

BRINKERHOFF ENVIRONMENTAL SERVICES, INC.

FIELD SAMPLING EQUIPMENT

Ford Econoline Vans (7) - Interior equipped for transporting field sampling equipment (i.e., stainless steel sampling augers, stainless steel and Teflon bailers, laboratory glassware, pumps and field decon equipment) and personnel.

Ford Ranger Pickups (6) - Field equipped for soil and groundwater sampling, shallow soil boring, wetland delineation work, and aquifer pump testing

Ford Explorers (3) - With 4 x 4 capability for sampling in difficult access areas.

Boat with Trailer – 15 foot V-Hulled aluminum boat used for sampling and probing in the waterways, also used to collect sediment samples as needed for dredging permits. Boat is equipped with a 25 horsepower outboard motor.

Mobile Communication Devices (10) - Field equipment for continuous communication with field personnel during sampling.

Mobile Groundwater Treatment Systems (5) - These systems are mounted in mobile trailer units of varying sizes for different site conditions. System features include high efficiency oil/water separators, pumps, filtration units, compressors, holding tanks and emergency shut off devices.

RMD X-Ray Fluorescence (XRF) Instrument (1) - NJDEP approved instrument utilizing X-ray technology to determine if lead based paint is present on various painted or stained surfaces.

Radiation Alert Monitor (1) - Senses ionizing radiation by means of a Geiger Mueller (GM) tube with a thin mica window. Can detect Alpha, Beta or Gamma particles from 0 to 50 mR/hr.

Asbestos Sampling Kits (2) - Asbestos field sampling kit including brass corers, flashlight, utility knife, duct tape, sprayer water bottle, permanent marker, sample bags, measuring tape, and silicon caulking.

Centrifugal Semi-Trash Water Pumps (3) - purge groundwater at adjustable rates from ½ GPM to 5 GPM.

Grundfos Redi-Flo2 1.8” submersible pump (1) - purges groundwater in deep, small diameter monitoring wells at adjustable rates up to 10 GPM.

Franklin Electric ½ HP 3” submersible pump (1) - purges ground water in deep, large diameter monitoring wells at rates up to 20 GPM.

Personnel Protective Equipment - Safety glasses, hard hats, steel-toed boots, Tyvek suits, breathing apparatus, gloves, and miscellaneous health and safety equipment for Safety Levels B, C or D.

Hnu P-101 Organic Vapor Monitoring Equipment - Used during UST removals, drilling operations and sampling operations when environmental concern for the presence of organic vapors exists. Elevated volatile organic vapors provide an early warning system for the requirement of personal protective safety equipment.

PID - Thermo Environmental Instruments Model 580 B, Version 3.1 - Equipment used for recording volatile organic compounds while soil and groundwater sampling; also used for headspace monitoring of wells and while performing soil gas surveys.

Keck Fluid Level Instrument - Range to 150 feet in depth, Teflon with stainless steel supporting cables, for determination of product and/or water levels in groundwater monitoring wells or piezometers.

Groundwater Level Instruments (2) - Liquid level probes with light-activated sensors. Can measure groundwater elevation to depths which exceed 500 feet.

pH, Conductivity, Temperature, and Oxidation Reduction Potential (ORP) Meters - Meters instantly determine above parameters for water and soil/water agitation samples.

Aquifer Pump Test Equipment and Data Logger - Downhole transducers and 8-channel Hermit Data Logger (Model 2,000) to be used during pump tests as needed for aquifer parameter analysis and design of groundwater remediation systems.

Hydropunch Ground Water Sampling Equipment and Temporary Wellpoints - Sampling equipment used for obtaining representative groundwater samples from unconfined and confined aquifers without the need for NJDEP permits, at depths of less than 25 feet

Pumps – Semitrash and two-inch diameter stainless steel submersible pumps for evacuation of boreholes and wells prior to collecting groundwater samples. Equipment is interchangeable for contaminated vs. uncontaminated conditions.

Munsell Soil Color Charts - Munsell charts are used to identify soil types by characterizing soil color, chroma, and hue; also indicates strength of gleying and mottling for determining seasonal high water table presence.

Pocket Penetrometer - Used to check visual classification of soil by testing unconfined compressive strength.

Torvane Shear Device - For determining the shear strength of soils either in the laboratory or in the field.

Brass Shelby Sampling Tubes - 1.5- and 3-inch diameter thin-walled brass modified Shelby tubes for obtaining undisturbed soil samples in the field or known volume-soil density relationships.

Stainless Steel, Teflon and Brass Bailers- Varying in size for data gathering in a wide range of downhole conditions

HEALTH AND SAFETY EQUIPMENT

Thermo Environmental OVM 580B PID - The 580B is a portable Organic Vapor Meter which detects and quantitates most organic vapors with a high sensitive photoionization detector. Instrument has an operating range of 0-2000 parts per million (ppm) with a minimum of 0.1 ppm. Used for field survey of workspace areas and headspace measurements.

MSA Passport Personal Alarm - Portable compact instrument used in the field environment to monitor combustible gases, oxygen and toxic gas levels in the breathing workspace. Instrument is a real time air monitor and provides an audible alarm for use in confined space work environments.

MSA Escort Elf Pump (2) - Personal work area sampling pumps are used to collect airborne contaminants such as asbestos fibers, silica, toxic gases, vapors, fumes and mists.

MSA Gemini Twin Port Sampler Assembly (2) - For use with the Escort Elf Pump. Used for detecting one or two organic vapors simultaneously, sorbent tubes detect vapors in the workplace.

MSA Cyclone Assembly (2) - For use with the Escort Elf Pump. Cyclone assembly separates respirable dust particles from nonrespirable particles. For use in confined spaces where mining or drilling activities are taking place.

MSA Optiflow Flow Calibrator - Primary calibration device used for determination of air flow measurements for personal sampling pumps.

Drager Gas Detector Pump - Handheld gas detector pump samples gas in the air by drawing pumped air through a specific detection tube.

Drager Tubes - Organic vapor/gas detection tubes for use in the Drager Pump. Air drawn through the tube indicates the concentration of gas or vapor by length or shade of color change. In-house supplies include the following: Natural gas (5), Sulfur Dioxide (7) and Hydrogen Sulfide (8)

LABORATORY TESTING EQUIPMENT

Ro-Tap Sieve Shaker - Accurately reproduces the circular and tapping motion given testing sieves in hand sieving, but with a uniform, mechanical action, producing dependable and comparable sizing test results.

Double Wall Laboratory Oven (Model #L-5B) - Designed for general laboratory tasks such as drying, conditioning, sterilizing, evaporating, dehydrating and other general laboratory work.

Ohaus Precision Standard Electronic Balance (Model #TS-4KD) - Weighing instrument for samples, with autorange balance of 400 to 2000 grams, and readability of .01 and .1 respectively for fine and coarse ranges.

Ohaus Precision Standard Mechanical Balance (700 Series) - Weighing instrument for samples, with a range of .1 to 2610.0 grams with a readability of .1 grams. Balance can be operated in the laboratory or the field and is easily transported.

Mechanical Stirring Device (Model #CL 272) - Utilized for dispersing soil samples in water for subsequent Hydrometer analysis. Stirrer is supplied with a butterfly agitator, for uniform and rapid dispersion.

Basic Laboratory Compaction Set - The set contains a selection of items including molds, hammers and sample ejector to accurately complete ASTM Testing Standard Nos. D-698 and D-1557, for Moisture-Density Relations of soils testing.

ASTM D-422, Particle Size Analysis Set - Includes hydrometers, hydrometer jars, thermometers, dispersing agents, and other related equipment necessary to analyze particle sizes of soil.

ASTM Brass Sieve Set - Multiple 12-inch brass sieves used for sorting and sizing of soils, either by dry or wet methods.

Glassware and Storage Containers - All necessary glassware and storage containers to complete different types of field and laboratory testing, including several sizes of beakers, carboys, graduated cylinders, stainless steel mixing pans and bowls, and glass stirring rods.

FIELD EXPENDABLE EQUIPMENT

Miscellaneous sorbent pads, booms

Tyvek suits, breathing cartridges

Acetone, deionized water and cleaning solutions for equipment (phosphate-free)

Disposable bailers for measuring product levels prior to sampling