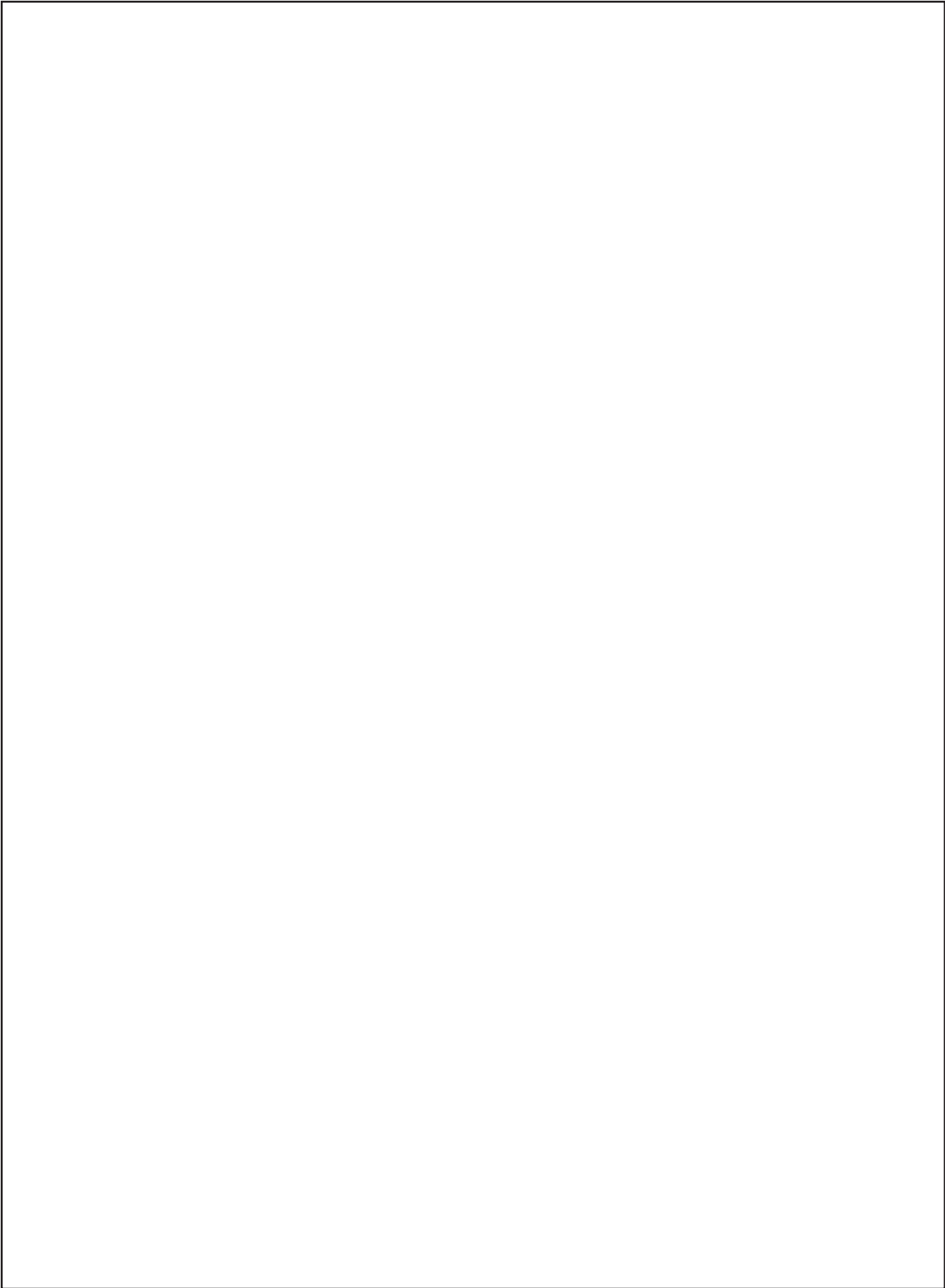


CHAPTER 20

WASTE MANAGEMENT

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20.1 INTRODUCTION

GENERAL

This chapter provides a condensed overview of federal and state environmental regulatory requirements and Department policy associated with the various types of wastes PennDOT highway maintenance and facility operations may generate. These are the minimum requirements that must be implemented for compliance. Local municipalities may have additional waste management requirements that are not included in this chapter due to the diversity throughout the Commonwealth. **Refer to Pub. 611, Volume II, Waste Management Guidance Manual for Maintenance.** For additional assistance, contact the Roadway/Strategic Environmental Management Program (Roadway/SEMP) Section for assistance.

Wastes generated by PennDOT fall into one of three categories: hazardous (including universal), residual, or municipal. Within these categories, some wastes have special handling requirements such as friable asbestos, PCB-contaminated material, infectious, chemotherapeutic and sharps waste, and used electronics. **A material is considered a waste on the day that the handler decides to discard the material.** This is referred to as the waste accumulation start date for disposal purposes. Where possible, PennDOT policy is to reduce or eliminate waste generation. Where this is not possible, PennDOT's objective is to recycle or reuse materials that would otherwise be considered wastes (e.g., aluminum cans, scrap metal, used antifreeze, scrap tires, etc.).

20.2 ROLES AND RESPONSIBILITIES

The County Maintenance Manager (CMM) is responsible for ensuring that county office staff oversee the management of wastes in accordance with work rules and regulatory requirements and have adequate resources and time to perform the work. The CMM ensures that county office staff maintain waste management records properly, comply with regulatory reporting requirements, and provide the District and Central Office with waste management data as required.

Assistant County Maintenance Managers (ACMMs) and/or Foremen assigned to stockpiles are responsible for ensuring that their personnel manage wastes in accordance with work rules and regulatory requirements and have adequate resources to perform the work. Foremen are responsible for conducting and documenting inspections in accordance with work rules to verify that wastes are managed properly.

Each employee is responsible for following waste management work rules associated with his/her job functions, and reporting waste management incidents and concerns to the supervisor. If uncertain about a waste management practice, the employee must ask the supervisor for direction. Employees are responsible for advising the supervisor if resources or work time are inadequate to perform the work.

20.3 HAZARDOUS WASTE

GENERAL

Wastes are defined as hazardous if they are a United States Environmental Protection Agency (USEPA)-listed hazardous waste from common manufacturing and industrial processes (F-list wastes), waste from specific manufacturing and industrial activities (K-list wastes), or waste from discarded commercial chemical products (P- and U-list wastes). Wastes may also be hazardous due to characteristics (D-list) such as ignitability, corrosivity, reactivity, or toxicity. Acute hazardous waste is a USEPA term that applies to hazardous wastes that may cause severe health effects in small quantities. USEPA has defined acute hazardous wastes as all P-list wastes and the six F-list dioxin-containing wastes.

Hazardous wastes are regulated from "Cradle to Grave" under the USEPA Resource Conservation and Recovery Act (RCRA) in the United States Code of Federal Regulations (CFR) Title 40, Protection of the Environment, Parts 260 through 268 (40 CFR 260 – 268) and under the Pennsylvania Code (PA Code) Title 25, Environmental Protection Chapters 260 through 270. The transportation of hazardous waste is regulated under United States Department of Transportation (USDOT) Title 49, Pipeline and Hazardous Materials Safety Administration Parts 100 through 199 (49 CFR 100 – 199).

Refer to Pub. 611, Volume II, Waste Management Guidance Manual for Maintenance, 3.0 Hazardous Waste Management.

TYPICAL PENNDOT WASTES

Hazardous wastes typically generated during PennDOT maintenance activities are D-list characteristic hazardous wastes that include:

- Aerosol cans
- Fuels (gasoline or contaminated diesel)
- Parts washer solvents
- Paints

1. Aerosol Cans

Aerosol cans may be hazardous waste if they are not fully empty when disposed. PennDOT maintains aerosol can puncturing units to ensure that the cans meet regulatory requirements for being considered "empty." The puncturing units relieve can pressure and collect the can residues for later characterization and proper disposal.

PennDOT policy is to dispose of punctured aerosol cans as scrap metal. PennDOT employees shall not dispose of aerosol cans that have not been punctured unless the recycling vendor performs the puncturing. In this case, the facility must properly store the cans and follow the vendor's instructions for placing them in the scrap metal container for disposal.

2. Fuels

Contaminated (e.g., diesel contaminated with gasoline) or spent fuels that cannot be used, recycled or burned for energy recovery are classified as hazardous waste based on ignitability (D001).

3. Parts Washer Solvent

A variety of cleaning agents are used for parts cleaning that can be hazardous if improperly disposed. Parts washers may utilize citrus-based cleaners that may be ignitable, hot water/cleaning agents that may be corrosive, petroleum distillates (e.g., mineral spirits, etc.) that may be ignitable, and/or organic solvents (e.g., chlorinated solvents) that may be toxic.

PennDOT garages generally use a vendor for parts washer service. The vendor reclaims spent solvent for reuse. USEPA excludes spent solvents that are being reclaimed from being classified as a hazardous waste. The vendor's contract and invoices are documentation of proper management practices.

In instances where PennDOT personnel maintain the parts washer by replenishing the cleaning chemicals and disposing of the filter/grease and grit, generator knowledge or analytical testing must be used to characterize waste for disposal.

4. Paint

Typical paint-related wastes generated in maintenance operations include excess paint (solvent and water-based), paint solvents and thinners, paint filters, paint truck waste, and empty paint containers. Fully dry, empty paint containers can be disposed in municipal trash.

Some paint wastes may be hazardous based upon characteristics (ignitability) or may contain toxic metals (e.g., lead, cadmium, chromium). Review the Safety Data Sheet (SDS) for the specific product to determine if the waste generated is hazardous.

GENERATOR CATEGORIES/ACCUMULATION TIMES

There are three hazardous waste generator categories that are based upon **monthly** hazardous waste generation limits as follows:

Status/Category	Very Small Quantity Generator (VSQG)	Small Quantity Generator (SQG)	Large Quantity Generator (LQG)
Monthly Waste Generation Limits	<ul style="list-style-type: none"> • <220 lbs. per month of hazardous waste • <2.2 lbs. per month of acute hazardous waste • <220 lbs. per month of acute hazardous waste cleanup residue/debris 	<ul style="list-style-type: none"> • >220 lbs. and <2,200 lbs. per month of hazardous waste • <2.2 lbs. per month of acute hazardous waste • <220 lbs. per month of acute hazardous waste cleanup residue/debris 	<ul style="list-style-type: none"> • >2,200 lbs. per month of hazardous waste • >2.2 lbs. per month of acute hazardous waste • >220 lbs. per month of acute hazardous waste cleanup residue/debris
Total Waste Accumulation Limits	At any time, no more than: <ul style="list-style-type: none"> • 2,200 lbs. of hazardous waste; or • 2.2 lbs. of acute hazardous waste; or • 220 lbs. of acute hazardous waste cleanup residue/debris. 	At any time, no more than: <ul style="list-style-type: none"> • 13,200 lbs. of hazardous waste; or • 2.2 lbs. per month of acute hazardous waste; or • 220 lbs. of acute hazardous waste cleanup residue/debris. 	No limit on quantities.
Obtain USEPA ID #	Not required	Required to obtain USEPA ID#	Required to obtain USEPA ID#
Accumulation Time Limits	None. PennDOT policy is no more than 180 days. If total accumulation limit for the VSQG is exceeded for either the acute waste or acute waste residue/debris, waste must be disposed within 90 days.	No more than 180 days. If total accumulation limit for the SQG is exceeded for either the acute waste or acute waste residue/debris, waste must be disposed within 90 days.	No more than 90 days.

WASTE MANAGEMENT

Hazardous waste shall be managed to ensure it does not impact human health, safety, or the environment. PennDOT maintenance facilities must have a designated, secure storage area for hazardous wastes that minimize potential impacts. Hazardous waste generated at a maintenance facility shall be stored at the facility until disposed.

Hazardous waste generated on the roadway right-of way (ROW) shall be temporarily stored where generated. Under no circumstances shall hazardous waste from roadway ROW be transferred or stored at a PennDOT maintenance facility.

PennDOT policy is to properly manage and dispose of hazardous waste through a contracted hazardous waste transportation and disposal vendor accompanied by a Uniform Hazardous Waste Manifest (UHW). Facilities that routinely generate hazardous waste must obtain an EPA ID number.

1. Storage and Labeling

The designated, secure hazardous waste storage area shall be:

- A. Labeled "Hazardous Waste" in a conspicuous place easily visible to employees, visitors, emergency responders, waste handlers, or other persons on site
- B. Covered and protected from weather
- C. Contained, having an impervious base and containment capable of holding 110% of the single largest container in the storage area
- D. Inspected at least weekly when waste is stored

2. Hazardous waste storage containers shall be:

- A. USDOT-approved containers
- B. In good condition and compatible with the hazardous waste material being stored
- C. Labeled "Hazardous Waste," include a description of the waste material, hazard warning properties, and an accumulation start date
- D. Closed except when adding or removing waste (e.g., lid or bungs)
- E. Stacked no more than two (2) high and in or on proper containment

When storing hazardous waste in drums, open-head (removable lid) drums are to be used only for solid materials and closed-head drums with bungs are to be used only for liquid materials.

3. Spill Preparedness

The Combined Facility Response Plan (CFRP) must include a specific section to address the hazardous waste storage area that informs personnel of the actions they must take to comply and ensure that proper arrangements have been made with local authorities and first responders informing them that hazardous waste is stored on site.

4. Emergency equipment must include:

- A. An alarm or communication system at the facility
- B. A fire extinguisher at the storage area
- C. Spill control equipment

Hazardous wastes that are solid may be swept up if spilled. For liquids, use absorbents, spill mats, or rags to absorb the spilled material. Prevent liquids from reaching drains or migrating off the facility property. The spill cleanup material and spent absorbents are hazardous waste. Containerize these

materials to ensure waste is secured. Label the container as described above and dispose within 180 days (or 90 days if an LQG) of the cleanup date. Do not mix the waste with any other material. Refer to the CFRP for additional details including notification reporting.

TRAINING REQUIREMENTS

Department employees who complete hazardous waste manifests or otherwise offer hazardous waste for transport shall be trained in accordance with 49 CFR 172.704. This requirement includes: hazardous materials general awareness training, hazardous materials function-specific training, safety training, and transportation security training. The training must occur before the individual signs a UHWM and must recur every three years from the calendar date previously trained. The employee must also be listed on the Department's list of authorized signatories.

RECORD KEEPING

It is PennDOT policy that all hazardous wastes that are transported for disposal must be accompanied by a properly completed UHWM that is signed by a trained and authorized employee. Department employees who are signing the UHWM must ensure that the waste is properly prepared for transportation including: packaging, labeling, marking, placarding, and properly manifested before signing the UHWM shipping certification.

The UHWM Copies 1 and 6 contain necessary records of disposal including the date of shipment, the types and quantities of hazardous waste shipped, the containers used, the waste generator, the waste transporter, the waste disposal facility, the date of shipment by PennDOT, and the date of receipt at the disposal/destination facility. Exception reporting to USEPA is required if Copy 6 of the manifest is not returned. Completed copies of the UHWM must be kept indefinitely per PennDOT policy.

Records of test results, waste analyses or other determinations associated with hazardous waste characterization shall be kept indefinitely. If a PennDOT facility becomes an LQG, a biennial report must be submitted to PADEP by March 1 of each even numbered year. The Roadway/SEMP Section will provide guidance in this event.

PennDOT requires that hazardous waste disposed be reported in the waste tracking database. Counties are required to scan and e-mail all waste receipts to a resource account on a routine basis.

20.4 UNIVERSAL WASTES

GENERAL

Universal wastes are hazardous wastes that are commonly generated by a wide variety of establishments and are present in significant volumes to cause environmental impact if not properly managed. Universal wastes are regulated under RCRA regulation in 40 CFR Part 273 and 25 PA Code 266b.

Under federal regulations, batteries, pesticides, mercury-containing devices, and lamps are identified. Under Pennsylvania regulations, universal waste streams also include oil-based finishes (e.g., oil-based paints, lacquers, stains, aerosol paint cans that are not empty) and silver-bearing photographic solutions. If these wastes are not managed as universal waste, they are considered hazardous waste and subject to all hazardous waste requirements specified in 20.3.

Refer to Pub. 611, Volume II, Waste Management Guidance Manual for Maintenance, 6.0 Universal Waste Management.

TYPICAL PENNDOT WASTES

Universal wastes typically generated during PennDOT maintenance activities include:

- Batteries, lead-acid (vehicle)
- Batteries (rechargeable)
- Lamps

- Mercury-containing equipment
- Pesticides/herbicides

1. Batteries

Vehicle batteries contain lead (toxic) and acid (corrosive) and can be managed under either universal waste or hazardous waste regulations. PennDOT manages vehicle batteries as universal waste. PennDOT purchases vehicle batteries from vendors with a service agreement that includes vendor pickup and recycling the used batteries. PennDOT tracks and receives battery core credit for the return.

Spent rechargeable batteries (e.g., tool batteries, electronics batteries, etc.) are managed as universal waste. Spent batteries from facility and road emergency lighting may be lead-acid or rechargeable and are also managed as universal waste. PennDOT policy is to recycle all rechargeable batteries.

Spent alkaline, carbon-zinc and zinc-air batteries are non-hazardous and non-recyclable. These batteries can be disposed in municipal or residual trash.

2. Lamps

PennDOT uses a wide variety of lamps/bulbs in its facilities and operations. Lamps/bulbs that are regulated as universal waste include:

- A. Fluorescent lamps (tubes, compact fluorescent lamps, etc.)
- B. High-intensity discharge (HID)
- C. Neon
- D. Mercury vapor
- E. High-pressure sodium
- F. Metal halide

PennDOT policy is to recycle all universal waste lamps. If a universal waste lamp/bulb is broken or not recycled, then it must be managed as a hazardous waste.

3. Mercury-containing Equipment

Typical mercury-containing equipment are:

- A. Thermostats (e.g., mechanical thermostats for office/home)
- B. Switches
- C. Thermometers
- D. Relays
- E. Manometers
- F. Thermocouples
- G. Gauges

PennDOT policy is to recycle all mercury-containing equipment. If mercury-containing equipment is not recycled, then it must be managed as a hazardous waste.

4. Pesticides/Herbicides

Pesticides/herbicides are used for facility and road maintenance operations. Old, unusable, or unwanted pesticide/herbicide products are managed as universal waste. PennDOT policy is to dispose of waste pesticide/herbicide through the Pennsylvania Department of Agriculture (PDA) Chemsweep free collection and disposal program.

Empty pesticide/herbicide containers must also be properly managed. Whenever possible, purchase products in vendor-returnable containers. If empty containers are not returnable, triple-rinse the containers (collecting and re-using the rinse water for application), puncture the containers to render them useless, then choose one of two options for disposal:

- A. Dispose of empty containers as municipal/residual waste.
- B. Dispose of empty containers through the PDA Plastic Pesticide Container Recycling (PPCR) Program.

5. Other Wastes

There are other wastes found at PennDOT facilities and in PennDOT operations that while not defined as universal wastes by regulations, must be properly managed to prevent environmental impact. These wastes include electrical ballast and electronic wastes (e-waste).

PennDOT policy is to recycle all electrical ballast through an approved vendor. PennDOT-generated e-waste (e.g., computers, peripherals, etc.) shall be returned to the District Information Technology (IT) unit for proper disposal. Roadside collected e-waste shall be disposed utilizing the Pennsylvania E-Marketplace for recycling vendors.

GENERATOR CATEGORIES/ACCUMULATION TIMES

There are two universal waste generator categories that are based upon the total accumulation of all universal wastes accumulated at any time. A small quantity handler of universal waste (SQHUW) accumulates no more than 5,000 kilograms (approximately 11,000 pounds) at any time in during the calendar year. If more than 5,000 kilograms of universal waste is accumulated, then the handler is designated as a large quantity handler of universal waste (LQHUW) through the end of that calendar year.

Maximum accumulation time for any universal waste stream is 365 days from the accumulation start date (e.g., first lamp/bulb in box, first rechargeable battery in container, etc.).

WASTE MANAGEMENT

Universal wastes shall be managed to ensure that it does not impact human health, safety, or the environment. PennDOT maintenance facilities must have designated, secure storage area(s) for universal wastes. In the event of a spill or release, it is PennDOT policy to dispose of the materials as hazardous waste.

1. Storage and Labeling

The designated universal waste storage area(s) must be:

- A. Labeled "Universal Waste" and identify the type of universal waste stored
- B. Controlled to prevent breakage, releases, leaks, or spills to the environment
- C. Segregated from non-compatible materials and other wastes

Universal waste storage containers (e.g., boxes, pails) shall be:

- A. Labeled or marked to identify the type of waste:

- 1) Universal Waste – Batteries or Waste Batteries or Used Batteries
 - 2) Universal Waste – Lamps or Waste Lamps or Used Lamps
 - 3) Universal Waste – Pesticides or Waste Pesticides
 - 4) Universal Waste – Mercury-Containing Equipment or Waste Mercury-Containing Equipment or Used Mercury-containing Equipment
 - 5) Any “other wastes,” must be labeled “Waste” or “Used” and specific type of waste
- B. Dated with the accumulation start date
- C. Closed except when adding items to the container

Vehicle batteries shall be on or in containment (e.g., spill pallet, berm, “clamshell,” etc.) and protected from weather. It is recommended that the battery be dated when removed from the vehicle.

Rechargeable batteries shall have their electrodes taped or otherwise covered to prevent contact with other batteries that can result in discharge or fire.

Waste lamps shall be stored in a manner that prevents breakage. Lamps must be segregated by type/shape This may include storage in pre-paid universal lamp boxes specific to the lamp size (e.g., lamps by shape and length) or storage in the original manufacturer boxes that do not contain new lamps.

Mercury-containing equipment shall be stored in a manner that prevents release. It is recommended that the equipment (e.g., thermostat, etc.) not be disassembled to remove the mercury ampoule.

2. Spill Preparedness

Proper storage of universal wastes will minimize the potential for spills. Where applicable, appropriate spill kits/materials shall be available (e.g., sorbent materials, etc.). In the event of a broken lamp/bulb refer to the SEMP Fact Sheet “Emergency Response – Broken Lamps/Bulbs” available on the P:/penndotshared drive.

Universal wastes that are solid may be swept up if spilled. For liquids, use absorbents, spill mats, or rags to absorb the spilled material. Prevent liquids from reaching drains or migrating off the facility property. The spill cleanup material and spent absorbents are hazardous waste. Secure these wastes in a sealed container. Manage, dispose and report on the spill materials as described in 20.3.

TRAINING REQUIREMENTS

PennDOT facilities that are SQHUW must inform all employees who handle or have responsibility for managing universal waste of the proper handling and emergency procedures appropriate to the type(s) of universal wastes handled at the facility. SEMP Fact Sheets for the various types of universal wastes may be part of this training and are available on the shared drive at P:/PENNDOT SHARED/SEMP EMS/SEMP EMS resources and tools/SEMP training materials.

RECORD KEEPING

It is PennDOT policy to keep records of universal waste shipments. The facility is responsible for documenting/tracking the universal waste accumulation time to demonstrate that no universal waste on-site has been stored longer than 365 days from accumulation start date. Typically, this is demonstrated by placing the accumulation start date on the item or the container.

PennDOT requires that universal waste disposed be reported in the waste tracking database. Counties are required to scan and e-mail all waste/recycling receipts to a resource account on a routine basis.

Additionally, it is Commonwealth policy for each County to report universal waste recycled (e.g., bulbs, batteries, etc.) to the Department of General Services (DGS) on a quarterly basis (March 25th, June 25th, September 25th and December 23rd).

20.5 RESIDUAL WASTE

GENERAL

Residual waste is non-hazardous industrial waste that does not fit the definition of municipal waste. Residual waste is a classification of waste unique to Pennsylvania and represents the vast majority of waste generated by PennDOT maintenance operations. Residual waste is garbage, refuse, other discarded material or other waste, including solid, liquid, semisolid or contained gaseous materials resulting from industrial, mining and agricultural operations. PennDOT's residual waste streams are either disposed (e.g., used asphalt slabs, broken tools, wash bay grit, etc.), recycled (e.g., tires, antifreeze, etc.) or beneficially reused (e.g., Reclaimed Asphalt Pavement [RAP], waste oil for burning, etc.).

Common residual waste regulatory requirements are in 25 PA Code 287, Residual Waste Management – General Provisions, 25 PA Code 298, Management of Waste Oil, and 25 PA Code 299, Storage and Transportation of Residual Waste.

Refer to Pub. 611, Volume II, Waste Management Guidance Manual for Maintenance, 4.0 Residual Waste Management.

TYPICAL PENNDOT WASTES

Typical residual wastes generated as part of PennDOT maintenance operations include:

- Waste oil
- Used antifreeze
- Oily rags and used absorbent materials (excluding solvents and gasoline)
- Wash bay grit trap waste
- Drained oil and fuel filters
- Oil/water separator waste
- Aqueous parts washer liquid
- RAP
- Used asphalt chunks/slabs
- Scrap metal including aerosol cans
- Used tires and shreds
- Sandblast grit

GENERATOR CATEGORIES/ACCUMULATION TIMES

Waste generator categories are not specifically identified for residual waste generators. The average volume of residual waste generated per month is used to determine regulatory reporting requirements as noted below.

All residual waste must be disposed within 365 days of the accumulation start date.

WASTE MANAGEMENT

Residual waste shall be stored to ensure it does not create a nuisance, become harmful or present a threat to public health, safety or the environment. If storing residual waste outside, ensure materials are stored to limit contact with rainwater and potential migration of material off the facility property.

1. Storage and Labeling

Residual waste containers (e.g., tanks, drums, dumpsters, rolloffs) shall be compatible with the waste material being stored and prevent leaks. Lids and/or bungs must be closed except when adding or removing waste. Containers of waste liquids must be stored on containment pallets with sufficient volume to hold 110% of the largest single container.

Each waste container shall be clearly labeled as “residual waste” or as the specific type of residual waste it contains. For mobile containers, such as dumpsters, the label shall be adjacent to the container. The label shall include the accumulation start date where feasible. Other means may also be established by the District to track waste accumulation time. Tanks shall be clearly labeled as “residual waste” and the type of residual waste shall be identified (e.g., “waste oil,” “used antifreeze,” etc.).

Do not mix or store residual waste with other types of wastes. Comingling (i.e., mixing both types of waste in the final collection container) residual and municipal waste may be acceptable and must first be verified with the waste hauler/waste collection vendor.

2. Spill Preparedness

Residual wastes that are solid may be swept up if spilled. For liquids, use absorbents, spill mats, or rags to absorb the spilled material. Prevent liquids from reaching drains or migrating off the facility property. The spill cleanup material and spent absorbents are residual waste. Secure these wastes in a sealed container. Label the container as described above and dispose within 365 days of the cleanup date. Do not mix the waste with any other material. Refer to the CFRP for additional details including notification reporting to regulatory agencies depending on the material spilled and volume involved.

TRAINING REQUIREMENTS

There are no regulatory training requirements associated with residual waste.

RECORD KEEPING

All residual waste generators are required to maintain records of the types and amounts of residual waste generated, the dates waste was generated and disposed, and the waste transporter and disposal facility.

A facility that generates more than an average of 2,200 pounds of residual waste per location per month based on generation in the previous year is required to submit a Residual Waste Biennial Report to PADEP by March 1 of each odd numbered year. In addition, the facility must complete the following PADEP forms:

- Develop Source Reduction Strategies (Form 25R); and
- Submit an Annual Chemical Analysis of waste (Form 26R)

PennDOT requires that residual waste disposed be reported in the waste tracking database. If residual waste is collected in a dedicated container, the weight on the bill of lading/weight ticket/invoice is reported in the waste tracker. Counties are required to scan and e-mail all waste/recycling receipts to a resource account on a routine basis. County personnel must estimate the composition of a comingled waste stream and document that information on the waste receipt. This is recorded in the waste tracking database and is used to determine whether the County generates sufficient residual waste to comply with regulatory reporting requirements.

Additionally, it is Commonwealth policy for each County to report the amount of residual waste recycled to the Department of General Services (DGS) on a quarterly basis (March 25th, June 25th, September 25th and December 23rd).

Refer to 20.8 for information on residual waste transport using PennDOT-owned vehicles.

20.6 MUNICIPAL WASTE

GENERAL

Municipal waste is defined as garbage, refuse, industrial lunchroom or office waste and other solid, liquid, or semi-solid materials resulting from the operation of residential, municipal, commercial, or institutional establishments, and sludge from Department-owned wastewater treatment plant. Municipal waste comes from PennDOT office activities, lunchroom waste and office cleaning activities. Additionally, other specific wastes have been deemed municipal waste by regulatory definition and are noted below.

Municipal waste regulatory requirements are in 25 PA Code 271, Municipal Waste Management – General Provisions, and 25 PA Code 285, Storage, Collection and Transportation of Municipal Wastes.

Refer to Pub. 611, Volume II, Waste Management Guidance Manual for Maintenance, 5.0 Municipal Waste Management.

TYPICAL PENNDOT WASTES

Typical municipal wastes generated as part of PennDOT maintenance operations include:

- Office and lunchroom trash
- Paper and cardboard that is not recycled
- Vegetative material from land clearing
- Construction and demolition (C&D) waste
- Street sweepings and anti-skid (not comingled with non-municipal waste)
- Alkaline and carbon-zinc batteries
- Incandescent lamps

Districts who believe that street sweepings or used anti-skid at specific stockpiles may consistently qualify as Clean Fill rather than municipal waste should contact Roadway/SEMP Section for instructions.

GENERATOR CATEGORIES/ACCUMULATION TIMES

Waste generator categories are not applicable to municipal waste.

All municipal waste must be disposed within 365 days of the accumulation start date.

WASTE MANAGEMENT

Municipal waste shall be stored to ensure it does not create a nuisance, become harmful, or present a threat to public health, safety or the environment. If storing municipal waste outside, ensure materials are stored to limit contact with rainwater and potential migration of material off the facility property.

1. Storage and Labeling

Municipal waste shall not be mixed with other types of wastes. Comingling (i.e., mixing both types of waste in the final collection container) municipal and residual waste may be acceptable and must first be verified with the waste hauler/waste collection vendor.

Municipal waste containers (e.g., drums, dumpsters, rolloffs) shall be designed to prevent leaks, and shall be equipped with a lid or cover if possible. Where lids or tarps cannot effectively cover larger dumpsters or rolloffs containing potentially polluting waste materials, either the dumpster or rolloff shall be placed under roof, or its contents shall be bagged to prevent leakage. Waste containers or waste storage piles/areas (e.g., clearing/vegetative waste, street sweepings, etc.) must be labeled or signed as “municipal waste” or as the specific type of municipal waste.

2. Spill Preparedness

Municipal waste must be managed and stored to prevent impact to waters of the Commonwealth.

TRAINING REQUIREMENTS

There are no regulatory training requirements associated with municipal waste.

RECORD KEEPING

Municipal waste generators must maintain sufficiently detailed records to demonstrate municipal waste is being stored and disposed as required by regulations. Municipal waste disposal contracts and invoices can be utilized to demonstrate that municipal waste disposal accumulation times are not exceeded. There are no federal or state reporting requirements. However, local or county solid waste agencies may require reporting. The PennDOT facility contact responsible for waste tracking should determine whether any local reporting requirements apply.

PennDOT requires that municipal waste disposed be reported in the waste tracking database. If municipal waste is collected in a dedicated container, the weight on the bill of lading/weight ticket/invoice is reported in the waste tracker. If municipal and residual waste are comingled, estimate the percentage of each waste stream collected and report a weight for each. Counties are required to scan and e-mail all waste/recycling receipts to a resource account on a routine basis

Additionally, it is Commonwealth policy for each County to report the amount of municipal waste recycled (e.g., cardboard, paper, aluminum cans, plastic, etc.) to the Department of General Services (DGS) on a quarterly basis (March 25th, June 25th, September 25th and December 23rd).

20.7 SPECIAL HANDLING AND ROADSIDE WASTES

GENERAL

There are a number of special handling and roadside wastes PennDOT may encounter. They require the application of special storage, collection and disposal practices based on their physical, chemical, and biological characteristics.

Special handling and roadside waste regulatory requirements are in 25 Pa Code 271, Municipal Waste Management – General Provisions, 25 Pa Code 285, Storage, Collection and Transportation of Municipal Wastes, Covered Devices Recycling Act (CDRA)

Refer to Pub. 611, Volume 2, Waste Management Guidance Manual for Maintenance, Chapter 8, Special Handling Wastes and Chapter 9, Roadside Wastes and Adopt-a-Highway Program Wastes.

TYPICAL PENNDOT WASTES

Special handling and roadside wastes PennDOT may encounter include:

- Infectious, chemotherapeutic, and sharps waste (ICW)
- Asbestos waste
- PCB-containing waste
- Electronic waste (e-waste)
- Illicit drug manufacturing waste

GENERATOR CATEGORIES/ACCUMULATION TIMES

Waste generator categories are not applicable to these special waste categories.

All special wastes must be disposed within 365 days of the accumulation start date.

WASTE MANAGEMENT

As part of roadside maintenance operations, PennDOT personnel may encounter any of the wastes identified above. Contact the ACMM if you encounter infectious, chemotherapeutic, and sharps waste or asbestos, PCB wastes, or illicit drug manufacturing wastes. If you inadvertently encounter these wastes, follow the storage and labeling practices below and contact the ACMM immediately. Additional guidance is found in Publication 611, Volume 2, Chapters 8 and 9.

Electronic devices specifically covered by the CDRA that PennDOT may encounter in roadside operations include: computers, computer monitors, peripherals and televisions. These devices must be stored at a PennDOT facility and be recycled. Roadside collected e-waste shall be disposed utilizing the Pennsylvania E-Marketplace for recycling vendors and may not be disposed as municipal, residual or hazardous waste.

1. Storage and Labeling

Segregate the various waste streams and store in containers that will prevent leaks, are constructed of rust and corrosion proof materials, be watertight, and be equipped with a tight-fitting lid or cover or otherwise sealed. Waste containers must be labeled as "municipal or residual waste" or as the specific type of municipal or residual waste.

Store electronic waste in a secure area to prevent breakage. Label the area/container or device "used electronic device."

2. Spill Preparedness

All waste must be managed and stored to prevent impact to waters of the Commonwealth.

TRAINING REQUIREMENTS

There are no specific regulatory training requirements associated with these wastes.

RECORD KEEPING

PennDOT must maintain sufficiently detailed records to demonstrate the waste is being stored and disposed as required by regulations. Report the amount of waste disposed in the waste tracking database. If the waste is recycled, it is Commonwealth policy to report the amount of municipal waste recycled to the Department of General Services (DGS) on a quarterly basis (March 25th, June 25th, September 25th and December 23rd).

PADEP Form 2540-FM-BWM0240, Regulated Medical and Chemotherapeutic Waste Shipping Log must be completed when disposing of this waste. Maintain these records indefinitely per PennDOT policy.

20.8 WASTE TRANSPORTATION

GENERAL

PennDOT vehicles do not transport waste in the course of normal operations. Existing waste contracts should be utilized for waste hauling and disposal whenever possible. However, PennDOT does utilize Department vehicles to transport waste in certain circumstances. When self-transporting, there are specific regulations that must be followed for disposal or recycling. PennDOT personnel and vehicles may be used to transport waste generated from roadside activities including Adopt-a-Highway and intermittent roadside cleanup. The transport of municipal waste is regulated under 25 PA Code 285, and the transport of residual waste is regulated under 25 PA Code 299, Storage, Collection, and Transportation of Residual Waste.

Refer to Pub. 611, Volume II, Waste Management Guidance Manual for Maintenance.

TRANSPORTATION OF WASTE USING DEPARTMENT FORCES

1. Hazardous Waste

PennDOT does not transport hazardous waste. Only a licensed hazardous waste transporter with an official USEPA transporter ID number and Hazardous Transporter license can legally transport hazardous waste for disposal. PennDOT maintains a Commonwealth-wide hazardous waste disposal contract that shall be utilized for transportation and disposal.

2. Universal Waste

PennDOT commonly transports universal wastes from non-01 facilities to the County 01 facility for proper storage and disposal. PennDOT does not transport universal waste directly to the recycling/disposal facility. If PennDOT personnel self-transport universal waste to the County 01 then:

- A. The waste must be transported in a manner that prevents breakage, spillage, or other release
- B. Any release and residues must be contained and remediated

3. Residual and Municipal Waste Transportation

PennDOT vehicles greater than 17,000 lbs. gross vehicle weight (GVW) or a trailer greater than 10,000 lbs. GVW that haul municipal or residual waste for disposal or processing require an Act 90 Waste Transporter Authorization Sticker. The Waste Authorization Sticker is vehicle-specific and must be renewed annually. PennDOT county facilities maintain several authorized trucks. No other trucks of this size shall be utilized to transport municipal or residual waste. A SEMP Fact Sheet "Transporting Municipal and Residual Waste" is available on shared drive at P:/PENNDOT SHARED/SEMP EMS/SEMP EMS resources and tools/SEMP training materials.

Additional requirements for authorized PennDOT vehicles transporting municipal or residual waste include:

- A. Signage that includes the vehicle owner and business address
- B. Signage (permanent or detachable) of the specific type of waste transported (e.g., "Residual Waste," "Municipal Waste," or "Municipal/Residual Waste") with letters at least six (6) inches in height
- C. A stocked spill kit
- D. A contingency plan in the cab that identifies emergency contact numbers and describes how to minimize and abate releases

- E. A daily operational record in the cab when transporting waste that includes, at a minimum:
- 1) Type of waste transported
 - 2) Weight or volume transported
 - 3) Name, address and telephone number of the generator (i.e., the PennDOT facility)
 - 4) Name and location of the transfer and/or processing facility for the waste

If a PennDOT vehicle transports scrap tires for disposal or recycling, in addition to the above requirements, the vehicle must have a PADEP Waste Tire Hauling Authorization card in the cab. The Roadway/SEMP Section applies for these cards annually and distributes them to the Districts for further distribution. The cards are not truck-specific, but can only be used in conjunction with a Waste Authorization Sticker vehicle.

20.9 SEMP WASTE TRACKING & MONITORING

GENERAL

This Chapter provides an overview of the waste tracking and monitoring tools used by PennDOT to monitor and evaluate regulatory compliance and, where required, determine generator status for record keeping and reporting.

WASTE TRACKING TOOLS

PennDOT and DGS have established two (2) tools for tracking volume of waste generated/recycled. PennDOT's waste tracking database is a repository for waste record keeping and reporting. An Excel spreadsheet tracks waste generated/recycled by each District. Counties must scan and email all waste/recycling receipts to a resource account for verification and then information is entered in the waste tracking database. Adopt-A-Highway and roadside cleanup waste quantities are not reported in the waste tracking database.

Individual Counties must also report volume of recycled material to DGS through Survey Monkey. DGS reporting is required quarterly (March 25th, June 25th, September 25th and December 23rd).

Refer to Pub. 611, Volume II, Waste Management Guidance Manual for Maintenance, 10.0, Waste Tracking and Record Keeping.

WASTE MONITORING TOOLS

There are internal compliance monitoring requirements that Districts must incorporate into their SEMP including:

1. Foreman's Walkaround Inspection (weekly)
2. M-900/OS-641 County Facility Inspections (monthly, quarterly, annual)
3. M-75 County Tank Inspections (monthly)
4. M-76 Rainwater Release Inspections (prior to rainwater release from containment)
5. M-74 SEMP Internal Compliance Audits (annual)

External compliance monitoring requirements include an annual third-party environmental compliance audit for each District.

Refer to Pub. 752, Strategic Environmental Management Program (SEMP) Manual.

