Static Electricity Causes Explosion of Tanker Truck



A worker loading a tank truck at a petrochemical plant was killed by an explosion which was apparently set off by electrostatic ignition. He had just written and passed his safety exams the month before.

According to the investigators the employee disregarded nearly all of the safety rules for loading petrochemicals. He had the motor of his pickup truck still running while he loaded the tanker. He did not block the wheels of the bigger truck. He failed to hook up grounding cables to the tanker. He didn’t hook a safety line to himself. And he had probably blocked the spring loaded filling valve in the open position so that it would continue to fill the truck while he was performing other tasks.

The employee then lowered a metal basket containing a sample bottle into the tank of toluene, while it was still loading. This is the most dangerous time to take the sample. Relaxation time is required to allow the static charge to dissipate, thus reducing the possibility of static ignition.

The resulting explosion burned nearly 100 per cent of his body and fractured his neck. The driver of the tank truck suffered minor burns.

This fatality points to the tragic results of ignoring the safety rules. Procedures such as “hot permits” or a pre-loading checklist are valuable in a situation such as this. Even a clearly posted safe work procedure may have helped.