

## **Oil Loading and Unloading Procedures:**

### **Bulk Delivery Procedures**

Precautions are taken to ensure both personnel safety and prevention of spills or accidental releases during routine handling of oil. Visual checks for leaks before, during, and after material transfers provide operating personnel with the opportunity to contain releases due to faulty equipment, and to implement proper repair measures. UHCL employs delivery procedures designed to prevent accidental spills and releases during the bulk transfer of oils and other materials. **Bulk oil is delivered using the following procedures:**

- Loading and unloading is only performed under the supervision of campus personnel responsible for ensuring that proper procedures are followed.
- Oil absorbent and containment materials must be available and sufficient to prevent spills from reaching navigable waters.
- Wheel chocks or a vehicle break interlock system must be employed to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines or hoses.
- Bonding and grounding devices must be connected before loading or unloading flammable oils from vehicle.
- Campus personnel and pump operator/driver must check all connections for tightness and that all fittings and hoses are in a safe and operable condition before beginning any pumping of oil.
- Where connections are not located within a secondary containment structure, a drip pan must be placed below the connection during the filling process.
- The operator of the pump shall not leave the pumping process unmanned for any reason during the filling process and shall remain within close proximity (five feet) of the shutoff valve at all times.
- When a high level alarm is not operational or available on the container being filled, an employee must gauge the container during filling operations and be in constant communication with the pump operator.
- After pumping is complete, the pump operator must check that all shutoff valves are locked in the closed position and there is no leakage.
- Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles must be closely inspected for discharges, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge.
- Connections of oil tank or campus piping must be securely capped, plugged, or sealed when not in service or when in standby service for an extended time.

### **Bulk Oil Collection/Pickup**

Used petroleum oils generated during maintenance activities transferred by UHCL personnel via 5-gallon pails are placed directly into the FMC used oil storage tank. Collected used oil is periodically picked up via trucks that park adjacent the used oil tank. In general, the operator collects the used oils using a hand-held nozzle and flexible tubing from a vacuum tanker connected directly to the truck.

### Container Loading/Unloading Procedures

Portable containers (drums, totes) of oils and oil-based products are generally delivered at the Facilities, Maintenance, and Construction (FMC) Building and the loading area of the Bayou Building. The drums are then taken directly to the point of use by hand cart or fork lift. Delivery to the FMC is through an overhead door leading to the drum storage area. These temporary staging locations are strategically located that in the event of a release during staging, release response equipment would be employed, and the release would be contained as close to the source as possible. Portable containers are loaded and unloaded using the following procedures:

- All containers must be closed and sealed prior to moving.
- No obstacles should block the unloading area or delivery paths.
- Safe lifting techniques must be used.
- Loads must not be stacked on the transport mechanism or vehicle in a manner that blocks the operator's vision.
- Heavy objects should be loaded at the bottom of a forklift, hand truck, or pallet jack.
- Bulky or awkward items should be secured while in transport.
- Only trained and authorized personnel are allowed to operate a forklift or use other powered material-handling equipment.
- Containerized materials are stacked and stored properly in a stable and secure manner.

### Elevator Hydraulic Oil Tanks

Oil is rarely added to or removed from these small tanks. When required, addition of oil is performed manually using small containers by qualified, contracted elevator service technicians. Removal of oil would only be required in the event of tank repair or replacement. In this event, oil would be manually removed from the tank by portable pumps and placed in containers.

### Electrical Transformers

Typically oil is neither added to nor removed from transformers except in the event of repairs. Addition or removal of oil from transformers is only performed by trained and qualified electricians.

### **Oil Equipment Design:**

#### Bulk Storage Oil Tanks

All bulk oil storage containers are constructed of materials compatible with petroleum products at the conditions of storage. Visual observations of bulk storage oil tanks are made routinely during normal work operations at UHCL. The construction materials of the aboveground portions of the tanks are examined at least quarterly to detect corrosion or erosion and leaking of fixtures and seams. The area immediately surrounding the tank is patrolled at least quarterly to detect obvious signs of leakage.

#### Portable or Mobile Oil Containers

All portable or mobile oil containers are constructed of materials compatible with petroleum products at the conditions of storage. In areas where containers of oil, such as drums, are used routinely, there are designated oil container storage locations. Inspections and visual