

## **CASE STUDY – DIESEL FUEL SPILL/CLEAN UP**

**Project Description:** Emergency Response/Remediation of Vandalized Aboveground Storage Tank (AST).

**Scope of Services:** AET was contracted to evaluate a diesel fuel spill and develop a Corrective Action Plan for a remote mountaintop communication tower site. Specifically, a 1,000 gallon AST adjacent to the Tower Service Building had been vandalized resulting in a visible spill around the tank and extending outward in a 3 ft plume approximately 250 feet from the tank. This site was fenced, accessed by an unpaved road, and had been out of service for several years. Site reconnaissance revealed no nearby surface waterways, wells, or sanitary/storm sewer systems.

### **AET's Corrective Action Plan Steps**

1. **Stop the Spill:** Emergency responders confirmed the spill size and the areas affected. The damaged AST was inspected to verify that no significant quantity of residual fuel remained in the tank and that no further leakage could occur. Although the magnitude of the spill was originally reported to state regulators as less than 30 gallons (based on the owner's understanding that a vendor had decommissioned the AST), visual inspection of the plume lead responders to estimate that 600-700 gallons of diesel fuel had leaked as a result of the vandalism. The case manager from the state regulatory agency overseeing the remediation was notified of the revised estimate for the magnitude of the spill.
2. **Contain the Spill:** Sorbent material was spread over any surface ponding of the spilled diesel fuel. Collection trenches were constructed across the down-hill portion of the spill plume to prevent further migration of fuel in the event of rain. Sorbent materials (i.e., booms) were installed in the trenches to collect fuel product from run-off in case of rain.
3. **Recover the Spill:** Because the site was not accessible to heavy equipment, soil within the spill plume was excavated by hand (typically to a depth of 3-5 inches). Soil removal continued until visible clean soil was identified and cleanliness confirmed using Photo Ionization Detector (PID). A threshold of 150 PPM was used as guidance for continuing or stopping excavation.
4. **Clean/Dismantle Damaged Tank System:** Residual diesel fuel in the AST and associated piping was recovered. The metal tank and associated piping were cleaned. All components were recycled.
5. **Contaminated Soil Remediation:** All soil (and spent sorbent material) was containerized and transported for later incineration. No landfill disposal was necessary.
6. **Site Closure/Remediation Effectiveness:** Core samples of soil from the remediated areas were collected and analyzed for comparison with the State Soil Cleanup Guidance Levels.
7. **Clean Fill:** Additional soil was added to the remediated areas to bring the ground surfaces to grade and prevent future erosion.

**Conclusion:** Although the site owner had paid a vendor to decommission the AST years earlier, the tank was left with hundreds of gallons of diesel fuel within the vessel and associated piping. This resulted in exposing the owner to substantial liability and hundreds of thousands of dollars in remediation costs when the tank was vandalized.

**Lesson Learned:** Independent 3<sup>rd</sup>-party verification by an environmental consultant (such as AET) to audit the vendors activities for completion of decommissioning process is a sound investment.

When you need professional industrial hygiene advice email Alan Sutherland, CIH, CHMM at [a.sutherland@aetinc.biz](mailto:a.sutherland@aetinc.biz) or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services on our website [www.aetinc.biz](http://www.aetinc.biz).

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