

Subsurface Soil Sampling and Analysis Workplan

Site 1122

March 8, 2010

LOCATION/SITE HISTORY

Building 1122 is an auto craft shop located in the southwestern portion of the Main Post in Fort Monmouth, north of Alexander Avenue and south of Mill Creek. It is a one story building built on a concrete slab and is approximately 11,600 square feet in size. Building 1122 houses "do it yourself" vehicle services ranging from general auto repair to battery service and is currently in use to this date. Used oil is collected in a 55-gallon drum inside the shop. When the drum is full, the oil is pumped into a 995-gallon, double-walled aboveground storage tank located on the northeastern side of the building. Also present on-site are two sheds, a car wash (Building 1124), and a woodworking shop. The smallest shed is believed to be chemical storage shed and the larger shed was a paint shop.

Two underground storage tanks (USTs) were removed from the area. The first UST was a 1,500-gallon; single-walled steel tank used for storing #2 fuel oil. The second tank removed was a 550-gallon waste oil UST beneath the pavement outside the building.

In June 2007, the floor drains inside the building were sealed and 900 tons of contaminated soil was removed from the grease room floor. One hydraulic lift in the grease shop was removed and replaced with electric above-ground lift. One hydraulic underground lift still remains which is located in Bay 1. A Request for Disposition form obtained from the motor pool indicates that tank or underground piping is leaking. Given that the cost of repairing this leak exceeds the cost of removing the tank and installing an above ground lift, the hydraulic lift has been tagged out of service and abandoned since 2002. The lift system is assumed to extend 10 feet below the existing floor with an approximately 20 gallon oil reservoir.

PURPOSE

To determine if soil contamination is below or adjacent to footings in the southeastern corner of the building. If contamination is present and is above NJDEP standards, it will require demolition for remediation. Also conclude to what extent if soils must be removed via in accordance with DEP regulation. Groundwater sampling is to determine if placement of additional permanent monitoring wells is needed.

SCOPE OF WORK

Three soil samples will be collected on the outside of the southeastern corner of the building. Two samples will be taken on the east side and one on the south. The sampling locations are presented on the attached figure. Soil samples collected for analysis are to be done in accordance with SOP# SAM-205 and SAM-204, and will include the following:

- Total Petroleum Hydrocarbons (TPHC). Indicate on Chain of Custody to analyze each soil sample for PAHs if TPHC concentration > 100 mg/kg.
- VO+15 and SVOCs (BN+15, AE+10).

If groundwater is encountered ≤ 8 feet below grade surface, a temporary monitoring will be installed and sampled for the following:

- BN+15 and VO+15

The collection of soil samples shall be completed as follows:

- Coordinate with Dean Tardiff (Lab Manager) for scheduling George Boyce to core 3 samples outside of the southeastern corner of the building. (Service order number 10-85513 was submitted via phone extension 21122 on 2/4/10 by Peter Hentschel).

PROCEDURE

- A) Complete a utility mark-out request.
- B) Core through asphalt.
- C) Hand auger to obtain soils for lithology and evidence of staining and odors. Screen soils with calibrated Flame Ionization Detector (FID).
- D) Hand auger to 8 feet below grade surface or to groundwater, whichever is encountered first.
- E) Collect sample at highest FID reading or above groundwater (approximately 48-54 inches).
- F) Analyze soil sample for Total Petroleum Hydrocarbons (TPHC), VO+15, and SVOCs (BN+15, AE+10). Indicate on Chain of Custody to analyze sample for PAHs if TPHC concentration >100 mg/kg.
- G) If groundwater is encountered, collect soil sample 0-6 inches above the water table.
- H) Install temporary monitoring point and collected water samples for BN+15 and VO+15. Depth of screen to be determined on site.
- I) Survey sampling location.
- J) Submit boring log for inclusion in report.