VIRGINIA DEPARTMENT OF TRANSPORTATION

WASTE MANAGEMENT AND POLLUTION PREVENTION GUIDE

JANUARY, 2015

MS4 / Waste Management Pollution Prevent Guide (WMPPG) CROSSWALK

MS4 No.	Permit Requirement	Corresponding VDOT Requirement and Guide
MS4 – 1	Ensure proper disposal of waste, including landscape	Waste Management Guides– 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, and 3.21, 3.22
MS4– 2	Prevent the discharge of vehicle wash water	Waste Management Guides– 3.23 and 4.3
MS4– 3	Prevent the discharge of wastewater	Waste Management Guide –4.3
MS4–4	Minimize discharge of pollutants from bulk storage	Waste Management Guides– 4.1, 4.4, 4.5, and 4.6
MS4–5	Prevent discharge from leaking vehicles and equipment	Waste Management Guides– 4.2 and 4.7
	Require implementation of BMP during utility construction and maintenance activities	ESC Standards & Specifications
	Prevent illicit discharges	IDDE Manual
	Ensure proper application of pesticides and fertilizers	DACS certification and nutrient management plan

The MS4/WMPPG Crosswalk chart provides a general overview of Specific MS4 Permit requirements and the associated WMPP Guides that can be used to assist with compliance with the requirement. As reflected in the chart, a generic MS4 Number has been assigned to the permit requirement that have an associated Waste Management Guide. The corresponding guides are listed in the third column. Likewise as an additional compliance aid, within the Table of Contents on the following page, the MS4 Number is also listed next to each Guide Number.

Environmental Hazmat Team Site

The Hazardous Materials Section of the Environmental Division maintain a team site where all the Guides presented in this document are maintained and updated as needed. The Team Site can be accessed at the following link:

https://insidevdot.cov.virginia.gov/div/env/HM/WMMGuide/SitePages/Home.aspx

Table of Contents

Section 4 – Pollution Prevention and Other Hazmat Program Information

Section 5 – Training

Waste Management/Pollution Prevention Guide Supplemental Appendices

Section 1

Solid and Hazardous Waste Overview

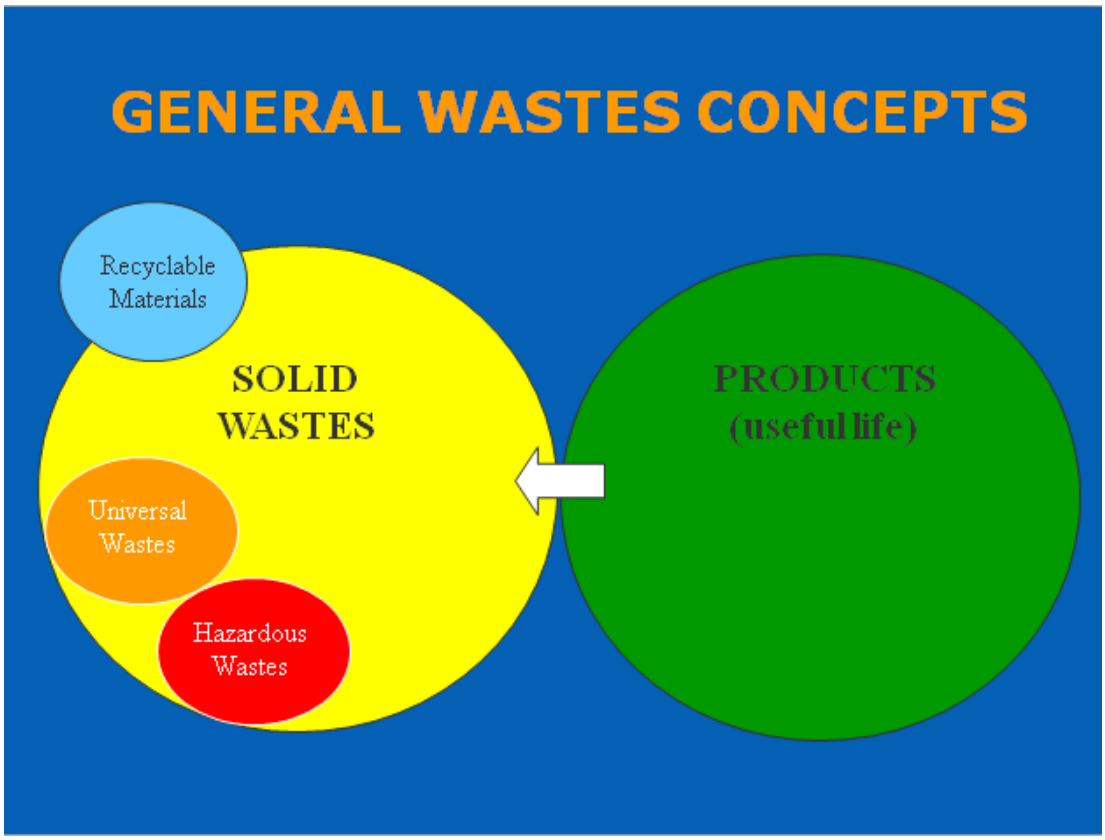
It it simplest terms, the definition of solid waste within the Virginia Solid Waste Management Regulations is “any discarded material”. The regulations then expand on this definition by providing 7 pages of exclusions and conditional exemptions.

Solid waste are further categorized as either Non-Hazardous Waste or Hazardous Waste, with Universal Waste being a subcategory of Hazardous Waste.

For VDOT, solid wastes are basically trash and other debris that are generated during maintenance and other operations that are sent to a landfill for disposal. Certain materials that are recycled are exempt from the soild waste regulation.

The management of Hazardous Waste is strictly controlled between the point of generation, on-site management, transportation, and disposal. Management of Hazardous Waste are described in detail in Guide 1.1 and Guides 2.0 through 2.3, as well as each specific guide for wastes that may be required to be managed as a hazardous waste.

The following guides provide an overview proper waste management procedures and options for solid wastes, hazardous wastes and universal wastes generated during VDOT operations.



VDOT facility operations produce wastes. While some of these wastes may seem like ordinary trash, they may actually be regulated hazardous wastes. As such, the way they are handled, stored, and disposed of is strictly mandated by state and federal law and there are substantial fines and possible criminal penalties for violations of the requirements. Therefore, strict adherence to these procedures is important. If you have any questions or need any assistance in classifying and properly managing hazardous wastes, please contact your Regional Hazardous Materials Manager or Central Office Hazardous Materials Section.

While not necessarily comprehensive, the following list of VDOT operations has the potential to generate hazardous wastes:

- Facility maintenance activities
- Vehicle and Equipment maintenance and repair
- Parts cleaning
- Pavement marking
- Landscaping and vegetation control
- Materials analysis
- Traffic engineering
- Sign/Graphics shop
- Janitorial activities
- Spill cleanup

Hazardous wastes can be solids, liquids or gases. Wastes (discarded materials) that have certain *hazardous characteristics* may be considered a hazardous waste. These characteristics include:

- **Ignitability**: Ignitable waste can readily catch fire and sustain combustion. Waste materials with a flash point less than 140^{o}F have the characteristic of ignitability (the MSDS or product label typically has flash point information). Examples include solvent-based paint wastes, thinners, mineral spirits, flammable aerosol cans, and certain degreasers.

- **Corrosivity**: Corrosive wastes are liquids that can readily corrode metal or dissolve flesh. Waste liquid materials with a pH between 2 and 12.5 have the characteristic of corrosivity (the MSDS or product label typically has the pH information). Examples include rust removers, acid cleaners, alkaline cleaners, and waste battery acid.

- **Reactivity**: Reactive waste can explode, undergo a violent reaction, or produce certain gases. Examples include aerosol cans, certain metals, explosives, cyanide compounds or compounds with high sulfur content.

- **Toxicity**: Toxic wastes are those that are harmful or fatal when ingested or absorbed, or toxic to the environment. This type of waste can contain heavy metals or pesticides. Examples include mercury containing devices, pesticides, fluorescent light tubes, HID lamps, and computer monitors.

In addition to these characteristics, some hazardous wastes may appear on one of four “lists” maintained by USEPA and are known to be harmful to human health or the environment when not managed properly. They are *listed* by a chemical name or by the process that generates them:

- **‘F’ list**: Wastes generated from common industrial or manufacturing processes such as degreasing solvents and certain other solvents. Examples include trichloroethylene, acetone, and toluene.

- **‘K’ list**: Wastes generated from specific industries such as chemical manufacturing and refineries. VDOT does not generate any of these wastes.

- **‘P’ & ‘U’ list**: Both lists are very similar. The wastes on these lists are pure or commercial grade formulations of toxic chemicals that are being discarded.

Section 2

Hazardous Management and Generator Status Categories

Guide 2.0 **Satellite Accumulation**
Revision 0

A person or activity that generates hazardous waste may accumulate as much as *55 gallons* of hazardous waste or 1 quart of acutely toxic hazardous waste in containers *at or near the point of its generation without any storage time limits*. This method of hazardous waste storage allows for hazardous waste to be temporarily and conveniently stored. This can be done without complying with the more stringent Small Quantity and Large Quantity storage requirements described in Guide 2.1 and 2.2.

⇨ Keep the container closed during storage

⇨ **Clearly identify the contents of the container and include the words 'Satellite Accumulation'**

⇨ Do not move the container until it is ready to be disposed or transferred to the central storage area

Once the legal 55 gallon satellite accumulation threshold is met, the waste must be shipped off-site within 3 days OR transferred to an on-site Small Quantity or Large Quantity Generator central storage area within 3 days.

If stored at a *Small Quantity Generator* central storage area, the container must be closed, secured, labeled with the initial storage date, labeled as to the container contents, labeled as Hazardous Waste, and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. See Guide 2.2 for details.

If stored at a *Large Quantity Generator* central storage area, the container must be closed, secured, labeled with the initial storage date, labeled as to the container contents, labeled as Hazardous Waste, and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. See Guide 2.3 for details.

Guide 2.1 **Conditionally Exempt Small Quantity Generator- CESQG**
Revision 0

A *facility* can store waste without a special permit by following certain *quantity storage limitations* and *time storage limitations*.

- **CESQG**: **Conditionally Exempt Small Quantity Generator** is a facility that generates less than 220 lbs of hazardous waste per month and accumulates no more than 2,200 lbs of waste at any one time. Although a CESQG is exempt from many hazardous waste storage and disposal requirements, it is important that the container(s) used must be in good condition, kept closed, marked with the storage date, labeled as to the container contents, and labeled as "Hazardous Waste".

⇒ ***The stored hazardous waste must be shipped off-site to a permitted waste disposal facility before these limits are reached.***

⇒ If a CESQG facility generates more than 220 lbs of hazardous waste per month or accumulates more than 2,200 lbs of waste at any one time, it becomes a Small Quantity Generator (SQG) and must follow the SQG requirements described in Guide 2.2.

- 220 lbs equals about ½ of a 55 gallon drum
- 2,220 lbs equals about five 55 gallon drums

If your facility generates less than 220 lbs in one month, but more than 220 lbs in another month it is highly recommended that you meet the higher generator standards throughout the year rather than switching back and forth.

If your facility meets the CESQG standards then there are no regulatory requirements for training. Nevertheless, to ensure compliance with the other regulatory requirements, VDOT staff involved in generating, storing or handling hazardous waste must be familiar with the procedures outlined in the Hazardous Materials Guide.

Guide 2.2 **Small Quantity Generator- SQG**
Revision 0

A ***facility*** can store waste without a special permit by following certain *quantity storage limitations* and *time storage limitations*.

- **SQG**: **Small Quantity Generator** is a facility that generates more than 220 lbs but less than 2,200 lbs of hazardous waste per month and accumulates no more than 13,200 lbs of waste at any one time. The container(s) used for storing waste must be in good condition, kept closed, marked with the storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly.

⇒ A small quantity generator may accumulate hazardous waste on-site at a designated storage area for **180 days or less** without a storage permit. This hazardous waste stored **must be shipped off-site within 180 days** to a permitted waste disposal facility. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file.

⇒ If a SQG facility generates more than 2,200 lbs hazardous waste per month, it becomes a Large Quantity Generator (LQG) and must follow the LQG requirements described in Guide 2.3.

- 220 lbs equals about ½ of a 55 gallon drum
- 2,220 lbs equals about five 55 gallon drums
- 13,200 lbs equals about thirty 55 gallon drums

If your facility generates less than 220 lbs in one month, but more than 2,200 lbs on rare occasions, it is recommended that you routinely meet the SQG standards. However, when you anticipate that you will exceed the 2,200 lb threshold, you should contact your Regional or Central Office Hazardous Materials staff to determine ways to avoid becoming a large quantity generator or otherwise meeting the requirements.

If your facility meets the SQG standards then the regulations require training for:

1. Facility staff that handle hazardous wastes as their normal job responsibility;
2. Facility personnel that are likely to handle hazardous wastes during an emergency situation
3. Facility staff who do not handle hazardous waste, but work in or adjacent to areas where hazardous wastes are generated, stored or handled.

Training for the first two groups must cover:

- proper waste handling and emergency procedures appropriate to the types of wastes generated and the hazards presented by the wastes
- emergency procedures training

Training for the third group is limited to a familiarization with basic emergency response procedures.

While there are no recordkeeping requirements for SQG training, the training is an enforceable requirement. Recurrent training is very important to (1) refresh staff in the requirements; (2) keep staff current on the any changes in the requirements; and (3) train new employees.

⇒ ***Central Office Hazardous Materials staff are available to assist with this training.***

Guide 2.3 **Large Quantity Generator- LQG**
Revision 0

A ***facility*** can store waste without a special permit by following certain *quantity storage limitations* and *time storage limitations*.

- **LQG**: **Large Quantity Generator** is a facility that generates more than 2,200 lbs of hazardous waste per month. The container(s) used for storing waste must be in good condition, kept closed, marked with the storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly.

⇒ A large quantity generator may accumulate hazardous waste on-site at a designated storage area for **90 days or less** without a storage permit. This hazardous waste stored **must be shipped off-site within 90 days** to a permitted waste disposal facility. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file.

  - 2,220 lbs equals about five 55 gallon drums

If your facility typically generates less than 2,200 lbs per month except on rare occasions when the amount is exceeded, it is recommended that you routinely meet the SQG standards. However, when you anticipate that you will exceed the 2,200 lb threshold, you should contact your Regional or Central Office Hazardous Materials staff to determine ways to avoid becoming a large quantity generator or otherwise meeting the requirements.

If you generate, store and handle hazardous waste and fall into the LQG categories discussed in Guide 2.3, you are required to have **Initial and Annual EPA hazardous waste training**. Hazardous waste training requirements for LQGs are much more stringent. Training can be in a classroom or on-the-job and must include instruction on proper hazardous waste handling and emergency response.

- **Initial training** *must occur* **within 6 months** for an employee whose job duties involve handling, storing, or generating hazardous waste.

- **Annual refreshers** must occur for the employee whose job duties involve handling, storing, or generating hazardous waste.

⇒ ***Central Office Hazardous Materials staff are available to assist with this training.***

There are strict recordkeeping requirements to document compliance with the regulatory requirements for LQG training. The specifics of the training requirements are more detailed than can be effectively presented in this guide. Therefore, if your facility is expected to become a LQG, you should contact your Regional or Central Office Hazardous Materials staff who can assist with this training.

Section 3

Waste Management

Guide 3.0 **Aerosol Cans**
Revision 0

2 options exist for the proper management of waste aerosol cans (empty, full, or 'duds'):

(1) Recycle
Aerosol cans are exempt from regulation if treated as a scrap metal and recycled.

- When recycling, each aerosol can must be punctured and drained after final usage. Coordinate with the Office of Safety and Health prior to purchasing and using a puncturing machine.
- Contents drained from the cans must be managed according to the hazardous waste requirements, **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Place contents in a container labeled "Waste Aerosol Can Contents Satellite Accumulation". Once the legal 55-gallon threshold is met, the used batteries must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

  If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

  If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

- Check in advance with the scrap metal vendor to determine their preferred storage options (i.e. store in a drum or mix with scrap metal).

- Be sure to maintain a record of final destination for your aerosol cans. This can be a written letter from your scrap metal vendor verifying the final location the aerosol cans are delivered for recycling.

Aerosol cans that have been punctured and drained can be transported to the District or Residency facility for proper disposal **ONLY IF** recycling.

(2) Dispose as a Hazardous Waste

- The aerosol cans (empty, full, or 'duds') could also be managed according to the hazardous waste requirements, **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Cans from site-wide related activities (i.e., office or janitorial) could be placed in any available aerosol can waste container.
- Depending upon the waste vendor, a steel drum, a fiber drum, or a fiber box might be used for shipment and disposal. This container will serve as the collection container for the aerosol cans.
- Label the drum or box as "Aerosol cans, satellite accumulation", and **close the container when cans are not being added**.

Once the legal 55 gallon satellite accumulation threshold is met, the waste must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Guide 3.1 **Animal Carcasses**
Revision 1
December 2011

Roadside management of animal carcasses is dictated by location and situation, with priority given to ensuring public safety by immediately removing the carcass from the roadway. Because of this, VDOT manages these carcasses in the best way available that does not create a hazard or public nuisance.

Dead animals on the right-of-way should be removed and disposed of by taking them to a landfill or rendering plant (for larger animal carcasses) or composting at the closest area headquarters * with such a facility. Burial of dead animal carcasses should be considered as a last alternative to disposal.

If no alternative but burial is available, then no more than one animal should be buried per excavation. Carcasses should not be brought back to any VDOT maintenance facility for burial.

A Memorandum of Agreement (MOA) between VDEQ and VDOT on the detailing the handling of solid wastes, including deer carcasses and the MOA Implementation Guide can be reviewed by clicking the icons below.

Key provisions of the MOA include:

• Animal carcasses may be buried within the right-of-way, in the vicinity of where they are found.
• Burial is limited to individual large carcasses (deer) or several small carcasses (dogs, cats, etc.) and must be conducted at random locations near where they are found. Mass burial is not permitted.
• Document the location of burial and maintain records for 3-years.
• Burial at VDOT facilities or staging areas is not permitted.
• Burial shall be below surface grade but not be within the water table, near a stream, or near a source of drinking water.
• Adequate cover is required to prevent disinterment by scavengers.
• Lime or other vector stabilizing agents (such as wood ash) may be added to reduce pathogens.
• Carcass burial within the right-of-way should be the final disposal option after considering: 1) composting*, 2) rendering, 3) landfilling, and 4) incineration.

*- Note that VDOT is currently researching composting of animal carcasses but no guidelines or regulatory approvals are available to date.

The VDEQ and VDOT MOA for Solid Waste and the MOA Soild Waste Implementation Guide are located In the Waste Management Pollution Prevention Guide Appendices or at the following link:

https://insidevdot.cov.virginia.gov/div/env/HM/ROWMaintOps/SitePages/Home.aspx

Forced Air Composter-Bethel AHQ

Guide 3.2 **Antifreeze**
Revision 0

Place used antifreeze in a drum or tank labeled **"Used Antifreeze"**. The container should remain closed when not in use and must be in good condition. No other fluids should be put in this container. Call for disposal when the container is full. Maintain records of disposal including the name and address of the vendor.

Be sure to maintain a record of final destination for your used antifreeze. This can be a written letter from your vendor verifying the final delivery location.

Guide 3.3 **Asphalt Equipment Cleaning**
Revision 0

The following guide provides summary information on the proper management of wastes generated from cleaning equipment used during asphalt paving operations. Maintenance of these items presents the potential for violation of the pollution control regulations or, while possibly acceptable from a legal standpoint, may pose harm to the environment and/or may impact the materials integrity of the asphalt if reincorporated into the asphalt mix or emulsion.

The complete Best Management Practices guidance document can be reviewed by clicking the icon below.

Asphalt Release Agents and Asphalt Cleaning Solvents

Asphalt release agents are applied to truck-beds to prevent asphalt from "sticking" to the bed, which can result in time consuming cleanup. Use only approved asphalt release agents. Enviroslide® is an example of an asphalt release agent.

Asphalt cleaning solvents are used to clean tools and equipment. VDOT has no statewide standard for asphalt cleaning solvent use. Each District and even many Area Headquarters typically make their own determination of which solvents will be used. Rhomo-Sol®, diesel, and kerosene are all examples of asphalt cleaning solvents.

Solvent Selection and Use

Some Districts have a list of approved chemicals that can be used to clean equipment. Contact your Regional Hazardous Materials Manager or the Central Office Hazardous Materials Section for assistance with solvent selection.

Note: Some solvents may be classified as hazardous waste when used and should be avoided.

- If your district approves, diesel fuel and kerosene may be used as a cleaning solvent, but should be recycled (liquid waste only) or otherwise properly disposed. Check with your used oil vendor to determine if asphalt/diesel waste can be mixed with used oil waste.
- Be sure to maintain a record of the final destination for your asphalt waste. This can be a written letter from your vendor verifying the final delivery location.
- Use only the amount of solvent necessary to release the asphalt.
- Do **NOT** mix spent cleaning solvent into the asphalt mix or reintroduce it back into the asphalt distributor / kettle as it may negatively affect the quality of the asphalt / emulsion. Follow the distributor's O/M guide for solvent use inside the distributor's pumps and lines.
- Asphalt equipment cleaning activities are permitted:
  - At an asphalt trough
  - On the lot if asphalt equipment is cleaned over a bed of absorbent material with *plastic laid under the absorbent material.*
- Do **NOT** clean equipment where solvent runoff may enter:
  - Storm drains
  - Ditches or natural drainage ways
  - Salt pond
- Do **NOT** clean equipment at the vehicle wash pad, sand pit, mixing pad, or salt pond.

Cleaning Methods

Asphalt Troughs

- Spray asphalt solvent onto equipment. Immersing equipment in a bath of solvent will increase the amount of waste to be disposed and should be avoided.
- **Clean the asphalt trough after each use. All liquid should be immediately removed and placed in a drum or fully enclosed container and labeled "Asphalt Waste".**
-

Cleaning Asphalt Equipment on the Lot

- Clean asphalt equipment over a bed of absorbent material with *plastic laid under the absorbent material*. Remove the solvent/asphalt/absorbent mixture immediately after each use and properly dispose of the material.
- Clean equipment in a location where:
  - There will be no major effects of runoff,
  - Solvent will not leave the property, and
  - Solvent will not enter a storm drain, ditch/drainage way, or salt pond.

Solvent/Rag/Absorbent Disposal Options

- Check the MSDS of the solvent to determine the best disposal method for the waste generated during cleaning.
- *Remember that disposal of solvents, even so-called "biodegradable" solvents, onto the ground is a violation of the Solid Waste Management Regulations and potentially the Hazardous Waste Management Regulations.*
- Non-saturated rags contaminated with a non-hazardous solvent can be managed as solid waste at the local landfill unless the landfill prohibits petroleum contaminated waste. In doubt, please contact the landfill to confirm that your local landfill can accept your rags.
- For assistance with disposal options and solvent selection, contact your Regional Hazardous Materials Manager or the Central Office Hazardous Materials staff.

A copy of the **Asphalt Equipment Cleaning Best Management Practices** is located in the WMPPG Appendices and at the following link:

https://insidevdot.cov.virginia.gov/div/env/HM/WMMGuide/AEC/SitePages/Home.aspx

- Traditional **"household" type alkaline batteries** (AA, AAA, C, D, 9 volt) are **not regulated** by EPA and can legally be thrown away.
- Types of batteries that are classified as **Universal Waste** and must be collected, stored, and recycled include: **Nickel Cadmium, Nickel Metal Hydride, Lithium Ion, Lithium, Mercury, Silver, Lead Acid, Lead Acid Flooded Cell Batteries, Non-Spillable Lead Acid Batteries, Sodium batteries, Potassium hydroxide**.

⇨ Organizations such as the Rechargeable Battery Recycling Corporation (RBRC) offers FREE recycling services to state, local, and governmental agencies. By signing up, a facility is provided a free small collection box. Once that collection box is filled, it can then be mailed back free to the RBRC in its postage paid collection container. All the RBRC needs from you is the District Complex, Residency or AHQs contact and mailing address to send you a battery collection container. Contact the RBRC at (678) 419-9990.

The RBRC makes it easy for you to recycle your used portable rechargeable batteries. RBRC recycles the following battery types: Nickel Cadmium (Ni-Cd), Nickel Metal Hydride (Ni-MH), Lithium Ion (Li-ion) and Small Sealed Lead (Pb) batteries.

- Batteries to be recycled should have the outer container marked as "Waste Batteries" or "Used Batteries".
- The battery collection container should have the date that the first battery is placed in the container marked on the outside.
- The rules allow for up to **11,000 lbs** to be stored at any one time or for **up to 1 year of the marked date, whichever comes first**.
- If recycled under the Universal Waste rules, these batteries can be collected and stored at each location or self transported to the District or Residency facility for proper recycling.
- Be sure to maintain a record of final destination for your used batteries. This can be a written letter from your vendor verifying the final delivery location.

  If not managed and recycled as a Universal Waste, then the batteries must be managed at each location according to the hazardous waste requirements, **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Place used batteries in a container labeled "Used Batteries Satellite Accumulation". Once the legal 55-gallon threshold is met, the used batteries must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

  If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

  If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be

stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Frequently Asked Question:

Do I need a permitted or certified transporter to take the used batteries to the District complex or Residency for recycling and would I need a hazardous waste manifest to go along with the batteries?

No. VDOT can transport used batteries to a central collection point that are destined for recycling and you do not need a waste manifest.

Guide 3.5 **Bridge Timbers and Treated Lumber**
Revision 1
June 2012

All bridge timbers and lumber are the property of the Commonwealth of Virginia and must be deemed as "salvage" or "surplus" for future sale. The best approach is to find a beneficial reuse for this material (i.e. reuse on other projects or resale through auction).

Timber Treated with Chromated Copper Arsenate (CCA)

The Resource Conservation and Recovery Act (RCRA) exempts Chromated Copper Arsenate (CCA) treated timber from the hazardous waste regulation *as long as the wood is in the same form as it was during its intended use* (40 CFR 261.4(b)(9)). Mulch produced from discarded CCA-treated wood is not exempt under this provision and cannot be landfilled.

Timber Treated with Creosote

If the timber is weathered, testing is not required prior to disposal. New creosote treated timber must be tested to determine if it is hazardous prior to disposal. Contact your Regional Hazardous Materials Manager or the Central Office Hazardous Materials Staff for assistance.
It is not required by regulation to test timbers prior to disposal; however, the disposal facility may require Toxic Characteristic Leaching Procedure (TCLP) testing.

Timber Treated with Pentachlorophenol (PCP)

All pentachlorophenol (PCP) treated timbers must be tested prior to disposal. Contact your Regional Hazardous Materials Manager or the Central Office Hazardous Materials Staff for assistance.

Guide 3.6 **Empty Containers**
Revision 0

Proper management of empty containers depends on what was stored in it. As a general rule, **empty containers** should ***not*** be **stored on site for long periods of time**. When storing empty containers for future disposal at a landfill or via a recycling vendor, each container should be **closed *and* stored together in a covered area** to prevent degradation. **Label the area or each container "Empty".**

(1) *Empty containers previously storing non-hazardous/non-RCRA* materials (such as oils and diesel fuel) should implement one of the following options:

Disposal: Empty the container(s). Use absorbents such as rags or oil dry (no liquids) to help capture remaining material. Cut off both ends ***and*** crush the container(s).

Recycle: Empty the container(s). Use absorbents such as rags or oil dry (no liquids) to help capture remaining material. Send the container(s) to a scrap metal recycler or drum reconditioner.

(2) *Empty containers previously storing hazardous/RCRA* non-acute hazardous materials or wastes (such as gasoline, low flashpoint solvents, and some paints) should implement one of the following options.

Disposal: Empty the container(s) so that the remaining residue at the bottom is **one inch or less**. Use absorbents such as rags or oil dry (no liquids) to help capture remaining material. Cut off both ends ***and*** crush the container(s).

Recycle: Empty the container(s) so that the remaining residue at the bottom is **one inch or less**. Use absorbents such as rags or oil dry (no liquids) to help capture remaining material. Send the container(s) to a scrap metal recycler or drum reconditioner.

Dispose as Hazardous Waste: The empty container(s) could be managed according to the hazardous waste requirements. **(Note: Hazardous waste cannot be transported off-site).**

If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with the initial storage date, labeled as "Empty Container - Hazardous Waste", and inspected weekly. The waste container can be stored up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as "Empty Container - Hazardous Waste", and inspected weekly. The waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Guide 3.7 **E-Waste (Monitors and Computers)**
Revision 0

All computers, monitors, and electronic waste must be returned to Information Technology. Contact your District Inventory Manager for more information.

Guide 3.8 **Filters - oil, gas, diesel, paint**
Revision 0

Used Oil Filters
2 options exist for the proper management of used oil filters:

(1) Recycle
Oil filters may be treated as a scrap metal and recycled. (Check with your scrap metal vendor prior to beginning service to get documentation verifying the final destination for the material). Drain filters into a used oil container. Drained oil filters may be co-mingled with drained diesel fuel filters. Place them in a container labeled "Used Oil/Diesel Fuel Filters". Call scrap metal vendor for disposal when full. Maintain disposal records.

Note: Some scrap metal vendors allow co-mingling of drained oil filters with scrap metal. Check with your scrap metal vendor prior to beginning service.

(2) Dispose as Solid Waste
Oil filters can be disposed as solid waste when punctured and drained. Drain into an enclosed container labeled "Used Oil".

Used Diesel Fuel Filters
2 options exist for the proper management of used diesel fuel filters:

(1) Recycle
Used diesel fuel filters may be treated as a scrap metal and recycled. (Check with your scrap metal vendor prior to beginning service to get documentation verifying the final destination for the material). Drain filters into a used oil container. Drained diesel fuel filters can be co-mingled with drained oil filters. Place them in a container labeled "Used Oil/Diesel Fuel Filters". Call scrap metal vendor for disposal when full. Maintain disposal records.

Note: Some scrap metal vendors allow co-mingling of drained oil filters with scrap metal. Check with your scrap metal vendor prior to beginning service.

(2) Dispose as Solid Waste
Diesel fuel filters can be disposed as solid waste when punctured and drained. Drain into a used oil container.

Used Gasoline Filters
Used Gasoline filters are typically classified as hazardous waste; two management options are available:

(1) Recycle
Used gasoline filters (metal casings) are exempt from regulation when treated as a scrap metal and recycled. (Check with your scrap metal vendor prior to beginning service to get documentation verifying the final destination for the material). Drain into a used gasoline container. Place drained filters into a separate container labeled "Used Gasoline Filters". Call scrap metal vendor for disposal. Maintain disposal records.

(2) Dispose as Hazardous Waste
Used gasoline filters may also be managed according to hazardous waste requirements, **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0).** Place drained filters in a container labeled "Used Gasoline Filters Satellite Accumulation". Once the legal 55-gallon threshold is met, the used filters must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Used Paint Filters

Most paint filters used throughout VDOT are considered a hazardous waste when ready for disposal. Therefore, paint filters should be managed according to the hazardous waste regulations, **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Label the container "Used Paint Filters, Satellite Accumulation", and close the container. Once the legal 55-gallon satellite accumulation threshold is met, the waste must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Guide 3.9 **Fluorescent lamps, HID, and metal halide lights**
Revision 0

- Types of lamps that are classified as **Universal Waste** and must be collected, stored, and recycled include: **fluorescent bulbs, high intensity discharge, metal halide, neon, mercury vapor, and high pressure sodium lights**.

- Lamps may be collected in an empty box the new ones came in or purchased from a lamp recycle vendor. The lights must be stored securely and unbroken.

- Broken bulbs must be contained in leak-proof containers. Many vendors will collect broken bulbs along with intact bulbs. Check with your vendor for more information.

- Lamps to be collected for recycle should have the outer container marked as "Waste Lamps" or "Used Lamps".
- The lamp collection container should have the date that the first lamp is placed in there marked on the outside.
- The rules allow for up to **11,000 lbs** to be stored at any one time or for **up to 1 year of the marked date, whichever comes first**.
- If recycled under the Universal Waste rules, these lamps can be collected and stored at each location or self transported to the District or Residency facility for recycling.

- Be sure to maintain a record of final destination for your used lamps. This can be a written letter from your vendor verifying the final delivery location.

- If not managed and recycled as a Universal Waste, then the lamps must be managed at each location according to the hazardous waste requirements **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Place used lamps in a container labeled "Used Lamps". Once the legal 55-gallon threshold is met, the used lamps must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

  If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

  If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Lamp Crushing Devices

- Lamp crushing devices are permitted in the State of Virginia to facilitate storage space and volume reduction. Certain requirements must be met and proper procedures established. Visit Virginia Department of Environmental Quality's website at http://www.deq.virginia.gov/Portals/0/DEQ/Land/fluorescentlight1.pdf or contact your Regional or Central Office Hazardous Materials Staff for more information. As of January 2015 the VDEQ is in the process of revising the regulations governing lamp crushing devices which should take effect in approximately 2017. The new regulations will include air filtration, training, and potential testing requirements.

.

The Environmental Protection Agency (EPA) requires service shops to use approved refrigerant recovery equipment for repair of air conditioning systems in motor vehicles. Technicians using refrigerant recovery equipment must be trained and certified by an EPA-approved organization.

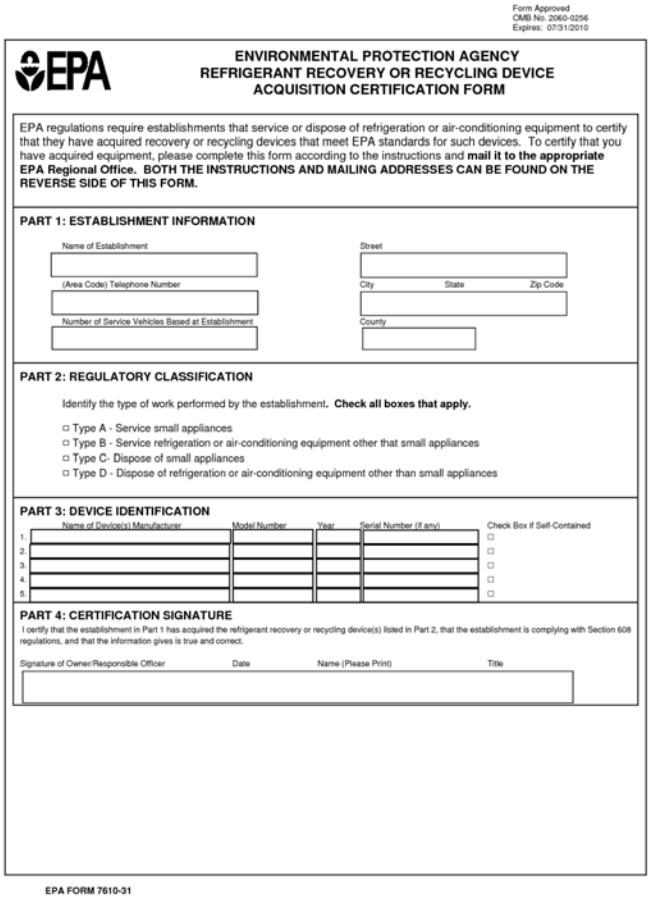
To comply with the requirement, service shops must:

- Send the MVAC Certification form to EPA.

  Note: The certification form can be found under the "Guidance" section of the Hazardous Materials team site on the VDOT portal.

- Include the following information with the certification form:
  - Facility name and address
  - Name of equipment manufacturer
  - Equipment model and serial number
  - Date equipment was manufactured

***Records must be maintained for at least three (3) years*.** Records must include the name and address of the reclamation facility and technician certifications.



Form Approved
OMB No. 2060-0256
Expires: 07/31/2010

EPA

ENVIRONMENTAL PROTECTION AGENCY
REFRIGERANT RECOVERY OR RECYCLING DEVICE
ACQUISITION CERTIFICATION FORM

EPA regulations require establishments that service or dispose of refrigeration or air-conditioning equipment to certify that they have acquired recovery or recycling devices that meet EPA standards for such devices. To certify that you have acquired equipment, please complete this form according to the instructions and **mail it to the appropriate EPA Regional Office. BOTH THE INSTRUCTIONS AND MAILING ADDRESSES CAN BE FOUND ON THE REVERSE SIDE OF THIS FORM.**

PART 1: ESTABLISHMENT INFORMATION

Name of Establishment | Street
(Area Code) Telephone Number | City | State | Zip Code
Number of Service Vehicles Based at Establishment | County

PART 2: REGULATORY CLASSIFICATION

Identify the type of work performed by the establishment. **Check all boxes that apply.**

- ☐ Type A - Service small appliances
- ☐ Type B - Service refrigeration or air-conditioning equipment other that small appliances
- ☐ Type C- Dispose of small appliances
- ☐ Type D - Dispose of refrigeration or air-conditioning equipment other than small appliances

PART 3: DEVICE IDENTIFICATION

	Name of Device(s) Manufacturer	Model Number	Year	Serial Number (if any)	Check Box if Self-Contained
1.					☐
2.					☐
3.					☐
4.					☐
5.					☐

PART 4: CERTIFICATION SIGNATURE

I certify that the establishment in Part 1 has acquired the refrigerant recovery or recycling device(s) listed in Part 2, that the establishment is complying with Section 608 regulations, and that the information gives is true and correct.

Signature of Owner/Responsible Officer | Date | Name (Please Print) | Title

EPA FORM 7610-31

Guide 3.11 **Herbicides and Pesticides**
Revision 1
February 2012

Storage
Herbicides and pesticides should be stored in a covered area on impervious flooring. Containers should be segregated according to type. Ensure all containers are labeled and kept closed. Mix or decant only the amount that is expected to be used.

Disposal Options
Empty pesticide containers may be managed as a universal waste, triple rinsed and disposed, or returned to the vendor.

A. Manage herbicide/pesticide and containers as a universal waste

- Herbicides/pesticide containers to be recycled should be marked as "Waste Pesticide" or "Used Pesticide".
- Check with your pesticide/herbicide vendor to determine their preferred method of disposal (i.e. store containers on a pallet or overpack).
- Label each container on the outside with the date the first container was placed into storage.
- The rules allow for up to **11,000 lbs** to be stored at any one time or for **up to 1 year of the marked date, whichever comes first.**
- Be sure to maintain a record of final destination for your used pesticides. This can be a written letter from your vendor verifying the final delivery location.
- If recycled under the Universal Waste rules, pesticide containers can be collected and stored at each location or self transported to the District or Residency facility for recycling.

B. Triple Rinse Containers for Disposal
Herbicide/pesticide containers should be triple rinsed and disposed. Triple rinsing requires each pesticide/herbicide container to be rinsed three times with potable water. Save the rinse water in a separate container for future applications.

If the rinse water is not reused then it must be managed. It is not acceptable to discharge rinse water to the ground. Contact your district hazardous materials manager for more information.

C. Reuseable Totes/Other Containers
Some herbicide/pesticide vendors have a container recycling program for totes or other containers. Check with your herbicide/pesticide vendor for more information regarding cleaning requirements.

Some pesticides are considered hazardous waste if they are disposed. Contact your regional hazardous material manager for more information regarding disposal of pesticides.

Guide 3.12 **Light ballasts (PCB and non-PCB)**
Revision 0

PCB's or polychlorinated biphenyls can be present in the solid potting material and in the capacitors of fluorescent light ballasts. Non-leaking light ballasts are restricted to disposal in sanitary or industrial waste landfills with leachate collection, liners, and appropriate groundwater monitoring.

Storage

- Non-leaking equipment can be stored for 30 days. Accumulation times exceeding 30 days are subject to more stringent storage requirements.
- Ballasts that are leaking should be placed in an enclosed container in good condition.
  - ⇒ **The outer container must be labeled with the date the equipment was taken out of service and must contain a PCB label** similar to that shown in Figures 1 and 2.
- Liquids or materials leaking should be captured with absorbent pads.

Disposal

- Non-leaking ballasts must be disposed as a solid waste in a municipal solid waste landfill.
- Leaking ballasts must be disposed in an approved facility – contact your waste disposal vendor or Hazardous Materials staff

Figure 1

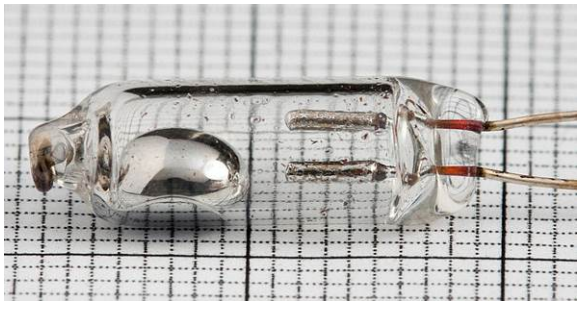
Figure 2

Guide 3.13 **Mercury switches and equipment**
Revision 0

- A mercury switch or equipment is **any device containing mercury integral to its function (e.g. thermostats)**.
- Mercury switches and equipment are classified as **Universal Waste** and must be collected, stored, and recycled.
- Mercury switches and equipment may be collected in an empty container. Switches and equipment must be stored securely and unbroken.
- Switches and equipment to be recycled must have the outer container marked as "Waste Mercury Switches/Equipment" or "Used Mercury Switches/Equipment".
- The collection container must be marked on the outside with the date that the first switch or piece of equipment is placed into it.
- The rules allow for up to **11,000 lbs** to be stored at any one time or for **up to 1 year of the marked date, whichever comes first**.
- If recycled under the Universal Waste rules, mercury switches and equipment can be collected and stored at each location or self transported to the District or Residency facility for recycling.
- Be sure to maintain a record of final destination for your used antifreeze. This can be a written letter from your vendor verifying the final delivery location.
- If not managed and recycled as a Universal Waste, then the mercury switches and equipment must be managed at each location according to the hazardous waste requirements, **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Place used mercury switches/equipment in a container labeled “Used Mercury Switches/Equipment Satellite Accumulation”. Once the legal 55-gallon threshold is met, the used mercury switches/equipment must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

  If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

  If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.



Used Oil Waste

- Used oil must be stored in a drum or tank in good condition and remain closed except when in use.
- Attached drum funnels must be kept closed.
- Label all containers used in collecting and transferring used oil as “Used Oil”.
- Call vendor for disposal when the container is full.
- Maintain records of disposal.
- Be sure to maintain a record of final destination for your used oil. This can be a written letter from your vendor verifying the final delivery location.
- Any overflow from the container or spillage onto the container should be treated as a spill or release and be immediately cleaned up – see guide 4.2
- See guide 3.16 for information on properly managing rags and absorbent materials used to absorb used oil.
- Do not mix other wastes with used oil.

Gasoline Waste

- Gasoiline waste includes materials where gasoline has been used as a solvent, has contaminated soil or other debris or oil dry, etc. It does not include pure gasoline or fuel water mixtures, which can be recycled. See Guide 3.22 for management of pure gasoline or fuel water mixtures.
- Gasoline wastes must be stored in a drum or tank in good condition and remain closed except when in use.
- Gasoline wastes must be managed according to hazardous waste requirements, **at or near the point of generation with storage limits up to 55 gallons (called Satellite Accumulation).** Place used gasoline in a container labeled “Used Gasoline Satellite Accumulation”. Once the legal 55-gallon threshold is met, the container(s) of used gasoline must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

  If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

- Any overflow from the container or spillage onto the container should be treated as a spill or release and be immediately cleaned up – see guide 4.2

- See guide 3.16 for information on the proper management of rags and absorbent materials containing gasoline.

Diesel Waste

- Diesel fuel wastes include materials where diesel fuel has been used as a solvent (such as asphalt equipment cleaning) or where diesel fuel has contaminated soil, oil dry or other materials. Pure diesel fuel or diesel fuel water mixture can be recycled (see guide 3.22)
- Diesel fuel waste must be stored in a drum or tank in good condition and remain closed except when in use.

- Label container "Used Diesel Fuel".

- Call vendor for disposal when the container is full.

- Maintain records of disposal.

- Be sure to maintain a record of final destination for your used antifreeze. This can be a written letter from your vendor verifying the final delivery location.

- Any overflow from the container or spillage onto the container should be treated as a spill or release and be immediately cleaned up – see guide 4.2

- See guide 3.16 for information on the proper management of rags and absorbent materials containing diesel fuel.

Guide 3.15 **Paint waste- latex, solvent based**
Revision 0

Latex Paint

Latex paint is non-hazardous and its containers may be discarded once completely empty. Latex paint containers **shall not contain free liquids.** Use absorbents to help remove any free liquids. Waste latex paint can be discharged to a local wastewater treatment plant ONLY if there is a written agreement with the plant.

If not directly discharged to the sanitary sewer via an agreement, paint tote and paint equipment wash water must be collected for proper disposal. The washout area should be equipped with appropriate controls to collect the waste water. All waste water containers should be closed and have appropriate controls that are protective of stormwater while stored on-site.

Solvent Based Paint

- Solvent based paint waste should be managed according to the hazardous waste requirements, **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Small amounts of solvent-based paint from site-wide related activities (i.e., facilities) could be placed in any available paint waste container in satellite accumulation.
    - Depending upon the original packaging, a drum or bucket might be used for disposal. This container will serve as the collection container for the waste paint.
    - Label the drum or container as "Waste Paint - Satellite Accumulation", and close the container.
- Once the legal 55 gallon satellite accumulation threshold is met, the waste must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

    If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

    If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as “Hazardous Waste”, and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Guide 3.16 **Parts cleaners**
Revision 0

Low Flashpoint Solvent
Low-flash solvents contained in the parts washers, such as Safety-Kleen “105 Solvent”, become hazardous waste once the solvent becomes too contaminated to clean effectively. At the point it becomes a waste, it must be managed according to the hazardous waste regulations.

- Unless the parts washers are under a regularly-scheduled service agreement, the vendor should be called to replace the solvent as soon as it becomes ineffective at cleaning.

- Obtain a copy of the Hazardous Waste Manifest from the disposal/service vendor and maintain a copy on file.

High Flashpoint Solvent
Waste solvents with a high flashpoint, such as Safety Kleen “Premium Gold 150”, are not typically hazardous and can be recycled. Some vendors provide a recycling program for these types of solvents. Check with your vendor for more information.

- Label the container according to its contents and call when ready for disposal. Maintain records of disposal.

- Be sure to maintain a record of final destination for your used antifreeze. This can be a written letter from your vendor verifying the final delivery location.

- In certain cases, the vendor will test the spent solvent and determine that the solvent must be managed as hazardous waste. In this case, the vendor should provide a copy of the Hazardous Waste Manifest and it should be retained on file.

Aqueous Solvent
Waste aqueous solvents are not hazardous and can be recycled. These solvents are generally bio-degradable or citrus based. Some vendors provide a recycling program for these types of solvents. Check with your vendor for more information.

- Label the container according to its contents and call when ready for disposal. Maintain records of disposal.

Guide 3.17 **Rags, wipes, absorbents**
Revision 0

It is preferred that used rags and absorbents be recycled through a laundering service to limit liability.

Rags, wipes, and absorbents (i.e. absorbent pads and booms, dry sweep) have varying disposal methods depending upon the type of material absorbed. Materials absorbed will either fall under the Used Oil Regulation, the Hazardous Waste Regulations, or the Solid Waste Regulations.

Absorbents used to capture used oil

Waste rags, wipes, and absorbents containing oil (such as motor oil, hydraulic oil, etc.) may be discarded in the trash unless saturated with used oil. Waste rags, wipes, and absorbents **saturated with oil** must be managed according to the following requirements:

- Storage must be in a closed container in good condition and remain closed except when in use,
- Label container "Used Absorbents",
- A used oil vendor must be contacted for disposal when the container is full, and
- Disposal records must be obtained from the disposal vendor and maintained on file.
- Be sure to maintain a record of final destination for your used antifreeze. This can be a written letter from your vendor verifying the final delivery location.

Absorbents used to capture diesel fuel

Waste rags, wipes, and absorbents containing diesel fuel may be discarded in the trash unless saturated with fuel. Waste rags, wipes, and absorbents **saturated with diesel fuel** must be managed according to the following:

- Storage must be in closed container in good condition and remain closed except when in use,
- Label container "Used Absorbents",
  Note: The same container used for oil saturated absorbents may also be used for absorbents saturated with diesel fuel.
- A used oil vendor must be contacted for disposal when the container is full, and
- Disposal records must be obtained from the disposal vendor and maintained on file.
- Be sure to maintain a record of final destination for your used antifreeze. This can be a written letter from your vendor verifying the final delivery location.

Absorbents used to capture hazardous materials

Waste rags, wipes, and absorbents used to capture hazardous materials such as **solvent based paint (not latex), gasoline, and some solvents and cleaners (solvents with low flashpoints)** must be managed as a **hazardous waste**.

- Collection must occur **at or near their point of generation with storage limits up to 55 gallons (see Satellite Accumulation Guide 2.0)**. Small quantities of hazardous waste from site-wide related activities (i.e., throughout the facility) could be placed in the nearest available hazardous waste container.
  - A drum or bucket may be used for shipment and disposal. This container will serve as the collection container for the waste absorbents.
  - Label the drum or container as "Waste Absorbents - Satellite Accumulation", and close the container.
- Once the legal 55 gallon satellite accumulation threshold is met, the waste must be shipped off-site **OR** transferred to an on-site central storage area within 3 days. **(Note: Hazardous waste cannot be transported off-site).**

  If stored at a ***Small Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Small Quantity Generator central storage area, the waste can be stored for up to 180 days, and disposed of by a hazardous waste vendor.

Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.2 for details.

If stored at a ***Large Quantity Generator*** central storage area, the container must be closed, secured, labeled with this initial storage date, labeled as to the container contents, labeled as "Hazardous Waste", and inspected weekly. Once at the Large Quantity Generator central storage area, the waste can be stored for up to 90 days, and disposed of by a hazardous waste vendor. Obtain the Hazardous Waste Manifest from the disposal vendor and maintain on file. See Guide 2.3 for details.

Guide 3.18 **Scrap Tires**
Revision 1
December 2011

Virginia regulation states that **no more than 100 scrap tires** may be stored on site at any one time without a Solid Waste Permit.

3 options exist for scrap tire disposal:

(1) Recycle – Vendor Collects from Your Site
Recycle through a registered waste tire hauler or processor. Visit the Virginia Department of Environmental Quality's website for a complete list of Virginia's waste tire haulers.
Maintain records provided by the waste tire recycler.

http://www.deq.virginia.gov/Portals/0/DEQ/Land/RecyclingPrograms/WasteTires/121%20web%20page%20Hauler%20Info%202014.pdf

Be sure to maintain a record of final destination for your waste tires. This can be a written letter from your vendor verifying the final delivery location.

(2) Recycle – You Transport Scrap Tires Off-Site
Dispose at a scrap tire facility. Maintain records of disposal actions.

(3) Dispose at Landfill
Tires may be taken to a landfill that accepts waste tires. These facilities have equipment onsite to slice and shred the tires. Maintain records of disposal.

Guide 3.19 **Salt Infrastructure and Waste Management**
Revision 2
February 2013

VDOT is legally required to manage stormwater that comes into contact with salt on our mixing pads.. This water is primarily managed in lined stormwater retention ponds "salt ponds", underground storage tanks (USTs), aboveground storage tanks (ASTs), or direct discharge to the sanitary sewer (also known as a Public Owned Treatment Works or POTW).

Operational Procedures

The following operational procedures are intended as a guide to minimize waste disposal costs, prevent pollution and ensure environmental protection

Before the winter season begins:

- Pump/empty pond/tank to provide sufficient water capacity
- Position diverter valves to direct runoff to the salt pond/tank.

During the winter season:

- Wash spreaders on the mixing pad and keep the pond pumped regularly to maintain a minimum 1-foot freeboard; check the pond levels on a regular basis and prior to forecasts of significant precipitation events
- Sweep residual salt from the mixing pad into the salt storage building.
- Load and unload spreaders on the mixing pad.
- At the completion of each storm response, clean up recoverable salt spilled on the lot, as well as salt present beneath spreaders or pushed beyond the mixing pad or other control barriers; return these materials to the salt shed.
- If the anticipated frequency of de-icing events is low, consider only diverting salty water during such events to the ponds/tanks or POTW. This active approach requires sweeping mixing pads, placing all salt back into the shed, closing the shed doors, and washing down the pad and flushing the lines prior to turning the diverter valve.
- For discharges to the POTW, only discharge salty water and not clean stormwater. .

Disposal / use options for salt water:

1. Contact a local septic service for removal of salt water in the pond. Water should be treated at a local wastewater treatment or permitted industrial wastewater treatment plant. Obtain disposal documentation from the septic contractor and treatment plant and maintain the records on file.

2. Salt water can be sprayed on unpaved roads or on the lot for dust suppression. Salt water should not be sprayed in areas adjacent to streams, wetlands or other water bodies. Ensure the salt water does not contain oil. Salt water containing oil (e.g. oil "sheens") must be removed with an absorbent pad prior to pumping. Document the location of the roads where the water is used.

3. Use the water for brine make-up water.

4. Obtain a VPDES permit for discharge to brackish water bodies (Eastern Districts)

At the end of the winter season:

- Sweep residual salt from the mixing pad into the salt storage building
- Keep doors to the salt storage building closed.
- Wash down the mixing pad and flush drains to remove residual salt.
- Pump the water out of the salt pond/tank through a septic service or use the water for dust suppression as described above.
- Any sludge/debris in the pond should be removed and properly disposed at a landfill or other permitted facility*.
- Salt pond sediment should not be disposed in VDOT approved disposal areas or on the lot. Obtain and maintain records of disposal and treatment as described above.
- After mixing pad and drains are washed and the pond is pumped down, turn diverter valves so that water is directed away from the salt pond. If no diverter valve exists, continue collecting water in salt pond and periodically spray the water on the lot.

Before and during the winter season:

- Inspect the salt pond for signs of leaks and overflows before and during the winter season.
- Inspect the salt pond liner for signs of damage/deterioration and repair as needed.
- Inspect the mixing pad and associated berms for signs of damage/deterioration and repair as needed.

Best Management Practices

Chemical Storage

- Do not store salt or mixed abrasives outside unless temporarily for repairs to salt storage structures; any temporary storage should be on the mixing pad and enveloped in plastic (see photo).
- Report any damage to the liner to the District Facilities Manager.
- Channel water from gutter systems away from the mixing pad to reduce the volume of water requiring management.
- Follow the winter time procedures when receiving and loading salt into the sheds during the non-winter season.

Mixing/Loading Pad

- Minimize the area within the berm to reduce the amount of salty water requiring management.
- Construct and maintain a berm (typically asphalt) along the edge of the mixing pad to limit the amount of water that collects on the pad.
- Promptly repair any damage to the mixing pad liner or berms.
- Do not conduct general vehicle washing on the mixing pad.
- Do not lubricate spreaders or other equipment on the mixing pad.
- Only conduct salt-related washing of vehicles, equipment, or spreaders on the mixing pad.
- Do not park asphalt tankers or conduct asphalt equipment cleaning on the mixing pad.
- Do not park heavy equipment or vehicles on the mixing pad.
- For spreaders staged on the mixing pad, cap all decoupled hydraulic lines or use a combination of oil absorbent pads, plastic bags and rubber bands to wrap the lines to prevent petroleum releases.
- Routinely clean out the mixing pad drop inlet to reduce the amount of sediment conveyed to the pond.
- Periodically sweep the mixing pad during the salting season to reduce the amount of petroleum soaked sediment (such as abrasives and small loose asphalt) conveyed to the pond.
- Re-use abrasives removed from the drop inlet unless contaminated with petroleum impact or alternatively placed in the dumpster for disposal. If petroleum contaminated, placed the material in a labeled drum or otherwise properly managed for disposal*.
- Cleanup any petroleum sheen (a rainbow colored glossy appearance) observed on the mixing pad by placing an oil absorbent boom around the drop inlet, and by placing oil dry and/or oil absorbent pads on the sheen and/or oil. Petroleum soaked materials should be properly managed and disposed per Guide 3.17 – Rags, wipes, absorbents.

Excess salt on the mixing pad during the non-salting season

Diverter Valves

- Install and utilize mixing pad flow diverter valves to direct salty stormwater to the salt ponds/tanks or sanitary sewer system during salting operations or divert clean water during non-salting season.
- Understand the diverter valve orientation to ensure the capture of salty water or the flow-through of clean water.
- **Do not** divert mixing pad flow for clean stormwater (i.e. non-salting season or events) until the mixing pad, drop inlet and drains have been flushed.

Salt Ponds, Underground Tanks and Aboveground Tanks

- Periodically evaluate and implement needed repairs to the salt pond liners, mixing pad liner and berms, as well as salt shed liners.
- Salt ponds should be **pumped regularly** to maintain the level of water in the pond. Salt ponds should never overflow and at least one foot of freeboard (water level to lowest rim edge) should be maintained at all times.
- USTs and ASTs should also be pumped regularly to prevent overflow or back up on to the mixing pad.

Discharges to POTW

- Any discharge of salty water – either directly from the mixing pad or pumped from ponds or tanks - to a Publically-Owned treatment Plant (POTW), i.e. sanitary sewer, must be made only under written agreement or permission from the local service authority.
- All discharges must comply with any procedures or requirements of the POTW.

* Contact Regional Hazardous Materials Manager for assistance as necessary.

Guide 3.20 **Salt spreaders**
Revision 1
December 2011

- Salt spreaders should be loaded on the mixing pad. Excess salt should be returned to the salt storage building.
- Salt spreaders should be cleaned on the mixing pad immediately after each use. Place excess salt in the salt building.
- Spreaders should **NOT** be lubricated on the mixing pad.
- Lubricate salt spreaders in the storage bay. Place a catch tray or absorbent pads under spreaders prior to lubricating. Absorbent pads can be stapled to a piece of plywood so that they will not blow away in the wind. Remove the pads when they are saturated or the lubricants no longer drip. Remove tray and absorbent pads and dispose according to the procedures outlined in Guide 3.13 and 3.16. Drain excess oil into a used oil container when finished.

Guide 3.21 **Solid Waste – trash**
Revision 1- January 2015

All solid items not recycled or managed as hazardous waste may be considered as solid waste and disposed. Liquids, whether in containers or free liquids, cannot be disposed with the regular trash collection service. Contact your Regional Hazardous Materials Manager or the Central Office Hazardous Materials Section for assistance as needed.

Solid waste dumpsters and roll-offs located at an MS4 Facilty must be provided with a cover to prevent infiltration of stormwater. Dumpster doors and covers should be closed when waste is not being added or removed.

Guide 3.22 **Fuel-Water Mixtures**
Revision 0
December 2014

Fuel-Water Mixture Manangement

VDOT periodically generates Fuel-Water Mixtures (gasoline and diesel fuel) through Underground Storage Tank (UST) maintenance activities and vehicle/equipment repairs. The Fuel-Water mixture are exempt from solid and hazardous waste regulation when fuel is present and the mixture is sent for legitimate recycling for reuse as a fuel. Virginia does not prescriptively define the percentage of recoverable fuel that must be present in the mixture to be eligible for exemption.

The fuel-mixtures should be stored at each facility in 55-gallon drums or other appropriate container. Depending on the vendor being used for recycling, they may want the gasoline-water mixtures to be segregated from the diesel-water mixtures.

SPCC Sites

If the drums are being generated and stored at a facility subject to SPCC, the fuel-water mixtures are considered to be an oil. Accordingly, the drums must be counted towards the faciliy's SPCC threshod placed on a secondary containment drum pallet (covered if exposed to precipitation) or other sized secondary containment structure. If the Fuel-Water mixtures are stored in containers smaller than 55-gallon in capacity, they are not subject to the SPCC Regulation.

MS4 Sites

If the drums are located at an MS4 location, appropriate Best Management Practice (BMP) Controls should be implemented to prevent any potential pollutants from release to stormwater. A covered secondary containment drum pallet is recommended as a BMP control.

Labeling

The drums should be labeled Fuel-Water Mixture for Recycling, Diesel-Water Mixture for Recycling, or Gasoline-Water Mixture for Recycling.

Guide 3.23 **Vehicle wash pads**
Revision 1
Revised February 2012

General

Vehicle wash water shall not be allowed to enter areas that directly enter any storm sewer system or through conveyances (e.g. ditches) that lead to any storm sewer system.

Vehicle wash water shall not be allowed to directly enter any ditch or through conveyances that lead to any waterbody.

Washing vehicles in a manner inconsistent with these best management practices may be considered a violation of state law and regulation and could result in fines and penalties.

Approved Areas for Vehicle Washing

- Wash bays draining to sanitary sewer
- Wash pads constructed of sand/gravel (This area cannot be used when washing asphalt equipment and vehicles used for asphalt operations) An example of wash pad construction detail can be reviewed by clicking the icon below.
- Car wash at the District Complex
- Commercial car washes

Unapproved Areas – (These are areas of point source pollution in which pollution occurs from a direct source. Such activities are prohibited by DEQ without a permit.)

- Mixing pad
- Directly on the lot

Vehicle Wash Pad Guidelines

There are a few guidelines that should be followed associated with the use of vehicle wash pads as follows:

- Wash pad construction and maintenance guidelines are available on the VDOT Environmental - Hazardous Materials website or by contacting your regional hazardous materials manager. An example of an approved washpad design is attached.
- Wash pads are designed for general washing of vehicle exteriors
- Wash pads are not designed for steam or power washing of engines or other grease/oil removal
- Washing asphalt equipment, vehicles used for asphalt operations, or vehicles/equipment used during salting operation should not be washed on the wash pads.
- Wash water should be allowed to infiltrate through the filter and should not sheet flow off of the pad
- The sand and gravel filter should be periodically sampled, disposed and replaced (typically at a minimum every two years). The regional hazardous materials manager can assist with the sampling.
- The washpad design and guidance can is located in the WMPPG Appencies and at the following link:

https://insidevdot.cov.virginia.gov/div/env/HM/WMMGuide/VW/SitePages/Home.aspx

Section 4

Pollution Prevention and Other Hazardous Materials Program Information

Guide 4.0 **Statewide hazardous waste disposal contract**
Revision 0

The Department of General Services has issued a statewide hazardous waste disposal contract for use by agencies of the Commonwealth of Virginia. The contract offers the option to select one of several vendors for disposal of hazardous wastes. Most of the wastes discussed in this guide are addressed in the contract. Contact your Regional or the Central Hazardous Materials Section for Guidance on the use of this contract.

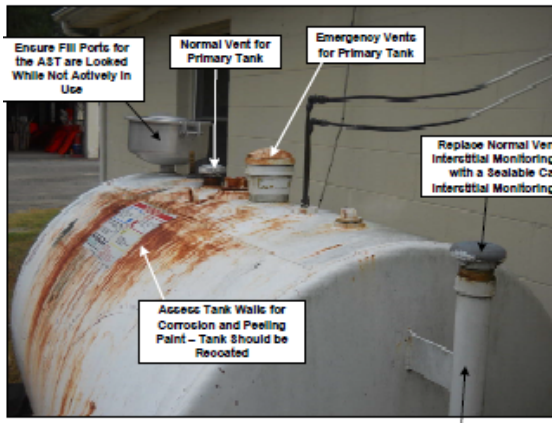
Guide 4.1 **Spill Prevention Control and Countermeasures**
Revision 0

Spill Prevention Control and Countermeasure (SPCC) is a regulation promulgated by the EPA to help reduce oil discharges from reaching navigable waters. The SPCC rule targets facilities whose aboveground oil storage capacity exceeds **1,320 gallons**. Containers that are **55 gallons or larger** are included in determining the threshold capacity. Facilities that fall under this rule are required to have the following:

- A SPCC Plan

⇨ The plan should include a description of the physical layout and a facility diagram; contact list for facility response coordinators, the National Response Center, cleanup contractors, and federal, state, and local agencies who must be contacted in case of a discharge; a prediction of the direction, rate of flow, and total quantity of oil that could be discharged where there is potential for equipment failure; a description of containment to prevent discharged oil from reaching navigable waters; and best management practices applicable to the facility and its operations. **All practices noted in the plan must be implemented at the site.**

If your facility stores more than 1,320 gallons of oil, including lubricants, liquid asphalt, heating oil, fuels including fuel stored in stationary and mobile equipment (e.g., emergency generators and asphalt tankers) your facility is required to develop and implement a SPCC Plan. Contact your Regional Hazardous Materials Manager or the Central Office Hazardous Materials staff for more information.



Guide 4.2 **Spill response and reporting**
Revision 0

Spill Response

All spills are required to be addressed promptly. Spilled materials that are not cleaned up are considered "abandoned" and promotes a threat of enforcement action. Spills that do not require reporting are required to be addressed.

Non-Reportable Spills

- Oil spills less than 25 gallons that do not reach a navigable waterway. These spills **must be cleaned up and documented.**

- Chemical spills not exceeding a CERCLA Reportable Quantities (RQ) or are wholly contained inside a building.

Reportable Spills

- Oil spills greater than 25 gallons must be reported to the Virginia Department of Environmental Quality (DEQ) within 24 hours

- Oil spills of any quantity that immediately threaten or affect (e.g. cause a sheen) a waterway must be immediately reported to the National Response Center (NRC) (1-800-424-8802) and the Virginia DEQ.

  ⇨ For example – spills resulting in oil running into a ditch or storm drain requires reporting due to effects downstream.

Chemical spills that equal or exceed the reportable quantity (RQ) or are an identified Marine Pollutant must be **immediately reported** to the NRC and the Virginia DEQ.

- ***SPCC regulated sites that have more than two (2) releases over 42 gallons or a single release greater than 1,000 gallons in any 12-month period are required to submit information to DEQ and EPA within 60 days.***

Supply the following information when reporting an oil or chemical release:

- Name, location, organization, and telephone number
- Name and address of the responsible party
- Date, time and location
- Source and cause of the release
- Types of material(s) released
- Quantity of materials released
- Medium (i.e. land, water, air) affected by release
- Danger or threat posed by the release
- Number and types of injuries or fatalities (if any)
- Name of the carrier or vessel, railcar/truck number, or other identifying information
- Whether an evacuation has occurred
- Agencies notified
- Any other information that may help emergency personnel respond to the incident

Each VDOT facility where petroleum underground storage tanks, aboveground storage tanks, 55-gallon drums and other heavy equipment is operated should have a spill kit and/or other spill reponse supplies on hand. Typical spill reponse kits are the yellow barrels located at the fuel islands, equipment shops, oil houses, etc. Spill kits typically have oil absorbent pads as well as oil absorbant socks and pillows.

Typical Spill Kit

In addition to the spill response supplies located in a spil kit, oil absorbents such as Oil-Dri® or kitty-litter is a routinely used spill cleanup product.

Oil absorbent used to clean up an oil spill

Refer to Guide 3.17 for management and disposal options for used spill reponse materials.

Guide 4.3 **Oil-Water Separator (OWS) / Grit Chambers**
Revision 0 **Operation and Maintenance**

Many VDOT facilities have grit chamber and/or oil-water separator units. These units are used to remove solids, fuels, and oils from stormwater and/or washwater. To ensure proper operation and comply with applicable discharge limits, these units require periodic maintenance. The VDOT OWS and grit chamber units come in multiple forms and serve various purposes. Typical units include:

- Multi-chambered underground storage tanks constructed on steel or fiberglass, for grit and oil management
- Concrete vaults with multi-chamber inserts, for grit and oil management
- Simple concrete box for grit management

The inlet to the units is typically associated with equipment shop floor drains, wash-bay floor drains, and possibly spreader racks.

The outlets from the units must discharge either to the sanitary sewer or a holding tank. The only exception to this requirement is for units designed to treat facility stormwater prior to off-site discharge to stormwater.

No units that treat anything other than solely stormwater may discharge to surface water conveyances. No OWS/Grit chambers may discharge to septic systems or dry wells.

Maintenance

- Determine the type of OWS/Grit Chamber present at the site.
- Follow any manufacture recommended Operation and Maintenance guidelines available,
- In the absence of specific manufacture's guidance, follow generic guidance for a similar model, or at a minimum implement the following:
    - Inspect the unit on a routine basis to determine the frequency of clean out required to ensure efficient operation of the unit. At a minimum the units should be cleaned once per year.
    - Once a clean out frequency is established, increase the cleanout frequency, as appropriate, based on changes and increases in operations discharging additional waste water to the unit.
    - If a specific oil retention section is not present, oil absorbent can be used to remove small amounts of oil accumulating on the surface of the OWS.
    - Document routine inspections and unit clean-out in a log book
    - Properly characterize and dispose of the oil and sediment removed from the units (seek assistance from the Regional Hazmat Managers, as needed).
- After clean out, inspect the unit for damage and implement any warranted repairs. Document the inspection and any repairs in the logbook.

Do's and Don'ts

- Do determine where the OWS discharges and contact Environmental if it does not discharge to the sanitary sewer or a holding tank.
- Do not use the OWS to directly discharge or dispose of oil, lubricants, or fuel.
- Do clean up spills and leaks promptly to limit the amount of oil conveyed to the OWS.
- Do clean out sediment from grated troughs routinely to limit the amount of sediment discharged to the unit.
- Do minimize the quantity of water reaching the OWS. Excess water can limit separator efficiency and allow pollutants to by-pass the OWS.
- Do limit the amount of detergent used in washing operations. Detergents can emulsify and disperse oil within the water and a allow pollutants to by-pass the OWS.
- Do not store chemicals in close proximity to OWS drop-inlets without secondary containment or other spill response items to control accidental spills.

Example Log Book Entries

Date, Inspector Name, Cleanout Date, Repair Required, Repair Date

Guide 4.4 **Non-SPCC Secondary Containment System Operation**
Revision 0

As a best management practice and added safeguard, many VDOT facilities have non-regulated secondary containment systems associated with above ground storage tanks storing various products, including, but not limited to:

- Liquid calcium chloride
- Liquid sodium chloride (brine)
- Liquid magnesium chloride
- Non-SPCC regulated petroleum products

VDOT uses different types of secondary containment systems and this guidance addresses those that accumulate water after precipitation events, including:

- Asphalt berms
- Concrete walls / dikes;
- Concrete block walls;

These secondary containment structures must be periodically drained to ensure adequate capacity in the event of a tank leak. Most containment structures have a valved drain situated at the lowest point with the structure. If no drain is present, the water must be actively pumped out of the containment structure

Prior to draining or removing the water from any secondary containment system, evaluate whether potential pollutants are present and if indications of potential pollutants are present (such as a petroleum sheen or salt crusting on containment walls), employ measures to remove the potential pollutants prior to discharge, such as:

1. If an oil sheen is present, deploy petroleum absorbent pads prior to discharge.
2. If sediment is present, deploy sediment filter.
3. If salt crusted on containment wall or there is an obvious inventory loss, discharge to salt pond/tank.
4. If the potential pollutants cannot be removed, do not discharge the water. Instead, coordinate proper removal and disposal / reuse of the water.

When possible, when draining the containment, employ techniques that will allow the water to sheet flow across the lot and not directly discharge to stormwater drains. Ideally, employing this technique will allow the water to stay within the lot boundaries and not be conveyed off-site.

The discharge valve must be kept closed except when draining. For VDOT Maintenance facilities regulated under the MS-4 permit, document the discharge in a specific containment discharge log book, or other location, such as the site diary. The log information should contain the discharge date, employee name, whether potential pollutants were noted, and if so, what actions were taken to remove the potential pollutants.

For SPCC regulated sites, follow the specific dike discharge procedure outlined in the facility SPCC plan for the SPCC regulated tanks.

Inert Stockpile / Perimeter Sediment Controls Guide

Guide 4.5 **Operation and Maintenance**
Revision 0

VDOT Facilities and Materials Storage Areas located within the designated urbanized areas and subject to VDOT's MS4 Permit are required to implement strategies to control erodible materials stored on the lot. Potential erodible materials include but are not limited to:

- Soil
- Sand and other abrasives
- Fine-grained aggregates, such as crusher-run or stone dust.

The following photos and information provide various control options for pile perimeter controls, drop inlet protection and drainage ditch controls. Additional controls are available in the Virginia Erosion and Sediment Control Handbook, should the site situation indicate that more elaborate controls are warranted.

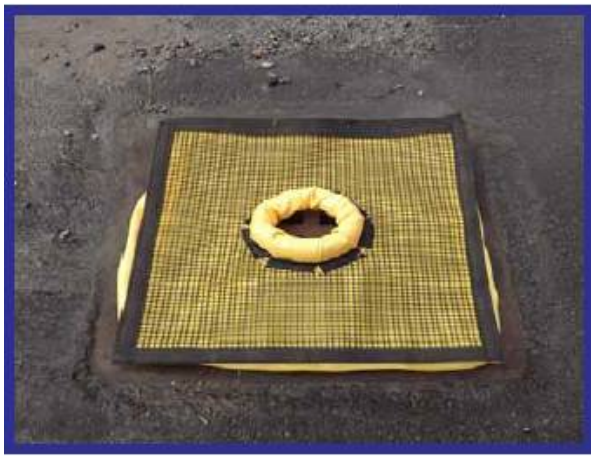
It is important to periodically inspect the controls installed on a site, especially after a storm event, to insure that the controls are still intact or to repair the controls when warranted. If material is bypassing the control, via cracks or underneath, the breech should be closed (spray foam, roofing tar, stone, or mortar are useful for this purpose).

As materials are used, some tracking and deposition of material outside the control area may occur. As needed, recover this material and place it back in the control area.

Concrete yard blocks around soil and sand piles

Silt Fence around soil pile

Rock Check Dams and Drainage Ditch Soil Stabilization



Drop inlet protection and periodic cleanout

Silt fencing and rock aprons at sheet flow discharge areas on stone lots

Clean up of sand/erodible materials pushed overtop of jersey-wall control structures

Rock Aprons to control fines in areas of sheet flow drainage discharge areas

Important

- Controls should be periodically inspected and repairs implemented to ensure integrity of the control
- Periodically check drop inlets and remove sediment as warranted
- Periodically sweep sediment build-up on impervious areas

Street Sweeping- Vac Truck Materials Management Guide

Guide 4.6 **Operation and Maintenance**
Revision 0

VDOT maintenance operations include street sweeping and vac truck cleanouts of stormwater drainage structures. Recovered material is typically wet and must be temporarily staged prior to being loaded and transported to the landfill. To facilitate management of this material, VDOT developed a conceptual design for a management structure that was vetted through the Virginia Department of Environmental Quality (VDEQ). The management design elements include:

- A 0.5% to 1.5% sloped impervious surface with a typical footprint of 30' x 60' (dimensions are flexible to meet site needs and conditions).
- Concrete yard block or jersey-walls to contain the material on the pad
- A sediment filter, such as stone, straw waddles, etc.
- A petroleum absorbent boom.
- A level spreader at the water exit point such that water leaving the pad sheet flows through vegetation (i.e. no point discharge.

Important operation and maintenance components include:

- If indications of contamination (odor, color, etc) are noticed during removal and recovery of the material from the roadway, drop inlets and drains, the material recovery should cease and environmental notified for proper characterization and removal by an appropriate firm. Suspected or known contaminated material should not be managed on the pad.
- Material should only remain on the pad long enough to dewater such that it meets the landfill dryness requirements, i.e. material should not be stored on the pad for weeks or months prior to removal.
- The volume of material stockpile should be limited to a maximum of 30 tons prior to removal.
- If a major precipitation event is anticipated, the material on the pad should be removed or covered to prevent re-wetting of the material.
- Maintain and replace the sediment filter and petroleum boom as needed.
- Organic material, such as leaves, removed with the vac-truck do not need to be managed on the pad unless it is comingled with sediment removed from the structure.

Detailed Siting, Construction, and Guidance is located in in the WMPPG Appendices or at the following link:

https://insidevdot.cov.virginia.gov/div/env/HM/SiteAssets/SitePages/Facilities%20and%20Facility%20Operations/Street%20Sweeping-Vac-truck%20Conceptual%20Design.pdf

Equipment/Vehicle Oil Leak/Spill Controls

Guide 4.7
Revision 0

VDOT has numerous vehicle and pieces of equipment requiring oil, and as such, oil leaks occur. The oil leaks can range from minor periodic drips associated with normal operation to larger leaks associated with damaged or worn out parts requiring repair. There is a recognized need to implement temporary controls to address the latter scenario of controlling the large leaks while the vehicle or piece of equipment awaits repair. Accordingly, the following guide provides several strategies that facility staff can implement as means to temporarily control oil leaks from equipment.

Catch Pans

Potential Uses

- To capture major oil leaks/drips from equipment
- Can be used in combination with oil absorbent and oil absorbent pads

Limits

- Will capture rain water if not placed completely beneath vehicle or equipment
- Requires active management to ensure that overfills do not occur and management of captured oil

Oil absorbent (kitty litter, clay, oil dry, peat moss, etc.)

Potential Uses

- To absorb and control pooled oil (typically on a hard surface)
- Can be "scrubbed" into oil stains with a broom to remove as much recoverable oil as possible
- Must be recovered in a timely manner and managed per Guide 3.17

Limits

- Not intended for use as a prolonged control. Rather, it is used as an immediate response control for leaks/spills
- If used outside and not promptly cleaned up, it could migrate offsite with stormwater

Oil Absorbent Pads (individual)

Potential Uses

- Response control to absorb and control pooled oil on the ground or water
- Catch oil drips and leaks from equipment being repaired
- Proactive placement in areas where oil is stored or transferred between containers

Limits

- Will potentially blow away with wind when used outside as long term control
- Requires change out when saturated

Oil Absorbent Pads tacked to plywood, wood frame, or old signs

Potential Uses

- A control for leaking equipment and vehicles present on the lot waiting for repairs
- A control for lubrication activities on equipment outdoors
- The control can be picked up and stored for reuse

Limits

- Not intended as a permanent control for constantly leaking equipment (i.e. leaking equipment should be repaired)
- Change out and replace pads as they become saturated and manage per Guide 3.17.

Oil absorbent pad attached to plywood

Oil absorbent pad attached to wood frame/pallet

Oil absorbent pad attached to plywood

Oil absorbent pad attached to wood strips on old signs

Spill Boom

Potential uses

- Proactive deployment around or downgradient of oil-filled equipment
- In drainage ditches leading off-site
- As a spill response control

Limits

- It is a general secondary containment tool and is not a permanent containment device. It must be replaced and properly managed per Guide 3.17 when deteriorated or saturated.

Oil adsorbent pad and bag tied to hydraulic hoses

Potential Use

- For hydraulic hose that have minor drips during storage

Limits

- Not for major leaks that will saturate pad in the short term
- Requires periodic review and change out when close to saturation limit

Successful use of these controls included periodic evaluation and change-out of the pads when they are either saturated with oil, damaged, or weather worn such that they are no longer effective. Controls that are not needed can be stored out of the weather until they are needed, which will extend the life of the control.

Recycled materials such as old plywood, sign posts, speed limit signs etc. can be used as the substrate to attach the oil absorbent pads.

Cleanup

While every cleanup scenario cannot be described, the following are a few rules-of-thumb regarding equipment oil (such as hydraulic/motor oil) leaks/spill cleanup disposal:

- Cleanup of major spills and leaks involving oil saturated material should follow Guide 4.2 and be containerized for shipment to a petroleum waste disposal/treatment facility
- Cleanup of minor equipment oil leaks or periodic housekeeping cleanup under spreaders or other equipment involving minor non-saturated material can be disposal at the landfill
- Cleanup of fuel leaks and spills should be addressed using Guides 3.14, 3.17, and 4.2.

Section 5- Training

Guide 5.0 **Hazardous Waste Training**
Revision 0

Persons who generate, store or handle hazardous waste at a SQG or LQG facility (see Guides 2.2 and 2.3) are subject to the **hazardous waste training** requirements.

Conditionally Exempt Small Quantity Generators (CESQG)

If your facility meets the CESQG standards (see Guide 2.1) then there are no regulatory requirements for training. Nevertheless, to ensure compliance with the other regulatory requirements, VDOT staff involved in generating, storing or handling hazardous waste must be familiar with the procedures outlined in the Hazardous Materials Guide.

Small Quantity Generators (SQG)

If your facility meets the SQG standards (see Guide 2.2) then the regulations require training for:

1. Facility staff that handle hazardous wastes as their normal job responsibility;
2. Facility personnel that are likely to handle hazardous wastes during an emergency situation
3. Facility staff who do not handle hazardous waste, but work in or adjacent to areas where hazardous wastes are generated, stored or handled.

Training for the first two groups must cover:

- proper waste handling and emergency procedures appropriate to the types of wastes generated and the hazards presented by the wastes
- emergency procedures training

Training for the third group is limited to a familiarization with basic emergency response procedures.

While there are no recordkeeping requirements for SQG training, the training is an enforceable requirement. Recurrent training is very important to (1) refresh staff in the requirements; (2) keep staff current on the any changes in the requirements; and (3) train new employees.

⇨ ***Central Office Hazardous Materials staff are available to assist with this training.***

Large Quantity Generators (LQG)

If you generate, store and handle hazardous waste and fall into the LQG categories discussed in Guide 2.3, you are required to have **Initial and Annual EPA hazardous waste training**. Hazardous waste training requirements for LQGs are much more stringent. Training can be in a classroom or on-the-job and must include instruction on proper hazardous waste handling and emergency response.

- **Initial training** *must occur* **within 6 months** for an employee whose job duties involve handling, storing, or generating hazardous waste.

- **Annual refreshers** must occur for the employee whose job duties involve handling, storing, or generating hazardous waste.

⇨ ***Central Office Hazardous Materials staff are available to assist with this training.***

There are strict recordkeeping requirements to document compliance with the regulatory requirements for LQG training. The specifics of the training requirements are more detailed than can be effectively presented in this guide. Therefore, if your facility is expected to become a LQG, you should contact your Regional or Central Office Hazardous Materials staff who can assist with this training.

Guide 5.1 **USDOT Hazardous Material Shipping Training**
Revision 0

Those personnel involved with the transportation of hazardous materials in commerce must complete this training. This includes persons who:

- Load, unload, and handle hazardous materials and wastes for in commerce transport
- Mark packages containing hazardous materials or wastes for shipment in commerce
- Prepare hazardous materials or wastes for transportation in commerce
- Sign and maintain hazardous waste manifests that were shipped in commerce

Hazardous materials transported **in commerce** are prepared for and transported by a commercial carrier or vendor on a commercial vehicle. In such instances, funds are often paid for the services provided. Hazardous materials regulated by DOT and carried in state owned vehicles are not considered as being transported in commerce and are, therefore, exempt from the Hazardous Materials Regulation (HMR). For assistance with determining whether you should complete this training contact the Central Office Hazardous Materials Section.

Each person must have **Initial** and **Refresher *USDOT hazardous material shipping training***. Employees involved with hazardous materials (and waste) shipping must be Trained, Tested, and Certified in **Hazardous Materials General Awareness, Function Specific, Safety,** *and* **Security Awareness** (both through the Initial and Refresher training) topics.

⇨ ***Central Office Hazardous Materials staff are available to assist with the General Awareness training.***

- Initial Training must occur within 90-days of when the employee's job functions first involve handling hazardous waste for transport.

- Refresher Training must occur every 3 years for those employees involved in handling hazardous waste for transport.

Guide 5.2 **SPCC Training**
Revision 0

The Spill Prevention Control and Countermeasure (SPCC) Program requires that all oil handling personnel at a SPCC site (see Guide 4.1) be trained in proper pollution prevention measures relevant to that site. Such measures and practices can be found in the site's SPCC Plan.

Training is required annually. Contact your site's SPCC Coordinator, Regional Hazardous Materials Manager, or the Central Office Hazardous Materials section for more information.

⇨ **Central Office Hazardous Materials staff are available to assist with this training.**

Guide 5.3 **Universal Waste Training**
Revision 1- January 2015

The Universal Waste regulations require training for all handlers of universal wastes. Training is required to "inform" all employees who handle or are responsible for managing universal waste on proper handling and emergency procedures for the types of Universal Wastes handled by the facility. No annual review is necessary.

⟹ ***Central Office Hazardous Materials staff are available to assist with this training.***

With regards to operation of the mercury lamp crushing devices each unit operator shall receive initial and annual training in crushing procedures, waste handling, safety, use of personal protective equipment and emergency procedures, including proper procedures for cleaning up broken mercury-containing lamps. All training shall be documented and records of training shall be maintained and available for inspection per 9 VAC 20-60-1505(B)(8)

Section 6

Hazardous Materials Program Contacts

Richmond District

Karol Akers
Office/Mobile: 804-715-2064

Hampton Roads District

Andy Winch
Office: 757-925-2374
Mobile: 757-335-2458

NOVA/Fredericksburg/Culpeper Districts

Brutus Cooper
Office: 703-259-2985/540-899-4218
Mobile: 540-220-2403

Timbo Diallo
Office: 540-372-3598

Staunton District

Brett Waller
Office: 540332-9893
Mobile: 540-280-9500

Central Office

Ed Wallingford - Program Manager
Office: 804-371-6824
Mobile: 804-840-7190

David Wilson
Office: 804-786-5588
Mobile: 804-840-7065

Chris Cowan
Office: 804-786-2480

Salem/Lynchburg Districts

Mike Scott
Office: 540-375-3564
Mobile: 540-312-3610

Jeff Butler
Office: 540-387-5410

Bristol District

Danny Adkins
Office: 276-466-1219
Mobile: 423-335-7794