

Case Study A

Beavercreek, Ohio

March 17, 2003

On March 17, 2003 at 13:30 hours Engine 4 and Medic 2 of the Beavercreek, Ohio Fire Department were dispatched to a child having a seizure on the Interstate 675 north bound at Indian Ripple Road. Responding from another incident, Engine 4 arrived on the scene approximately ten minutes after dispatch. A police car was parked on the shoulder when Engine 4 arrived on the scene. The engine was positioned approximately 100 feet to the south of the patient's vehicle, nosed to the shoulder at a forty-five degree angle, blocking the shoulder and right lane. Medic 2 arrived five minutes after the engine and positioned approximately 20 feet in front of the patient's car, halfway on the shoulder.

The patient was a 5-month old child traveling with her mother and older sibling when the seizure occurred. The mother had called her parents to come pick up the sibling prior to the arrival of fire units. The grandparents arrived just as the patient was being loaded into the ambulance. The grandparents had parked on the shoulder just south (downstream) of the engine, out of the "safe zone." At this time there were a total of ten people on the scene: four fire department personnel, five civilians, and one police officer.

Twelve minutes into the incident, as the crew was preparing the patient and mother for transport, Engine 4 was struck by a tractor-trailer going approximately 70 mph. The impact pushed Engine 4 thirty feet forward and to the side of the road. The tractor-trailer then crossed all three lanes of north bound traffic, went through the median, crossed all three south bound lanes of traffic, and traveled up a embankment coming to rest just twenty feet from the south bound on-ramp to the interstate (**Figures A.1 and A.2**). The distance traveled by the tractor-trailer after impact was over five hundred feet. Amazingly, no other vehicles were involved in the crash. The truck driver was the only one injured. He was transported to a local hospital for treatment of minor injuries.

The driver of the tractor-trailer reported the medic crew that he had just hung up his cell phone when he hit the engine. The accident caused debris field that littered all of the northbound lanes and the median for approximately two hundred and fifty feet from the point of impact (**Figure A.3**). Medic 2 received minor damage on the top of the patient care module and hood from flying debris. The passenger side, saddle tank from the tractor-trailer was torn from the truck and went spinning down the highway covering the exterior of Medic 2 with fuel before coming to rest in the median; approximately one hundred and fifty feet from the point of impact. Engine 4 was totally destroyed (**Figure A.4**). The proper placement of the fire engine created a safe work zone credited with saving all ten lives on the scene

Lessons Learned From This Incident

In reviewing the details of this incident, the student should recognize the following important points:

1. Proper positioning of fire apparatus at highway incidents is essential to responder and civilian safety. In this situation Engine 4 was parked to protect the incident scene and the patient loading area of the ambulance. Because the engine was parked at a proper angle and also a sufficient distance from the work area, the intruding tractor-trailer was successfully deflected away from the people on the scene and no one was injured.

2. Make sure all people and vehicles on the scene remain within the safe work zone. Although no one was injured in this incident, it was noted that later arriving family members parked their POV outside the protected area. The number of civilians allowed on a highway scene should be minimized as much as possible. If they are required to be on the scene, both they and their vehicles must be within the safe work zone.



Figure A.1



Figure A.2



Figure A.3



Figure A.4

