

Abstract of an Accident

FY95-5

MISHAP TYPE: Explosion (Electrical)
INJURY: None
DAMAGE: Est. 50K - 100K
TYPE OF WORK: Drilling (Environmental Site)
EQUIPMENT: Drilling Rig

DESCRIPTION OF MISHAP

An electrical explosion occurred on a BRAC Closure Site during the course of the Phase II Environmental Baseline Survey field effort being conducted by a drilling subcontractor. The subcontractor had obtained site plans showing utility locations, and conducted a site walk-through before selecting soil boring locations. Six days later the drilling rig was set up to begin taking soil samples. Drilling proceeded with caution, as the subcontractor was aware of underground utilities in the area. A hand auger was advanced to 3.5 ft at which point hand auguring was not possible due to the coarse gravel. At this point the 4.25 inch ID hollow stem auger was advanced to a depth of approximately 5 ft. The drillers were about to add another flight of augers. As the auger was slowing to a stop the workers heard a "hissing sound" coming from the hole. Within seconds flames erupted and the workers fled the area. Smoke was subsequently observed coming from two adjacent buildings and from a manhole near the site. The drilling rig was engulfed in flames.

DIRECT CAUSE

Subcontractor drilled through an electrical high voltage cable supplying power to a building from transformer station.

INDIRECT CAUSE

- Inadequate identification of underground utility lines.
- Use of the 4.25 inch ID hollow stem auger.

LESSONS LEARNED

Contractors must ensure they identify all existing utilities prior to beginning work. They must not only acquire utility maps but also use the maps and site plans and carefully survey the area to identify problem areas before selecting drilling sites. If there are underground utilities in the immediate area then hand auguring or excavation must be accomplished to avoid mishaps.

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