

**TENNESSEE DEPARTMENT OF TRANSPORTATION  
CORE PLAN FOR THE MANAGEMENT OF HAZARDOUS WASTES,  
UNIVERSAL WASTES, AND USED OIL**

**February 21, 2000**

**Prepared for**

**State of Tennessee  
Department of Transportation  
Nashville, Tennessee 37243-0334  
through contract with  
Waller Lansden Dortch & Davis, PLLC**

**Prepared by**

**Science Applications International Corporation  
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Oak Ridge, Tennessee 37831**



**SCIENCE APPLICATIONS INTERNATIONAL CORPORATION**

contributed to the preparation of this document and should not  
be considered an eligible contractor for its review.

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## ACRONYMS

AST	Aboveground Storage Tank
BTU	British thermal unit
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-know Act
LDR	Land Disposal Restriction
ppm	parts per million
psi	pounds per square inch
RCRA	Resource Conservation and Recovery Act
SPCC	Spill Prevention, Control, and Countermeasures
SQG	Small Quantity Generators
SPR	Spill Prevention and Response
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TEMA	Tennessee Emergency Management Agency
UST	underground storage tank
VO	volatile organic

## DEFINITIONS

<b>Accumulation Area</b>	An area designated for the temporary holding of hazardous wastes and/or universal wastes for a limited period of time prior to the off-site shipment of such wastes to a treatment, storage, recycling, or disposal facility.
<b>Conditionally Exempt Small Quantity Generator</b>	Any facility that generates less than 100 kg/month (220 lb) of hazardous wastes and that does not accumulate more than 1,000 kg (2,200 lb) of hazardous wastes at any time.
<b>Fully Regulated Generator</b>	Any facility that generates more than 1,000 kg (2,200 lb) of hazardous wastes per month or more than 1.0 kg of acute hazardous wastes per month.
<b>Hazardous Wastes</b>	Hazardous wastes are defined in detail in the Waste Characterization Core Plan. In summary, a hazardous waste is any solid waste that is listed in 40 Code of Federal Regulations ( <i>CFR</i> ) 261 Subpart D (TNRule 1200-1-11-.03) or that exhibits the characteristics of ignitability, corrosivity, reactivity, or toxicity. Hazardous wastes also include any solid waste that is mixed with a listed hazardous waste or that is a residue derived from the treatment, storage, or disposal of a listed hazardous waste is also a hazardous waste. Hazardous wastes also include any solid waste mixed with listed hazardous waste unless the resulting mixture no longer exhibits a characteristic (i.e., ignitability, corrosivity, reactivity, or toxicity) is a hazardous waste.
<b>Large Quantity Handler of Universal Wastes</b>	Any facility that accumulates more than 5,000 kg (11,000 lb) of universal wastes at any one time.
<b>Satellite Accumulation Area</b>	An area at or near the point of generation that is designated for the accumulation of fewer than 55 gal of hazardous wastes or less than 1.0 qt of acutely hazardous waste in containers, which is under the control of the operator of the process that is generating the hazardous waste or acutely hazardous waste.
<b>Small Quantity Generator (or Regulated Small Quantity Generator)</b>	Any facility that generates between 100 and 1,000 kg/month (220 to 2,200 lb/month) of hazardous wastes, or any facility that accumulates more than 1,000 kg (2200 lb) of hazardous wastes at any time.
<b>Small Quantity Handler of Universal Wastes</b>	Any facility that accumulates less than 5,000 kg (11,000 lb) of universal wastes at any one time.
<b>Storage</b>	The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

<b>Universal Wastes</b>	Universal wastes are defined in the Waste Characterization Core Plan. Universal wastes are a subset of hazardous wastes that are separately regulated because these wastes are widely generated in both commercial and industrial settings and are similar to household wastes. In general, under the Federal Rules at 40 <i>CFR</i> Part 273, universal wastes include certain recalled pesticides, mercury thermostats, batteries, incandescent lamps, fluorescent lamps, sodium vapor lamps, and mercury vapor lamps. Currently, Tennessee Rules at TNRule 1200-1-11-.12 do not include any lamps other than mercury vapor lamps within the scope of universal waste.
<b>Used Oil</b>	Used oil is defined in the Waste Characterization Core Plan. In general, used oil is any oil refined from crude or any synthetic oil that has been used and, as a result of such use, contains physical or chemical impurities that have not been mixed with any hazardous waste.
<b>Used Oil Burner</b>	A permitted facility that burns off-specification used oil for energy recovery.
<b>Used Oil Generator</b>	Any facility whose operations produce used oil or whose act first causes the used oil to be subject to regulation under Resource Conservation and Recovery Act (RCRA) Subtitle C. Used oil aggregation and collection points are subject to regulation as generators.
<b>Used Oil Marketer</b>	Any person who directs a shipment of off-specification used oil to a used oil burner or who claims that used oil to be burned for energy recovery meets the fuel specification of 40 <i>CFR</i> 279.11. and TNRule 1200-1-11-.11.
<b>Used Oil Processor</b>	Any facility that processes used oil to facilitate the production of fuel oils, lubricants, or other oil-derived products including, but not limited to, blending used oils to meet specifications, blending used oil with other petroleum products, filtration, distillation, other separations processes, or re-refining.



## **EXECUTIVE SUMMARY**

This core plan identifies responsibilities for the development and implementation of the hazardous waste management program at Tennessee Department of Transportation (TDOT) facilities.

This plan identifies minimum design and construction standards for on-site waste management units used to accumulate hazardous wastes, universal wastes, and used oil. The minimum design and construction standards for units used to hold orphan wastes pending their characterization in accordance with the requirements of the Waste Characterization Core Plan are also provided.

This plan identifies waste management procedures that must be developed and implemented by TDOT facilities for the on-site accumulation of hazardous wastes, universal wastes, and used oil. Minimum content requirements for these procedures are also described. Regional and county TDOT Facility Managers will implement TDOT Headquarters' facility-specific instructions based on facility missions rather than develop individual facility-specific procedures.

This plan also identifies certain waste management program elements such as personnel training programs; Spill Prevention, Control, and Countermeasures (SPCC) Plans; and records files must be maintained at TDOT facilities. This plan describes the minimum requirements for these program elements. Regional and county TDOT Facility Managers will use TDOT Headquarters' training programs and modify a Master SPCC Plan template rather than develop individual facility-specific program elements.

## **1.0 SCOPE**

### **1.1 VOLUME REQUIREMENTS FOR HAZARDOUS AND UNIVERSAL WASTES**

The requirements of this plan are applicable to all TDOT operations that ever generate more than 1,000 kg (2,200 lb) of hazardous waste and universal wastes within any given month. Facilities that ever generate more than 1.0 kg/month (2.2 lb/month) of acute hazardous waste, as defined in the Waste Characterization Core Plan, are also subject to the requirements of this plan.

Operations that generate more than 100 kg (220 lb) of hazardous and universal wastes within any given month or that accumulate more than 1,000 kg (2,200 lb or ~250 gal) at any one time are considered Small Quantity Generators and are also subject to the specified requirements of this plan.

Facilities that accumulate a total of more than 5,000 kg (11,000 lb) of universal wastes on site at any one time are considered Large Quantity Handlers of Universal Wastes and are subject to all requirements of this plan that pertain to those wastes. Facilities accumulating lesser quantities of these wastes are exempted from certain universal wastes requirements, as noted herein.

### **1.2 DESIGN AND CONSTRUCTION STANDARDS**

This plan addresses design and construction standards, waste management procedures, and other waste management program elements applicable to satellite accumulation and short-term accumulation of hazardous wastes in containers (i.e., 90 days or less). Similar standards and program elements applicable to the on-site accumulation of universal wastes are also provided. Accumulation of hazardous wastes in tanks is prohibited unless such tanks are exempt from RCRA Subtitle C requirements as wastewater treatment units.

Additionally, this plan describes design and construction standards, waste handling procedures, and waste management program elements applicable to the accumulation of used oil in containers and aboveground storage tanks (ASTs).

### **1.3 NON-SCOPE ITEMS**

This plan does not address storage of hazardous wastes or universal wastes in tanks or waste piles. Storage of hazardous or universal wastes in these units at TDOT facilities is prohibited.

The standards of this plan do not address treatment or disposal of hazardous wastes at permitted facilities. Treatment or disposal of hazardous wastes requiring a RCRA permit is prohibited at TDOT facilities. The requirements for off-site disposal at contracted commercial facilities and treatment of hazardous or universal wastes on-site are covered under the Disposal Core Plan.

This plan does not address treatment, recycling, or disposal of universal wastes. Generators and other handlers of universal wastes at TDOT facilities are prohibited from treatment, disposal, or conductance of the actual recycling process for these wastes except as allowed in the TDOT Disposal Core Plan. Universal wastes will be sent to licensed recyclers for processing in accordance with the Disposal Core Plan.

The standards of this plan do not address accumulation of used oil in underground tanks as defined in 40 *CFR* 280. This plan does address accumulation and storage in containers and ASTs with respect to used oil.

The standards of this plan do not address processing of used oil or the burning of used oil for energy recovery. Used oil processing regulated under 40 *CFR* 279 is prohibited at TDOT facilities. Burning off-specification used oil for energy recovery at TDOT facilities is prohibited except for the exemption of its use as a fuel in small space heaters with a capacity of less than 500,000 British thermal units (BTUs)/hour.

## **2.0 RESPONSIBILITIES**

### **2.1 TDOT ENVIRONMENTAL COORDINATOR**

The TDOT Environmental Coordinator has the overall responsibility for implementing the RCRA program. With respect to this plan, the TDOT Environmental Coordinator is responsible for the following:

- Issuance and control of this plan.
- Ensuring that the requirements of this plan conform to the relevant requirements of 40 *CFR* 262/TNRule 1200-1-111-.03<sup>1</sup>; 40 *CFR* 265 Subparts C,D, and I/TNRule 1200-1-11-.05<sup>2</sup>; 40 *CFR* 273/TNRule 1200-1-11-.12<sup>3</sup>; and 40 *CFR* 279/TNRule 1200-1-11-.11<sup>4</sup>.
- Developing and issuing operations-specific waste management procedures that meet the minimum content requirements of this plan.
- Developing and issuing a Master SPCC Plan template that meets the requirements of this plan.
- Ensuring that TDOT Operations Managers establish accumulation units for hazardous wastes, universal wastes, and used oil that meet the requirements of this plan.
- Ensuring that TDOT Operations Managers implement waste management procedures, SPCC Plans, training programs, and record-keeping systems that meet the requirements of this plan.
- Periodic assessment of TDOT operations to ensure compliance with the requirements of this plan and the facility-specific procedures.
- Obtaining and preparing department-wide disposal plans and Requests-for-Proposals for disposal of wastes.
- Coordinating the preparation and submittal of required reports identified within this plan.
- Monitoring and coordinating pollution prevention and waste minimization initiatives at TDOT Operations.
- Preparing budget requests and providing funding for the programs and equipment required by TDOT operations to implement the requirements of this plan.

### **2.2 FACILITY MANAGERS**

Facility Managers at each TDOT installation are responsible for implementing and operating that facility's RCRA program in accordance with the requirements of this plan, other core plans, Headquarters-issued procedures, directives, and programs, and operation-specific instructions and procedures. With respect to the requirements of this plan, Facility Managers are responsible for the following:

- Establishing accumulation units for the on-site management of hazardous wastes, universal wastes, and used oil that meet the requirements of this plan.

- Ensuring that daily waste handling and management operations are conducted in accordance with the requirements of this plan and associated implementing procedures.
- Preparing and maintaining an operation-specific SPCC Plan based on the TDOT Headquarters SPCC template that meets the minimum content requirements of this plan.
- Ensuring personnel under his/her supervision have received training consistent with the nature of the job duties for each employee who generates and manages hazardous wastes, universal wastes, and used oil. Such training shall meet the minimum content requirements of this plan and shall be documented as required by this plan.
- Collecting and submitting information for the RCRA Annual Report to the TDOT Environmental Coordinator.
- Maintaining document and records files as specified by this plan.

## **3.0 GENERAL CONFIGURATION STANDARDS, REQUIREMENTS, AND RECOMMENDED PRACTICES FOR ACCUMULATION UNITS**

This section presents regulatory standards and best management practices for the configuration, construction, and location of container accumulation units for hazardous waste, universal waste, and used oil. In general, these standards and best management practices that apply to hazardous waste accumulation units also apply to container accumulation of used oil. Regulatory standards and best management practices for ASTs used to accumulate used oil are also provided.

### **3.1 HAZARDOUS WASTE CONTAINER ACCUMULATION UNITS**

This section presents configuration standards for hazardous waste management units that are used to accumulate hazardous waste. Appendix A includes specific accepted design and operational practices that include the structural integrity of the base and containment system, acceptable materials of construction for the unit, containment capacity, segregation of incompatible materials, protection from climatic conditions, and infrastructure requirements.

#### **3.1.1 Generator Accumulation Areas**

##### **Conditionally Exempt Small Quantity Generators**

Accumulation of hazardous waste at generator facilities is dependent upon the classification of the generator. A conditionally exempt small quantity generator (CESQG) as defined at 40 *CFR* Part 260 and TNRule 1200-1-11-.01 is not subject to standards for accumulation or storage areas<sup>5</sup>. A facility is a CSQG provided that less than 100 kg of hazardous waste (1 kg of acute hazardous waste or 100 kg of contaminated material from a spill cleanup) is generated in a calendar month and no more than 1,000 kg of hazardous waste (1 kg of acute hazardous waste or 100 kg of contaminated material from a spill cleanup) is accumulated on site at any time.

##### **Small Quantity Generator**

Facilities that generate greater than 100 kg but less than 1,000 kg of hazardous waste on a monthly basis are considered small quantity generators (SQG). Small quantity generators may accumulate hazardous wastes on-site without a permit for up to 180 days while meeting the following standards found in 40 *CFR* 262.34 and TNRule 1200-1-11-.03:

- The quantity of hazardous waste accumulated on site never exceeds 6,000 kg.
- Containers holding hazardous waste must be in good condition. If a container holding hazardous waste is not in good condition, or if it begins to leak, the hazardous waste must be over packed or transferred from the container to a container that is in good condition.
- Containers used to hold hazardous waste must be made of or lined with a material that is compatible with the hazardous waste to be stored.
- All containers holding hazardous waste must be closed except when waste is added or removed from the container.
- Containers holding hazardous waste shall not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.

- Accumulation and storage areas must be inspected weekly for leaks and deterioration caused by corrosion or other factors.
- Incompatible hazardous wastes, or incompatible hazardous waste and materials, shall not be placed within the same container.
- Hazardous waste shall not be placed in an unwashed container that previously held an incompatible waste or material.
- Containers storing a hazardous waste that is incompatible with any waste or other material stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.
- Each container shall be marked with the date each period of accumulation begins such that it is readily visible during inspection.
- Each container shall be marked or labeled clearly with the words, "Hazardous Waste."

In addition, SQGs operating accumulation areas must comply with the following:

- At all times there must be at least one employee, either on the premises or on call, with the responsibility for coordinating all emergency response.
- Information must be posted next to the telephone, including the name and telephone number of the emergency coordinator and location of fire extinguishers and spill control material.
- The number of the fire department unless the facility has a direct alarm.

### **Large Quantity Generator**

Any facility where hazardous waste is generated in quantities equal to or greater than 1,000 kg monthly is a large quantity generator. Large quantity generators may accumulate hazardous wastes for up to 90 days on site without a permit, provided that the standards specified within this section are met. Storage and accumulation standards that will be followed at TDOT facilities that qualify as large quantity generators include the following:

- Containers holding hazardous waste must be in good condition. If a container holding hazardous waste is not in good condition, or if it begins to leak, the hazardous waste must be over packed or transferred from the container to a container that is in good condition.
- Containers used to hold hazardous waste must be made of or lined with a material that is compatible with the hazardous waste to be stored.
- All containers holding hazardous waste must be closed except when waste is added or removed from the container.
- Containers holding hazardous waste shall not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.
- Accumulation and storage areas must be inspected weekly for leaks and deterioration caused by corrosion or other factors.

- Containers holding ignitable or reactive hazardous waste (40 *CFR* 261 Subpart C and TNRule 1200-1-11-.02(2))<sup>6</sup> must be stored at least 50 feet from the facility property line.
- Incompatible hazardous wastes, or incompatible hazardous waste and materials, shall not be placed within the same container.
- Hazardous waste shall not be placed in an unwashed container that previously held an incompatible waste or material.
- Containers storing a hazardous waste that is incompatible with any waste or other material stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.
- Containers holding hazardous wastes with a volatile organic content (VO) of greater than 500 ppm shall comply with applicable air emission control standards found in 40 *CFR* 264 Subparts AA, BB, CC and TNRule 1200-1-11-.05(27)(28)(29).
- Each container shall be marked with the date each period of accumulation begins such that it is readily visible during inspection.
- Each container shall be marked or labeled clearly with the words, "Hazardous Waste."

Large quantity generators are also subject to the requirements of 40 *CFR* 265 Subparts B and C/ TNRule 1200-1-11-.05(3) and (4) and 40 *CFR* Part 265.16/TNRule 1200-1-11-.05(2)(f)1,3,and 4. These requirements include the following:

- Operation of the facility must be maintained to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release.
- Emergency equipment such as fire extinguishers, telephone, and internal communication.
- Arrangements with local authorities to familiarize emergency response personnel and police with the layout of the facility and the properties associated with the hazardous waste stored in the event of an emergency.
- Preparation of a Contingency Plan meeting the requirements specified in 40 *CFR* 265 Subpart C/ TNRule 1200-1-11-.05(4).
- Provide and document personnel training (classroom or on-the-job) that teaches personnel to perform their duties in a way that ensures facility compliance. At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing themselves with emergency procedures, equipment, and systems.
- The training program must be directed by a person trained in hazardous waste management procedures.

Both SQGs and large quantity generators are subject to the notification requirements found in 40 *CFR* Part 262 and TNRule 1200-1-11-.03. Additional requirements for pre-transport, treatment within an on-site accumulation area, and off-site shipment are included in the Hazardous Waste Disposition Core Plan.



Large quantity generators and SQGs may accumulate up to 55 gal of hazardous or 1 qt of acute hazardous waste at a satellite accumulation area provided the following requirements of 40 *CFR* 262.34(c) and TNRule 1200-1-11-.03(4)(e)5 are met:

- Containers holding hazardous waste must be in good condition. If a container holding hazardous waste is not in good condition, or if it begins to leak, the hazardous waste must be over packed or transferred from the container to a container that is in good condition.
- Containers used to hold hazardous waste must be made of or lined with a material that is compatible with the hazardous waste to be stored.
- All containers holding hazardous waste must be closed except when waste is added or removed from the container.
- The container is marked with the words “hazardous waste” or with other words that identify the contents of the container.
- The container is maintained at or near the point of generation.

### **3.1.2 Hazardous Waste Accumulation Units for Volatile Organics**

Hazardous waste container accumulation units that hold wastes with a VO concentration of greater than 500 parts per million (ppm) are subject to the air emissions control standards of 40 *CFR* 265 Subparts BB and CC, and TNRule 1200-1-11-.05(1) and (28) unless certain conditions are met. Container accumulation areas that hold hazardous wastes with a VO concentration of greater than 500 ppm shall be operated so that containers accumulating VO wastes:

- meet relevant U.S. Department of Transportation (DOT) specifications;
- have a capacity of less than 120 gal;
- are equipped with covers and closure devices that minimize exposure of the hazardous waste to the atmosphere and when closed, there are no visible holes, gaps, or open spaces;
- remain closed except for waste transfers;
- do not remain open for a period of longer than 15 minutes during intermittent waste transfer operations; and
- are not used for treatment.

Large quantity generators that accumulate hazardous waste on-site in 90 day accumulation areas may be subject to certain air emission standards under 40 *CFR* 265 Subpart BB and TNRule 1200-1-11-.05(28). SQGs are not subject to these requirements unless they sporadically exceed the 1,000 kg/month hazardous waste generation limit (SQGs that sporadically exceed the 1,000kg/month limit should comply with the emission requirements until controls have been instituted that consistently ensure hazardous waste generation rates are below 1,000 kg/month.). Facilities that store or recycle hazardous waste on-site may also be subject to these requirements. CESQGs are not subject to these emission standards.

The emission standards apply to certain items of process equipment used to handle hazardous wastes with greater than 10% by weight total organic concentration. The hazardous wastes subject to these requirements are further segregated as follows:

- Gases/vapors are those hazardous wastes that are gaseous at operating conditions.
- Light liquids (or equipment in light liquid service) are those hazardous wastes with greater than 10 percent total organic concentration in which
  - 1) one or more of the constituents has a vapor pressure at 20 degrees C of greater than 300 pascals (2.25mm of Hg);
  - 2) the total concentration of constituents with a vapor pressure of greater than 300 pascals at 20 degrees C is greater than 20 percent by weight;
  - 3) the fluid is a liquid at operation conditions.
- Heavy liquids are other hazardous wastes with greater than 10 percent total organic concentrations that are not light liquids.

A liquid boils when its vapor pressure equals atmospheric pressure (760 mm of Hg). Therefore, fluids meeting the light liquid definition are gases at ambient conditions and must be compressed to be liquids under normal operating conditions. TDOT facilities do not handle hazardous wastes that meet the gas/vapor or light liquid definition.

The types of equipment at 90-day accumulation areas, recycling units, or storage units that may be subject to the requirements for heavy liquids at TDOT facilities include the following:

- sampling connection systems,
- open ended valves or lines,
- pumps in heavy liquid service,
- valves in heavy liquid service,
- pipe flanges and connections in heavy liquid service, and
- pressure relief valves in heavy liquid service.

When these types of equipment in heavy liquid service are installed or encountered, they should conform to the following design and operational practices in order to comply with the applicable emission standards. Sampling connection systems shall be closed purged or closed purge or closed loop design. These designs return the sample purge to the process line or collect the sample purge for recycle or management in containers or tanks in a closed piping system.

Open-ended valves and piping shall be fitted with a blind flange, cap, plug, or dual valve system. Pumps, valves, pipe flanges and connections, and pressure relief valves shall be periodically inspected for signs of leakage or fugitive emissions (monthly monitoring is recommended). If signs of leakage are detected, fugitive air emission testing shall be conducted within five days using the equipment required by 40 *CFR* 60 Method 21. When a leak is detected, a first attempt at repair must be made within five days of discovery. Final repair must be complete within 15 days of discovery. Upon detection of a leak, the

equipment shall be marked with a weatherproof mark that identifies the item by its equipment number and the day the leak was detected.

Each piece of the equipment listed above in operation at a facility shall be marked in a manner that segregates it from other equipment. Records shall be maintained for at least three years after a particular piece of equipment is taken out of service that includes the following:

- identification of each piece of equipment;
- location of the equipment at the facility;
- type of equipment;
- total organic concentration of the hazardous waste stream where the equipment is in use;
- the state of the hazardous waste stream where the equipment is used (gas, light liquid, heavy liquid);
- method of compliance with the leak detection requirements;
- results of equipment inspections;
- results of leak detection tests;
- date of repair attempts;
- a description of the repair attempts, repairs made, and
- the date of successful repair.

In general, it is unlikely that TDOT facilities will have any of the above equipment or hazardous waste service. Where TDOT facilities have such equipment, and it is used for less than 300 hours of service annually, it is exempt from all requirements with the exception of marking and recordkeeping.

Large quantity generators that accumulate hazardous waste on site for less than 90 days may be subject to certain air emission standards found at 40 *CFR* 265 Subpart AA and TNRule 1200-1-11-.05(29). These standards also apply to facilities that store or recycle hazardous wastes. These requirements do not apply to CESQGs. In order for these requirements to apply, the hazardous waste must contain 10 ppm of organics and must be recycled or managed in one of the following types of operations on-site:

- distillation,
- evaporation,
- steam or air stripping, or
- solvent extraction.

In general TDOT facilities do not perform these operations and, therefore, these requirements would not be applicable to TDOT operations. If such operations are performed, organic vapor emissions must be reduced by 95 percent or less than 3.1 tons/year. It is highly unlikely that TDOT facilities will have air emissions exceeding this limit. If total emissions do exceed this limit, the facility shall control organic vapor emissions using activated carbon or a condenser designed and operated to remove or recover 95 percent of the organic vapors vented.

### **3.2 HAZARDOUS WASTE SATELLITE ACCUMULATION AREAS**

Configuration and construction standards for satellite accumulation areas are not prescribed under 40 *CFR* 262.34 or TNRule 1200-1-11-.03. Regulatory standards for these units are based on container management practices that are addressed by facility-specific waste operations procedures as described in Section 4.0 of this plan. Although the regulation does not establish design or construction standards for satellite accumulation areas, the use of secondary containment is recommended. Secondary containment for satellite accumulation may be provided by containment pans, dikes, or temporary liner systems. Where secondary containment is provided for satellite accumulation, the capacity shall be equal to the largest container within its boundaries. Satellite accumulation shall also be designed to provide for segregation of incompatible wastes.

### **3.3 UNIVERSAL WASTE ACCUMULATION AREAS**

Specific regulatory standards for the design and construction of universal waste accumulation units are not prescribed by 40 *CFR* 273 or TNRule 1200-1-11-.12. Universal waste management standards are based on good container management practices, as indicated by the facility-specific waste operations procedures described in Section 4.0 of this plan. Generator standards for the accumulation of hazardous waste also apply to universal waste handlers that generate other forms of hazardous wastes. Accordingly, it is recommended that universal wastes be accumulated in areas that are provided with secondary containment. Secondary containment may be provided by containment pans, dikes, or temporary liner systems. Where universal waste batteries are drained, such activities shall be conducted over or within the confines of a containment pan. Secondary containment, as described in Appendix A, should be provided for universal wastes that have been containerized<sup>7</sup>. TDOT facilities shall maintain the status of a “small quantity handler” of universal wastes. Universal wastes shall be stored on site for no longer than one year from the date the waste was generated.

#### **3.3.1 Universal Waste Batteries**

As small quantity handlers of universal waste, TDOT facilities must manage batteries in a way that prevents release to the environment. Any universal waste battery that shows evidence of leaking, spillage, or damage that could cause leakage must be contained. The container used must remain closed, be structurally sound, show no evidence of leaking, and be compatible with the battery<sup>8</sup>. All batteries or containers holding universal waste batteries must be marked with the words “Waste Battery(ies)”<sup>9</sup>. In addition, the following activities may be conducted as part of the management of universal waste battery waste at TDOT facilities as long as the casing of each individual battery cell is not breached and remains intact and closed:

- Sorting of batteries by type.
- Mixing battery types in one container.
- Discharging batteries so as to remove the electric charge.
- Regenerating used batteries.
- Disassembling batteries or battery packs into individual cells or batteries.
- Removing batteries from consumer products.

- Removing electrolyte from batteries provided the individual cell or cells are immediately closed after removal.

Electrolyte removed from batteries must be appropriately characterized in accordance with the Hazardous Waste Characterization Core Plan and managed in accordance with this plan and the Waste Disposition Core Plan.

### **3.3.2 Universal Waste Pesticides**

Universal waste pesticides accumulated at TDOT facilities shall be stored in containers. Containers storing universal waste pesticides must remain closed, be structurally sound, must not show evidence of leaking or damage that could cause leaking in the future, and be compatible with the waste pesticide being stored<sup>7</sup>. All containers holding universal waste pesticides must be marked with the words “Waste Pesticide(s)”<sup>8</sup>.

Storage of universal waste pesticides may be conducted in tanks or transport vehicles only by permission of the TDOT Environmental Coordinator. In the event tank or transport vehicle storage is used, the TDOT Environmental Coordinator will develop operation specific procedures to conduct the storage.

### **3.3.3 Universal Waste Thermostats**

Universal waste thermostats must be managed in a way that prevents release of any universal waste or component of a universal waste to the environment. Any universal waste thermostat that shows signs of leakage, spillage, or damage that could cause leakage must be contained. Any container in which universal waste thermostats are placed must remain closed, be structurally sound, must not show evidence of leaking or damage that could cause leaking in the future<sup>7</sup>. All universal waste thermostats or containers holding universal waste thermostats must be marked with the words “Waste Mercury Thermostats.”<sup>8</sup>

In addition, small quantity handlers of universal waste may remove ampules mercury containing from universal waste thermostats provided:

- the manner in which the ampules are removed prevents breakage;
- removal occurs over or in a collection device;
- mercury clean-up equipment is readily available;
- the area in which the ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels;
- employees removing the ampules are thoroughly familiar with proper mercury waste handling and emergency procedures including transfer of mercury from containment devices to appropriate containers; and
- removed ampules are containerized to prevent breakage and are stored in closed, non-leaking containers that are in good condition.

All residues or other solid waste generated as a result of the removal of the mercury-containing ampules must be characterized to determine whether these materials exhibit a characteristic of hazardous waste<sup>10</sup>.

### 3.3.4 Universal Waste Lamps

Universal waste mercury lamps must be managed in a way that prevents release of any universal waste or component of a universal waste to the environment. Any universal mercury waste lamp that shows signs of leakage, spillage, or damage that could cause leakage must be contained. Any container in which universal waste lamps are placed must remain closed, be structurally sound, must not show evidence of leaking or damage that could cause leaking in the future<sup>7</sup>. All universal waste thermostats or containers holding universal waste thermostats must be marked with the words “Waste Mercury Lamp(s)”<sup>8,11</sup>.

In addition, crushing of universal waste mercury lamps may be conducted on-site as specified within the Hazardous Waste Disposal Core Plan.

## 3.4 STANDARDS FOR ACCUMULATION AND STORAGE OF USED OIL

Used oil generators may conduct certain activities such as; accumulation, storage, aggregation, and use of used oil at their facilities without being processors of used oil subject to 40 *CFR* 279 Subpart F and TNRule 1200-1-11-.11(3)(a)(2)<sup>12</sup>. TDOT facilities that generate used oil shall store the oil in the following manner in accordance with 40 *CFR* 279.22 and TNRule 1200-1-11-.11(3)(c)<sup>13</sup>:

- Used oil shall not be stored in units other than tanks or containers or in RCRA interim status or permitted hazardous waste units.
- All containers and tanks must be in good condition with no severe rusting, apparent structural defects, or deterioration.
- Containers and tanks must not leak.
- Containers and tanks used to store used oil must be labeled or marked clearly with the words “used oil.”
- Upon discovery of a leak from a container or AST, the release must be stopped and the used oil contained and recovered.
- Leaking tanks or containers must have any necessary repair completed or be replaced prior to being returned to service.

Recommended general design criteria for used oil storage areas are those found in Appendix A of this plan. Where used oil is stored in ASTs, the recommended design criteria addressing such items as structural integrity and secondary containment are provided in Appendix B.

As discussed in the Hazardous Waste Disposal Core Plan, used oil may also be burned on site in oil-fired space heaters<sup>14</sup>. TDOT facilities may include operation of aggregation points where used oil is accumulated from multiple facilities. This activity is also discussed within the Hazardous Waste Disposal Core Plan. Operation of an aggregation point that is owned by TDOT and accepts only TDOT-generated used oil is subject to the storage requirements for used oil generators outlined in this section.

TDOT facilities must manage mixtures of used oil and hazardous waste as a hazardous waste rather than as a used oil, in compliance with the Hazardous Waste Characterization Core Plan, the Hazardous Waste Disposal Core Plan, and the sections of this plan dealing with hazardous waste. The application of any used oil or used oil mixture to the ground for dust suppression is prohibited<sup>15</sup>.

TDOT facilities shall not engage in other activities such as marketing, re-refining, or otherwise managing used oil subjecting the facility to further requirements included in 40 *CFR* Part 279 and TNRule 1200-1-11-.11 without consultation with the TDOT Environmental Coordinator. Other than generator storage, aggregation, or use in on-site oil-fired space heaters, management of used oil is prohibited without the express permission of the TDOT Environmental Coordinator.

## **4.0 WASTE MANAGEMENT OPERATIONS PROCEDURES**

This section presents requirements for waste operations procedures for hazardous waste accumulation areas, satellite accumulation of hazardous waste, universal waste accumulation areas, and accumulation of used oil in containers. Waste handling practices for universal wastes and used oil are similar to those required for hazardous wastes as discussed in Section 3.4 of this plan. Best management practices to meet SPCC Plan requirements for the accumulation of used oil in ASTs are also provided. Facility Managers shall implement TDOT Headquarters waste management operations facility-specific procedures that meet the minimum content requirements of this section.

### **4.1 HAZARDOUS WASTE ACCUMULATION**

Waste operations procedures for hazardous waste accumulation areas shall address container management practices, segregation of incompatible wastes, container marking, inspections, and accumulation time limits. In order to comply with the specific standards specified in Section 3, minimum content requirements for these procedures are provided below:

#### **4.1.1 Container Management**

Waste operations procedures for container management necessary to comply with the requirements specified in Section 3 shall include the following:

- maintenance of containers in a good condition that meets the relevant physical condition criteria;
- practices for container handling, movement, and accumulation that prevent spills and ruptures;
- practices for waste transfer operations that prevent spills;
- measures that ensure containers remain closed except for waste transfers and that transfers are completed in a timely fashion, meeting the air emissions requirements of 40 *CFR* 265 Subpart CC and TNRule 1200-1-11:05(29);
- practices and criteria for segregation of incompatible wastes; and
- practices and requirements for container marking.

#### **4.1.2 Segregation**

Segregation practices that shall be addressed in hazardous waste accumulation area operations procedures include the following:

- practices to minimize contact between containers and standing liquids;
- measures to mitigate entry of precipitation and run-on;
- measures to protect containers holding ignitable or reactive wastes from potential ignition sources; and
- maintenance of sufficient aisle space, as required by Section 3.1.3 above.



### **4.1.3 Inspections**

Waste operations procedures for inspection of hazardous waste accumulation areas shall address the following:

- Weekly inspection of the containers for physical condition, evidence of leakage or spills, container marking, and the other criteria defined in Section 4.1.1.
- Daily inspection of loading and unloading areas each day that these staging areas are in use.
- Weekly inspection of the secondary containment for its integrity and the presence of free liquids.
- Periodic inspection of spill control and emergency response equipment as mandated by the site contingency or SPCC Plan (see Section 4.6).
- Periodic inspection for general housekeeping.
- Periodic inspection of operating equipment.

Waste operations procedures for inspection of hazardous waste accumulation areas shall include inspection log sheets. Facility Managers shall implement the record-keeping procedures to maintain these logs for three years. Requirements for record-keeping procedures are described in Section 7.0.

### **4.1.4 Accumulation Time Limits**

As specified in Section 3, large quantity generators of more than 1,000 kg/month (2,200 lb/month) or more than 1.0 kg/month (2.2 lb/month) of acute hazardous waste may accumulate their waste for up to 90 days or less. SQGs that produce 100 to 1,000 kg/month (220 to 2,200 lb/month) of hazardous waste may accumulate their waste for 180 days or less, provided the total waste accumulated is less than 6,000 kg (13,200 lb/month). Waste operations procedures shall include practices to ensure that accumulation limits are not exceeded. CESQGs generate less than 100 kg/month (220 lb/month) and less than 1.0 kg/month (2.2 lb/month) of acute hazardous waste may accumulate up to 1,000 kg of hazardous waste (220 lb) or 1 kg (2.2 lb) of acute hazardous waste at any time. No time limits apply to CESQGs.

## **4.2 SATELLITE ACCUMULATION**

Waste operations procedures for satellite accumulation areas shall address container management requirements, container marking, and accumulation limits. Minimum content requirements for satellite accumulation procedures are provided below:

- Waste operations procedures for satellite accumulation shall include the practices and criteria identified in Section 4.1.1.
- Waste operations procedures for satellite accumulation shall include practices for proper marking of containers.
- Satellite accumulation is limited to 55 gal of hazardous waste or 1.0 qt of acute hazardous waste. Wastes must be transferred from the satellite accumulation point to the accumulation area or to an off-site facility within three days of reaching these limits. Provisions shall be incorporated in the waste operations procedures to ensure that these limits are met.

### **4.3 UNIVERSAL WASTE ACCUMULATION**

The primary universal wastes generated by TDOT facilities are hazardous waste batteries, fluorescent lamps, incandescent lamps, and halogen lamps. On occasion, TDOT facilities may generate universal waste herbicide products. It should be noted that only certain herbicide products, as defined in the Waste Characterization Core Plan, are considered to meet the definition of universal waste herbicides. Waste operations procedures for accumulation of universal wastes shall ensure that the facility does not accumulate a total of greater than 5,000 kg (11,000 lb) of universal waste batteries, lamps, and herbicides at any one time and that time limits for accumulation are met. Waste operations procedures for accumulation of universal wastes shall meet the minimum content requirements indicated below.

#### **4.3.1 Batteries**

At a minimum, waste operations procedures for accumulation of universal waste batteries shall include the following:

- Practices for the segregation and separate accumulation of nickel/cadmium batteries and other universal waste batteries from lead-acid batteries.
- Provisions for handling and storage of nickel/cadmium and other hazardous waste batteries in a manner that prevents rupture or damage of the casing, leakage, or spillage.
- Practices to separately containerize any nickel/cadmium or other universal waste batteries that have ruptured or damaged casings.
- Practices to manage containers of nickel/cadmium or other universal waste batteries in accordance with the requirements of Sections 3.1 and 4.1.
- Practices to properly mark universal waste batteries and containers that hold universal waste batteries.
- Provisions for handling and storing automotive lead-acid batteries in a manner that maintains the devices in good condition, prevents rupture of the case, and prevents spillage or leakage of the electrolyte.
- Practices to ensure that automotive lead-acid batteries remain closed during handling and accumulation.
- Provisions to prevent drainage or treatment of the electrolyte from lead-acid automotive batteries that are in sound condition.
- Practices to containerize the electrolyte and any spill cleanup residue from leaking lead-acid batteries in structurally sound containers in accordance with the provisions of Sections 3.1 and 4.1.

#### **4.3.2 Fluorescent, Incandescent, and Halogen Lamps**

Waste operations procedures for accumulation of universal waste lamps shall address the following:

- Practices to prevent breakage during handling and accumulation.
- Provisions for packaging universal waste fluorescent lamps in their product boxes or in similar containers with sufficient packing material to prevent breakage during accumulation, handling, and transport.

- Provisions for packaging incandescent lamps and halogen lamps in containers with sufficient packing material to prevent breakage during accumulation, handling, and transport.
- Criteria to ensure that containers used to hold universal waste lamps are structurally sound, meet relevant physical condition criteria, and remain closed during accumulation, except for addition of lamps.
- Practices to segregate and separately containerize broken universal waste lamps and to ensure that such containers are managed in accordance with the requirements of Sections 3.1 and 4.1 during accumulation.
- Practices for proper marking of universal waste lamps and containers that hold such lamps.

### **4.3.3 Herbicides**

Waste operations procedures for universal waste herbicides shall include the following:

- Criteria to determine if a herbicide product that is no longer used is considered a universal waste herbicide.
- Practices to segregate universal waste herbicides from product stocks.
- Criteria to ensure that containers that hold universal waste herbicides are structurally sound, meet relevant physical condition criteria, and remain closed during accumulation.
- Practices for over packing and separate containerization of leaking containers of universal waste herbicides.
- Practices for separate containerization of any spill cleanup residues resulting from leaking containers of universal waste herbicides.
- Practices to ensure that containers of universal waste herbicides and containers holding spill cleanup residues are managed in accordance with the requirements of Sections 3.1 and 4.1.

## **4.4 CONTAINER ACCUMULATION OF USED OIL**

Waste operations procedures for container accumulation of used oil shall address container management, container marking, and inspections. Where the facility accumulates more than 1,320 gal of used oil, the used-oil container accumulation unit must be addressed by an SPCC Plan/Contingency Plan meeting the requirements of Section 4.6. At a minimum, waste operations procedures for container accumulation of used-oil smut include the following:

- Criteria to ensure that containers used to accumulate used oil are structurally sound and maintained in good condition.
- Practices to ensure that used-oil containers are handled, accumulated, and transported in a manner that prevents spills and ruptures.
- Practices that prevent spills during transfer operations.

- Measures to ensure that used-oil containers remain closed except for waste transfers.
- Practices to prevent the addition of characteristic hazardous waste, F-listed solvents, other hazardous wastes listed in 40 *CFR* 261 Subpart D, or other materials to used oil.
- Provisions to ensure that containers of used oil are segregated from potentially incompatible materials and potential ignition sources.
- Practices for marking of used-oil containers.
- Provisions for periodic inspection of used-oil accumulation areas for evidence of spillage or leakage, physical condition of the containers, and marking the containers as well as the condition of any secondary containment.
- Provisions to maintain inspection logs for used-oil accumulation areas.

#### **4.5 ASTS STORING USED OIL**

Waste operations procedures for ASTs that accumulate used oil shall address ensuring and maintaining tank integrity; prevention of spills, leaks, and overflows, and inspections. In addition to the requirements of this section, used-oil ASTs may be subject to the requirements of a facility-specific SPCC Plan, as specified in Section 4.6.

#### **4.6 EMERGENCY RESPONSE**

Each TDOT facility that routinely or occasionally generates more than 1,000 kg/month (~250 gal/month) of hazardous waste shall have a RCRA Contingency Plan that meets the requirements of 40 *CFR* 265 Subpart D and TNRule 1200-1-11-.05. Any TDOT facility that accumulates or stores a total of 1,320 gal of petroleum products, hazardous substances, and used oil shall have an SPCC Plan that meets the requirements of 40 *CFR* 112. It is recommended that the requirements of both plans will be incorporated into a facility-specific Spill Prevention and Response (SPR) Plan. Facility Managers shall implement a facility-specific SPR Plan from the TDOT Headquarters SPR Plan template that includes the elements indicated in this section of this plan.

##### **4.6.1 Minimum Content Requirements**

At a minimum, each site-specific SPR Plan shall include a statement of the plan's purpose, identification of the types of spills and emergency situations addressed by the plan, and implementation levels and criteria.

Additionally, the SPR Plan will discuss internal notification and reporting procedures for spills and other emergency events and conditions for gaining external assistance. Contact telephone numbers for local fire response organizations, local police department, and the Tennessee Emergency Management Agency (TEMA), as well as the locations where these phone numbers are posted, will be included.

The plan will provide a description of the roles and responsibilities of designated personnel in responding to fires, spills, and other emergencies. Identification of the Emergency Response Coordinator or Incident Commander (individual in charge during a spill, fire, or other event) by name, position, telephone number, and pager, or other contact number at which that individual may be reached 24 hours a

day, will be included in the plan. The plan will also include identification of the type, quantity, and location of equipment used for fire fighting, spill containment, spill cleanup, and decontamination.

Identification of the spill potential at the facility with respect to the types of materials stored, quantities stored, storage locations, rate and direction of migration in the event of a release, nearby streams, creeks, other waters of the state, and potential receptors will be discussed. A description of the procedures implemented to prevent spills during storage, handling, and transfer of petroleum products, used oil, hazardous substances, and hazardous wastes will be included in the plan as well as a description of control systems that are in place to prevent spills.

The SPR Plan will include a description of any permanent and temporary secondary containment systems used to control migration of spills and a description of the procedures that will be implemented to control migration of spilled materials.

Specific procedures for immediate response to fires, spills, and cleanup of spilled materials as well as the procedures and criteria for determining if additional investigation or response is required will be included. Descriptions of the personal protective equipment required for response to various types of emergency events, an evacuation plan and/or procedures, and identification of the local authorities that may be requested to provide assistance for certain types of emergency events will be provided.

Finally, procedures for restoration, decontamination, and cleanup of emergency response equipment and post-incident reporting to the Tennessee Department of Environment and Conservation (TDEC), TEMA, or the National Response Center will be included, as appropriate.

The SPR Plan for any TDOT facility that never generates more than 100 kg/month (~25 gal/month) of hazardous waste and that never stores or accumulates a total of 1,320 gal of petroleum products, used oil, and hazardous substances may include fewer elements than stated above.

#### **4.6.2 Additional Requirements**

The plan shall include provisions for documentation of spill prevention and response training provided to facility personnel. The plan may address whether the facility stores or uses any hazardous substances subject to the requirements of the Emergency Planning and Community Right-to-know Act (EPCRA) and may include provisions for compliance with the relevant notification and reporting requirements. A copy of the plan shall be provided to the local fire department and other local authorities, such as police and emergency response personnel who may provide assistance in the event of an emergency.

The plan shall include procedures for its revision any time the facility design or operations change in a manner that alters the spill potential, when the response coordinator or equipment changes, or if the plan fails in an emergency situation. The plan shall be reviewed every three years. The plan shall be sealed by a Professional Engineer registered in the state of Tennessee.

## 5.0 CLOSURE OF ACCUMULATION UNITS

TDOT facilities shall close hazardous waste accumulation areas and used-oil accumulation areas in a manner that:

- minimizes the need for future maintenance;
- provides for decontamination or proper disposal of all contaminated equipment and structures;
- provides for removal and proper disposal of contaminated soils;
- controls, minimizes, or eliminates the post-closure escape of hazardous waste, hazardous constituents, leachate, or contaminated runoff to the ground, groundwater, surface water, or atmosphere; and
- provides for proper management of any decontamination wastes resulting from closure.

The TDOT Facility Manager should document such closure actions, including the location of the accumulation unit, types of wastes managed at the unit, specific activities conducted during the closure, and disposition of the closure-related wastes.

## **6.0 PERSONNEL TRAINING**

Each TDOT facility shall ensure that personnel who handle hazardous wastes or universal wastes in accumulation areas have completed a training program that ensures compliance with the requirements of RCRA, as documented in the TDOT Core Plans for Waste Characterization, Waste Management, and Waste Disposition. Personnel who handle used oil or universal wastes or who accumulate hazardous wastes at satellite accumulation points shall complete awareness training concerning proper handling procedures, satellite accumulation point management, spill prevention, and emergency response.

### **6.1 HAZARDOUS WASTE ACCUMULATION TRAINING**

Hazardous waste accumulation training shall address the following elements:

- hazards associated with the wastes,
- waste identification and characterization criteria,
- standard operating procedures for waste handling,
- record keeping for hazardous waste accumulation,
- use of operating or sampling equipment pertinent to the job duties,
- spill and emergency response procedures in the SPR Plan,
- use of spill and response equipment, and
- standard operating procedures and record keeping for waste shipments.

Hazardous waste accumulation training shall be provided to personnel who handle hazardous waste in 90-day accumulation areas within six months of the assignment of those job duties. Training shall be documented and the training records shall include the person's name, job position, description of the duties associated with the position, required training elements, and dates of completion of the required training. Personnel required to complete hazardous waste accumulation training shall do so annually. For purposes of this training, personnel shall include all persons who work at or oversee the operations of a hazardous waste facility and whose actions or failure to act may result in non-compliances with the requirements of 40 *CFR* Part 265 and TNRule 1200-1-11-.05. This includes contractor personnel working at TDOT facilities.

### **6.2 TRAINING FREQUENCY AND RECORDKEEPING**

Personnel who accumulate hazardous waste in satellite accumulation points or who handle used oil or universal wastes shall complete awareness training annually. Awareness training shall address waste identification and characterization, proper waste handling procedures, spill prevention procedures, and emergency response procedures. Awareness training shall be documented as described in Section 6.1. Records of all training shall be maintained for current employees until shutdown of the facility. Records of former employee training must be maintained for at least three years from the employee termination date.

## 7.0 RECORD KEEPING AND REPORTING

Each TDOT Facility Manager shall complete the necessary documentation and retain the relevant records required under RCRA concerning the management of hazardous wastes, universal wastes, and used oil including training records. The minimum documentation and record-keeping requirements for TDOT facilities are specified below.

### 7.1 MANAGEMENT OF HAZARDOUS WASTES

If the facility ever generates more than 100 kg/month (~25 gal/month) of hazardous wastes, the Facility Manager shall complete a Notification of Hazardous Waste Activity and file the form with TDEC. The Facility Manager shall maintain a copy of this notification in the facility's hazardous waste file.

The Facility Manager shall maintain documentation used to characterize a hazardous waste in the hazardous waste files for a period of not less than three years after the facility has ceased generation of that waste. The Facility Manager shall ensure that a Uniform Hazardous Waste Manifest is completed for each shipment of hazardous waste from the facility. The Facility Manager shall maintain copies of the manifest for a minimum of three years.

If the facility is a SQG, the Facility Manager may complete or review and sign shipping papers, an equipment service manifest, or similar documentation for hazardous wastes that are reclaimed pursuant to a contractual agreement. Copies of the contractual agreement and the shipping papers for each shipment of hazardous waste that is reclaimed shall be retained for three years. This provision does not apply to large quantity generators of 1000 kg/month (~250 gal/month).

Facility Managers shall complete a Manifest Exception Report for shipments of hazardous wastes when the return copy of the manifest is not received from the treatment or disposal facility within 45 days. The Facility Manager shall provide a copy of the Manifest Exception Report to TDEC and retain a copy in the facility's hazardous waste files for a minimum of three years. The Facility Manager shall maintain copies of any Manifest Discrepancy Report from the receiving treatment, storage, and disposal facility in the facility's hazardous waste files for a period of three years.

Facility Managers shall maintain all documentation used as the basis for Land Disposal Restriction (LDR) Notification/Certification for each hazardous waste shipment in the facility's waste files for a minimum of five years. A copy of the LDR Notification/Certification shall be maintained for five years. LDRs are further addressed in the Hazardous Waste Disposal Core Plan.

Additionally, they shall maintain inspection logs for hazardous waste accumulation areas in the facility's hazardous waste files for three years. Documentation that demonstrates compliance with accumulation limits shall also be maintained in the facility's hazardous waste files for three years.

Facility Managers shall complete an incident report for any event that invokes the SPR Plan. The incident report shall be filed with TDEC within 15 days of the incident, and a copy of the report shall be maintained in the facility's hazardous waste files for 3 years.

A log documenting each hazardous waste generated at the facility, the characterization of that waste, the quantity generated each month, and the disposition of the waste shall be maintained and provided to the TDOT Environmental Coordinator. The Environmental Coordinator shall complete an annual report (*Hazardous Waste Stream Report and Off-site Shipping Report*) and submit that report to the TDOT



Environmental Coordinator by February 1 of each year. The TDOT Environmental Coordinator shall, in turn, submit the annual reports for all facilities, with the maintenance fees, to TDEC by March 1 of each year. Facility Managers shall maintain a copy of the report in the facility's hazardous waste files for three years.

## **7.2 MANAGEMENT OF UNIVERSAL WASTES**

Facility Managers shall maintain logs for accumulation of universal waste batteries, herbicides, and lamps that document the total quantity of each of these wastes at the facility each month.

Facility Managers shall maintain shipping papers for each shipment of universal waste that document the quantity in the shipment, date of the shipment, address and U.S. Environmental Protection Agency (EPA), identification number of the receiving facility, and DOT shipping name and number appropriate to the universal waste shipment.

## **7.3 MANAGEMENT OF USED OIL**

Facility Managers shall maintain analytical results for used-oil shipments that rebuts the presumption that used oil is hazardous waste if the total halogen content is greater than or equal to 1,000 ppm. These analytical records shall be maintained for three years.

Facility Managers shall maintain analytical records for total organic halides, flash point, and metals for shipments of used oil that is burned for energy recovery. This requirement does not apply to used-oil shipments that are re-refined.

If the facility has not completed a Notification of Hazardous Waste Activity and ships used oil to be burned for energy recovery, the TDOT Environmental Coordinator, with help from the Facility Manager, shall complete and submit the notification to TDEC. The Facility Manager shall maintain a copy of the Notification in the facility's hazardous waste files.

The Facility Manager shall maintain a record for each used-oil shipment that is burned for energy recovery identifying the date of the shipment, quantity of the shipment, name of the receiving facility, address of the receiving facility, and analytical results demonstrating that the shipment meets the used-oil fuel specifications. If the shipment does not meet the used-oil fuel specifications, the record for each shipment shall also include the EPA identification number of the receiving facility and the transporter's name, address, and EPA identification number. These records shall be maintained for a minimum of three years.

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<sup>1</sup> 40 *CFR* 262/TNRule 1200-1-111-.03—These requirements include specific accumulation requirements—<90-day, < 180-day, and satellite areas—for generators that do not require a permit.

<sup>2</sup> 40 *CFR* 265 Subparts C,D, and I/TNRule 1200-1-11-.05—General facility standards and technical standards applicable to <90-day and <180-day accumulation areas at generating facilities.

<sup>3</sup> 40 *CFR* 273/TNRule 1200-1-11-.12—Standards for universal waste management including batteries, pesticides, mercury thermostats, and lamps.

<sup>4</sup> 40 *CFR* 279/TNRule 1200-1-11-.11—Standards for management of used oil. These requirements include standards for accumulation, testing, marketing, transporting, and disposition of used oil destined for recycling.

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<sup>5</sup> 40 *CFR* 261.5 and TNRule 1200-1-11-.02(1)(e)—Special requirements for hazardous waste generated by conditionally exempt small quantity generators.

<sup>6</sup> 40 *CFR* 261 Subpart C and TNRule 1200-1-11-.02(2) —These rules identify the hazardous waste characteristics and testing methods for determining whether a waste exhibits such a characteristic.

<sup>7</sup> 40 *CFR* 273.6/TNRule 1200-1-11-.12(1)(b)—A small quantity handler of universal waste may not accumulate more than 4000 kg total of universal waste at any time.

<sup>8</sup> 40 *CFR* 273.13/TNRule 1200-1-11-.12(2)(d)—These rules include waste management requirements for universal wastes managed by small quantity handlers of universal waste.

<sup>9</sup> 40 *CFR* 273.14/TNRule 1200-1-11-.12(2)(c)—Specific wording and labeling requirements for universal waste.

<sup>10</sup> 40 *CFR* 173.13/TNRule 1200-1-11-.12(2)(d)3—Requires that all solid wastes generated from the removal of mercury-containing ampules must be characterized to determine if they exhibit a hazardous waste characteristic.

<sup>11</sup> 40 *CFR* Part 273—The federal rules governing universal waste lamps have been expanded to include incandescent and fluorescent lamps. The current state rules do not include these items.

<sup>12</sup> 40 *CFR* 270 Subpart F and TNRule 1200-1-11-.11(3)(a)(2)—Provides additional requirements for used oil processors.

<sup>13</sup> 40 *CFR* 279.22 and TNRule 1200-1-11-.11(3)(c)—Standards for used oil storage.

<sup>14</sup> 40 *CFR* 279.23 and TN Rule 1200-1-11-.11(3)(d)—Provision for burning of used oil in on-site oil-fired space heaters.

<sup>15</sup> 40 *CFR* 279.12 and TNRule 1200-1-11(9)—Used oil is prohibited from use as a dust suppressant in Tennessee.