

VI. Technical Field Services

TRADEBE's technical field service groups specialize in the proper categorization, packaging and transportation of lab pack waste. A "lab pack", in accordance with 49 CFR 173.12, refers to small quantities (less than 5 gallons of liquid and 40 pounds of solids) of laboratory wastes, which are securely packed in an outer container and have detailed chemical packing lists attached. Hospitals, research centers, universities and other technical facilities typically generate these wastes. TRADEBE has extensive field operations (packing at the source) and depack operations (the unloading and processing of lab pack waste) at the Indiana and Tennessee facilities. TRADEBE also provides high hazardous and reactive waste management programs and is one of the nation's largest household hazardous waste collectors and processors.

Service begins with the submittal of an inventory of chemicals including the chemical names and quantities. TRADEBE then provides a quotation specifying the scope of work and the cost associated with the mobilization, transportation, labor, supplies and treatment /disposal for that specific inventory. Qualified service groups may also submit completed drum inventories to TRADEBE for approval. TRADEBE's approval department will verify that the drums are packaged according to TRADEBE's lab pack guidelines, in accordance with the DOT guidelines (a copy of these guidelines are available upon request and a link to the regulations is available on our website www.tradebeusa.com under the Compliance tab)

TRADEBE's technical field service teams, consisting of two or more chemists, mobilize out of various locations across the country. These Field Chemists receive on-going, extensive training in EPA and DOT regulations pertaining to the packing, transportation and disposal of hazardous waste materials. Upon arrival at a generator's site, TRADEBE field chemists will complete a contingency plan outlining all the health and safety information for that specific job. A safety station will then be established for the job. This safety station will include spill control equipment, fire extinguishers and a first aid kit. Field chemists will then begin to segregate, create an inventory list/sheet and package waste according to EPA and DOT regulations. Once drums are packaged, appropriate shipping labels will be affixed to each container. TRADEBE chemists will then complete all required paperwork, including hazardous waste manifests and land disposal restriction forms. All regulatory paperwork will be reviewed with the generator and appropriate signatures will be obtained. The drums are then loaded onto TRADEBE's technical field service's trucks, which are permitted waste hauling vehicles, for transportation to a TRADEBE facility for processing.

A. High Hazardous Waste

TRADEBE has a High Hazardous Chemical Management program. This program allows us to provide our customers with safe and cost-effective options for handling and disposing of high hazard chemicals and compressed gas cylinders. TRADEBE's high hazard chemists have extensive training and are experienced in the identification, handling, removal and disposal of these hard to handle chemicals.

Services offered by this program include, but not limited to:

- Explosive Chemical Evaluation and Deactivation
- Known/Unknown Compressed Gas Cylinder Identification and Disposal
- Stabilization and Disposal of Shock Sensitive Chemicals
- Remote Opening Capability
- Unknown Chemical Identification and Disposal
- On-site Detonation Capability

B. Household Hazardous Waste

TRADEBE, through its Technical Field Services division, is one of the largest on-site providers of community based household hazardous waste collection programs in the nation. The depth of the trained staff at TRADEBE allows us to manage multiple collection sites in a given weekend. Normally, TRADEBE contracts with local solid waste management districts to offer a program that allows local citizens to drop off used paints, solvents, aerosol cans and other household items that can be disposed of in TRADEBE's waste management programs. TRADEBE's on-site personnel will manage the program in conjunction with local environmental officials. During a typical household project, TRADEBE will work with local officials to select a location that is suitable for the collection with traffic lanes, receiving stations, depack stations, safety equipment, spill containment and emergency procedures. Once the household waste has been properly packaged, it is shipped or transported to a TRADEBE facility. The majority of the wastes collected from these programs are processed at our facilities, or sent to various other energy recovery facilities. In addition to managing household collection programs, TRADEBE is also one of the nation's largest processors of household collection waste. TRADEBE has contracts with several service groups who manage household programs throughout North America. The combination of TRADEBE's lab pack operations and automated shredding towers makes TRADEBE a viable choice for both municipalities and service groups involved in the waste disposal selection process.

C. Depack Facility Overview

In 2003, TRADEBE redesigned its Indiana Labpack/Depack facility. The Depack facility is housed in a 5,000 square foot fully enclosed building with four (4) hazard class booths that operate with independent air pollution control devices.

TRADEBE's Chemists package small quantities of laboratory waste onsite per DOT Guidelines. Once the chemicals arrive at our specialized Depack Facility, we safely and efficiently segregate the chemicals in order to recycle as much of the material as possible. The remaining material is disposed of using the best available disposal technology. The market segments we serve are: educational, industrial, government, research and municipal household hazardous waste collections.

What follows, is an overview of TRADEBE's East Chicago Depack area.

1. Tracking

TRADEBE tracks individual containers using computerized scanners (bar code system). This process allows material to be tracked during storage, treatment and final disposition. "Cradle-to-Grave" liability tracking can therefore be assured.

2. Lab Depack Booths/Vapor Suppression

Each modular-processing booth has an exhaust hood, controls for the exhaust air system and a specific control to neutralize/contain vapors released during the bulking process.

Booth 1 is designed to handle flammable and combustible materials. Organic vapors are controlled by a vacuum hood and then passed through a carbon absorption unit. These vapors are absorbed into the carbon and the spent carbon filters are recycled as fuel solids.

Booth 2 is designed to manage corrosive materials that require a caustic air pollution scrubber. An alkaline sodium hydroxide scrubber neutralizes any acid vapors released during the bulking process.

Booth 3 is designed to manage the neutralization of compounds that include, but are not limited to, potassium hydroxide, amines and dilute ammonia solutions. Alkaline vapors released during the bulking process are neutralized in an acid scrubber.

Booth 4 is designed to manage flammable solids, ignitable reactives and "dangerous when wet" items. Powders and solids that may be released during the process enter a "Baghouse Dust Collection" system. Particles drop into a lined drum that is sent to a RCRA incinerator.

3. Employee Exposure Minimization

A chemist and/or a technician will bulk materials within a designated booth under either Level B or Level C Personnel Protective Equipment. Each booth is equipped with a positive pressure live airline used with an air mask. Chemical resistant clothing, inner/outer chemical resistant gloves and chemical resistant boots are additional items of safety gear worn by members of TRADEBE's Technical Field Services team.

4. Fire Suppression System/Explosion Proof Building

- a. Each booth has eight heat sensors, which are temperature activated. If the temperature exceeds 160° F, the system blankets the entire booth with a dry powder fire suppressor.
- b. Each booth (1-4) also have photo sensors designed to detect flames. If detection occurs, the booth is blanketed with the dry powder.
- c. Electrical outlets are designed to be intrinsically safe against sparking. Blowers and exhaust fans are located within the building to provide proper air circulation through the entire work area.
- d. Each booth is also equipped with grounding wires to arrest any static electricity.

5. Secondary Containment

The lab pack building has contained bermed areas around the drum storage areas. This containment system eliminates the risk of accidental material release spreading throughout the facility.