall was cracked and broken. One of the photographs showed the fixture chain at the flushometer connection (spud) broken, and the flushometer was completely unattached from the fixture. This would allow water to freely spray from the connection when the flushometer was activated. The American Standard manufacturer's representative indicated the fixture was engineered to support approximately 300 pounds. The water pressure at which the fixture could burst or explode was in excess of 400 psi. The building's domestic water distribution system was incapable of producing this level of water pressure. Upon further investigation, it was noted that the plaintiff was in a hovering position over the toilet seat, so as not to contact the potentially unsanitary surface. It is consistent that the plaintiff, in the hovering position, slipped and lost footing. The plaintiff's impact with the fixture broke the flushometer free of the fixture. When she began to stand, her motion triggered the automatic flushometer and sprayed her with cold water. Startled, her reflexes caused her to lunge forward and impact the toilet partition door.

Result: Case settled.





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