

Hazardous Waste Self-Evaluation Workbook for Vermont Small Quantity Generators

2017

Purpose

This document is intended for facilities that generate between 220 and 2,200 lbs. of hazardous waste per month and are registered as Small Quantity Generators (SQG) of Hazardous Waste in the state of Vermont. It includes a self-evaluation checklist and instructions and explanations for completing the checklist. The document is general guidance to assist Small Quantity Generators in maintaining compliance with the Vermont Hazardous Waste Management Regulations (VHWMR). It is not meant to replace the VHWMR. In the event of a conflict between this document and newly promulgated regulations, the regulations govern.

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SMALL QUANTITY GENERATOR (SQG) FACILITY SELF-EVALUATION CHECKLIST

This document is written as a guide for facilities that generate between 220 and 2,200 lbs. of hazardous waste per month and are registered as Small Quantity Generators (SQG) of Hazardous Waste in the state of Vermont. The purpose of this checklist is to help such facilities determine compliance with the **Vermont Hazardous Waste Management Regulations (VHWMR)**, and identify areas for improvement. Detailed instructions, as well as useful examples follow this checklist, and will aide you in accurately evaluating your waste management and record keeping practices. For assistance with determining or confirming your generator status, refer to [Appendix A](#) at the end of this document. For a summary of regulatory requirements for each generator status, refer to [Appendix B](#).

Carefully evaluate each question in this checklist: a **YES** answer indicates **compliance** with VHWMR, while a **NO** answer indicates **non-compliance** and will require a corrective action. Refer to the instructions for information that may aide you in answering the questions; the last column of the checklist provides the corresponding page number where the question is explained. Check “**Does Not Apply**” for any questions that do not apply to your facility at this time. For questions where additional information is required to determine your facility’s compliance, choose “**I Don’t Know**” and follow-up accordingly in order to make a “Yes” or “No” determination.

Section 1. General Information

Before completing this check list, please evaluate your monthly hazardous waste generation rate.

If you generate between 220 and 2,200 Lbs. of hazardous waste per month, you are an SQG.

NO	YES	Does not Apply	I Don't Know		Page #
				Q1: Have you determined which wastes generated at your facility are hazardous wastes? (i.e. made a hazardous waste determination)	<u>18</u>
				Q2: Do you have supporting documentation for all hazardous waste determinations?	<u>18</u>
				Q3: Have you filed a Hazardous Waste Handler Site ID form?	<u>18</u>
				Q4: Is the Hazardous Waste Handler Site ID Form up to date – does it accurately describe current waste activity, waste generation, and provide current facility contact information?	<u>19</u>

NO	YES	Does not Apply	I Don't Know		Page #
				Q5: Have you paid the annual hazardous waste registration fee (due April 30 th)?	19
				Q6: If your facility treats or recycles hazardous waste on-site, have you submitted a “Generator Treatment” notification form to the Agency for each treatment activity?	19
				Q7: With the exception of hazardous waste that is treated or recycled on-site, does your facility ship all hazardous waste off-site to a permitted treatment, storage or disposal facility for proper management?	20
				Q8: Has your facility reported all reportable discharges/releases of a hazardous waste or a hazardous material immediately by phone and in writing within 10 days?	20
				Q9: Do you ensure that no hazardous waste is evaporated?	21
				Q10: Do you ensure that no hazardous waste is diluted?	21
				Q11: Do you ensure that no hazardous waste (or hazardous material) is disposed of on the ground, to surface waters, floor drains, storm drains, a sanitary sewer, or in the trash?	21
If you answered “NO” to any question(s), identify issue and corrective action needed.					
<i>Section 2. Waste Accumulation and Container Management</i>					
<i>Do you accumulate hazardous waste in Satellite Areas? YES NO</i>					
<i>If yes, complete section 2A.</i>					
<i>Do you accumulate hazardous waste in Short Term Storage Areas (STSA) YES NO</i>					
<i>If yes, complete sections 2B.</i>					

Do you generate wastes that are Exempt? Yes NO
 (please refer to Guidance Document for examples of Conditional and recycling Exemptions for wastes)
 If yes, complete section 2C.

Section 2A. Satellite Accumulation

NO	YES	Does not Apply	I Don't Know		Page #
				Q1: For each waste stream accumulating in a satellite area, are you accumulating less than 55 gallons (one drum) of hazardous waste or one cubic yard of VT-listed non-liquid hazardous waste?	22
				Q2: Is only one accumulation container per process waste stream being used to accumulate such waste in each satellite area?	22
				Q3: Is each satellite area at or near the location where waste is generated?	22
				Q4: In each satellite area, is the accumulating waste under the control of the operator of the process generating that waste?	23
				Q5: Are all satellite accumulation containers chemically compatible with the wastes that are being placed into them?	23
				Q6: Are all satellite containers in good condition?	23
				Q7: Are all satellite containers located within a structure that sheds rain and snow and has an impervious surface?	23
				Q8: Is each satellite container holding hazardous waste closed (except if actively adding or removing waste)?	24
				Q9: Is each satellite container marked with the words "Hazardous Waste" and other words that identify the contents?	24
				Q10: Are full satellite containers immediately dated? Are full satellite containers moved to a short-term storage area (or transported off-site) within three days of becoming full?	25
Section 2B. Accumulation in Short Term Storage Area (STSA)					
If you accumulate waste in containers located in your STSA, complete this section.					
				Q11: For each waste stream accumulating in a STSA, are you accumulating less than 55 gallons (one drum) of hazardous waste or one cubic yard of VT-listed non-liquid hazardous waste?	25

NO	YES	Does not Apply	I Don't Know		Page #
				Q12: Is only one accumulation container per process waste stream being used to accumulate waste in a STSA?	25
				Q13: Is the waste collected at the point of generation using a shift accumulation container brought directly to the STSA by a trained employee at the end of each work shift (< 12 hours)?	25
				Q14: Is each shift accumulation container in good condition, kept closed and labelled as "Hazardous Waste" and other words that identify its contents?	26
				Q15: Is each accumulation container in the STSA marked to indicate that it is an "accumulation container" and to identify the point of waste generation?	26
				Q16: Is each accumulation container in the STSA marked or labeled as required? (see Section 3, Questions 13 through 16 for specific requirements)	26
				Q17: Are accumulation containers located in the STSA dated immediately upon becoming full?	26
Section 2C. Management of Exempt Waste					
<i>If you generate wastes that are managed using a conditional or recycling exemption, complete this section. Please be aware that this section only addresses the management of some of the most common exempt waste streams. Refer to the VHWMR (§7-203 and §7-204) for a complete list of wastes that can be managed as exempt.</i>					
<i>Please be aware that exemption from the requirements of the VHWMR is contingent on meeting exemption conditions.</i>					
				Q18: If you launder contaminated shop rags, are they stored in containers marked as "Destined for Laundering" or with similar language?	27
				Q19: If you launder your contaminated shop rags, are they stored in containers that are kept closed, in good condition, stored on an impervious surface, and are protected from rain and snow?	27
				Q20: If you generate used oil filters, do you gravity-drain them prior to disposal and do you manage the drained oil appropriately? (See Section 6 for used oil requirements)	28
				Q21: If you generate used antifreeze for recycling or reuse, is it stored in containers that are marked with words that identify the contents?	28
				Q22: If you generate used antifreeze for recycling or reuse, is it stored in containers that are: kept closed; in good condition; stored on an impervious surface; and protected from rain and snow?	28
				Q23: If you generate used lead-acid batteries, do you store them under cover and on an impervious surface?	29

If you answered "NO" to any question(s), identify issue and corrective action needed.

Section 3. Short-Term Storage of Hazardous Waste

Does your facility have a Short-Term Storage Area (STSA) for Hazardous Waste? YES NO

If yes, complete the following section.

NO	YES	Does not Apply	I Don't Know		Page #
				Q1: Can you demonstrate that full containers of hazardous waste are stored on-site for less than 180 days?	<u>30</u>
				Q2: Do you have less than 13,200 pounds of hazardous waste on site at any one time?	<u>30</u>
				Q3: Does your STSA have an impervious storage surface (i.e. floor)?	<u>30</u>
				Q4: Is your STSA located in a structure that sheds snow and ice?	<u>30</u>
				Q5: Have measures been taken to prevent hazardous waste stored in your STSA from freezing (e.g. is the space heated)?	<u>30</u>
				Q6: Is spill or fire control equipment available in the vicinity of each STSA?	<u>30</u>
				Q7: Is aisle space between row of containers at least 24 inches?	<u>31</u>
				Q8: Is hazardous waste labeling visible on all containers in the STSA?	<u>31</u>
				Q9: Is each container in the STSA closed, except to add or remove waste?	<u>31</u>

NO	YES	Does not Apply	I Don't Know		Page #
				Q10: Are incompatible hazardous wastes segregated or stored in separate enclosures?	31
				Q11: Have you avoided placing incompatible wastes into the same container?	31
				Q12: Have you avoided placing waste into an unwashed container that previously held an incompatible waste or material?	31
Are containers in the STSA marked or labeled with the following information:					
				Q13: Generator's name, address and EPA ID number?	32
				Q14: Name and hazardous waste ID code of the waste in the container?	32
				Q15: The following language: "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the EPA"?	32
				Q16: Date when the container was first used to store hazardous waste (date container became full)?	32
STSA: Security and Safety					
				Q17: Is a "Warning - Hazardous Waste" sign, visible from 25 feet, posted at each STSA?	33
				Q18: Is a "No Smoking" sign posted at each STSAs where ignitable wastes are stored?	33
				Q19: If your facility is located in a county that borders the province of Quebec, are warning signs written in both English and French?	33
Is the following required information posted in the vicinity of each STSA?					
				Q20: Name and telephone numbers (office, cell, and home) of the emergency coordinator(s)?	34
				Q21: Location of fire extinguishers, spill control material, and, if present, fire alarm?	34
				Q22: The telephone number of the fire department (unless your facility has a direct alarm)?	34

NO	YES	Does not Apply	I Don't Know		Page #
STSA: Inventory & Inspection					
				Q23: Do you maintain an up-to-date inventory of hazardous waste in each STSA, and is this inventory kept at a location apart from the STSA?	<u>34</u>
				Q24: Do you complete and document daily inspections of each STSA?	<u>35</u>
				Q25: Are your daily inspection records kept for at least 3 years?	<u>35</u>
Does your daily inspection log include the following required items (Q26-30):					
				Q26: Condition of hazardous waste drums?	<u>35</u>
				Q27: Presence and condition of Safety and Emergency Equipment?	<u>35</u>
				Q28: Adequate aisle space (minimum 24 inches)?	<u>35</u>
				Q29: Description of problems encountered and corrective actions taken?	<u>35</u>
				Q30: Date of Inspection/Inspector's Signature?	<u>35</u>
				Q31: If you use tanks to store hazardous waste, are the tanks marked with the words "Hazardous Waste" and other words to identify the contents of the tank?	<u>36</u>
If you answered "NO" to any question(s), identify issue and corrective action needed.					

Section 4. Hazardous Waste Manifests and Land Disposal Restrictions (LDR)

NO	YES	Does not Apply	I Don't Know		Page #
				Q1: Do you use a uniform Hazardous Waste Manifest for each hazardous waste shipment?	<u>38</u>
				Q2: Is hazardous waste offered for shipment only to transporters and TSDFs with EPA ID numbers?	<u>38</u>
				Q3: Do you verify that each section of the manifest is completed accurately?	<u>38</u>
				Q4: Do you confirm that completed copy of each manifest is returned to your facility from the designated TSDF within 35 days?	<u>39</u>
				Q5: If a completed copy of a manifest was not received by your facility within 45 days of the initial shipment, did you submit an exception report to the Agency?	<u>39</u>
				Q6: Have you confirmed that completed copies of each manifest have been received by the Agency?	<u>40</u>
				Q7: Do you retain copies of completed manifests for at least 3 years?	<u>40</u>
				Q8: For applicable hazardous wastes, do you retain Land Disposal Restrictions (LDR) paperwork on file?	<u>40</u>

*If your facility ships hazardous waste outside the United States (i.e. exports), please review the specific **export requirements** in Subchapter 7 of the **VHWMR**.*

If you answered "NO" to any question(s), identify issue and corrective action needed.

Section 5. Emergency Preparedness

NO	YES	Does not Apply	I Don't Know		Page #
				Q1: Is your facility operated in a manner that minimizes the potential for emergencies involving hazardous waste?	<u>43</u>
				Q2: Have you designated at least one employee to serve as the “emergency coordinator” for your facility and is that person familiar with the specific responsibilities of that position?	<u>43</u>
				Q3: Is at least one emergency coordinator either on the premises or on call at all times?	<u>43</u>
				Q4: Is emergency response information posted in the immediate vicinity of all short-term storage areas and locations where hazardous wastes are accumulated?	<u>43</u>
				Q5: Is the emergency coordinator(s) able to perform the required emergency responses?	<u>45</u>
				Q6: Is each employee with hazardous waste management responsibilities thoroughly familiar with the emergency procedures, proper waste handling procedures relevant to their job responsibilities, and evacuation signals/routes?	<u>45</u>
				Q7: Have you determined what types of emergency response equipment your facility is required to have?	<u>46</u>
				Q8: Is all emergency equipment tested and maintained as necessary to ensure its proper operation in time of emergency?	<u>46</u>
				Q9: Have you familiarized emergency response organizations with the information pertaining to potential hazards posed by your facility?	<u>46</u>

If you answered “NO” to any question(s), identify issue and corrective action needed.

Section 6. Used Oil

Does your facility generate used oil? YES NO

Does your facility burn used oil fuel on -site in a space heater? YES NO

If **NO** to both, skip to next section.

NO	YES	Does not Apply	I Don't Know		Page #
				Q1: If used oil is burned as fuel at your facility, have you tested it for chlorine contamination?	<u>47</u>
				Q2: Are containers of used oil/used oil fuel closed when not adding or removing used oil/used oil fuel?	<u>48</u>
				Q3: Are containers holding used oil/used oil fuel managed in a manner to prevent the container from rupturing or causing a release?	<u>49</u>
				Q4: Are containers holding used oil/used oil fuel compatible with oil?	<u>49</u>
				Q5: Are containers holding used oil/used oil fuel in good condition?	<u>49</u>
				Q6: Are containers holding used oil/used oil fuel marked with the words "Used Oil?"	<u>49</u>
				Q7: Are containers holding used oil/used oil fuel stored on an impervious surface?	<u>49</u>
				Q8: Are containers of used oil/used oil protected from rain and snow?	<u>49</u>
				Q9: Are containers holding used oil/used oil fuel and water mixtures protected from freezing?	<u>49</u>
				Q10: If you store used oil in an above-ground storage tank, is the tank marked with the words "Used Oil" or "Used Oil Fuel"?	<u>50</u>
				Q11: If you store used oil in an aboveground storage tank located outdoors, is the tank equipped with secondary containment?	<u>50</u>

If you answered "NO" to any question(s), identify issue and corrective action needed.

Section 7. Universal Waste

Does your facility manage spent lamps, mercury devices, light ballasts, or CRTs as Universal Waste? YES NO

If **yes**, complete this section

NO	YES	Does not Apply	I Don't Know	Universal Waste Lamps (Fluorescent Lights)	Page #
				Q1: Are universal waste lamps packaged in containers that are structurally sound, adequate to prevent breakage, and kept closed?	<u>52</u>
				Q2: Are full containers of waste lamps sealed with tape?	<u>52</u>
				Q3: Are containers of waste lamps stacked no higher than 5 feet?	<u>53</u>
				Q4: Are all containers holding waste lamps marked as "Universal Waste - Lamps" or "Used Lamps"?	<u>53</u>
				Q5: Can you demonstrate waste lamps have been accumulated/stored for less than one year?	<u>53</u>
Mercury-Containing Devices (thermostats, switches)					
				Q6: Are mercury-containing devices packaged in containers that are structurally sound and adequate to prevent breakage, and are the containers kept closed?	<u>54</u>
				Q7: Are containers holding mercury-containing devices marked as "Universal Waste-Mercury Device(s)", "Waste Mercury Device(s)", or "Used Mercury Device(s)"?	<u>54</u>
				Q8: Can you demonstrate mercury-containing devices have been accumulated/stored for less than one year?	<u>54</u>
Light Ballasts					
				Q9: Are PCB-containing fluorescent light ballasts managed to prevent releases to the environment?	<u>55</u>
				Q10: Are PCB-containing fluorescent light ballasts, or their containers, marked as "Universal Waste- PCB Ballast(s)", "Waste PCB Ballast(s)", or "Used PCB Ballast(s)"?	<u>55</u>
				Q11: Can you demonstrate light ballasts have been accumulated/stored for less than one year?	<u>55</u>

NO	YES	Does not Apply	I Don't Know	Cathode Ray Tubes (CRTs)	Page #
				Q12: Are CRTs packaged to prevent breakage during storage, handling, and transportation?	56
				Q13: Are CRTs, or their containers, marked as "Universal Waste- Cathode Ray Tube(s)", "Waste Cathode Ray Tube(s)", or "Used Cathode Ray Tube(s)", "Universal Waste- CRT(s)", "Waste CRT(s)", or "Used CRT(s)"?	56
				Q14: Can you demonstrate CRTs have been accumulated/stored for less than one year?	56
<p>If you answered "NO" to any question(s), identify issue and corrective action needed.</p>					

HAZARDOUS WASTE MANAGEMENT FOR SMALL QUANTITY GENERATORS

The purpose of the following sections is to provide clarification and additional information on the questions listed in the Self-Evaluation Checklist.

SECTION 1 - General Information

Small quantity generators include a diverse range of businesses. While most people realize that certain businesses produce or generate hazardous waste (e.g., dry cleaners, electroplaters, auto body shops), hazardous waste “generation” is less obvious for other businesses. For example, food product manufacturers, educational institutions, municipalities and retail stores typically generate hazardous wastes through equipment cleaning, grounds-keeping, painting, other maintenance activities, and disposal of unwanted/expired products. The types of materials used by a facility often indicate if hazardous wastes will be generated, and businesses that use the following materials are likely to generate hazardous waste:

- Solvents, thinners or cleaning fluids;
- Sorbent materials (e.g., “kitty litter,” sorbent pads);
- Petroleum products;
- Dyes, paints, or inks;
- Pesticides or herbicides;
- Acids or caustic materials;
- Toxic metals (e.g., arsenic, cadmium, chromium, lead, mercury);
- Flammable or reactive materials;
- Materials that cause skin to burn or itch upon contact;
- Materials that bubble or fume upon contact with water;
- Products accompanied by a shipping paper, label, or safety data sheet indicating that the product is hazardous.

Hazardous wastes have properties or contain chemicals which make them dangerous or capable of harming human health or the environment, as explained in detail in the **Vermont Hazardous Waste Management Regulations (VHWMR)**. A waste is considered to have been “generated” when it is put into a container or tank for disposal, or a decision has been made that the material is no longer useable. Hazardous wastes managed in the course of running a business – including wastes from municipalities and from businesses operated out of a home – are regulated by the VHWMR.

All wastes that are regulated as hazardous waste in Vermont are identified in Subchapter 2 of the VHWMR. These wastes are either specifically “**listed**” or exhibit a hazardous “**characteristic**.” Listed wastes are specifically named on several lists found in the VHWMR. Characteristic wastes exhibit one (or more) of four hazardous properties (ignitibility, corrosivity, reactivity, and toxicity). All hazardous wastes are identified by a waste-specific four-digit “**hazardous waste code**” that consists of one or two letters followed by two or three numbers (e.g., F005, VT02, D018).

Listed wastes: In Vermont, there are five categories of listed hazardous waste. The hazardous waste codes corresponding to these wastes begin with the letters VT, F, K, P or U. In general, VT- and F-listed hazardous wastes are much more commonly generated by SQGs than K-, P-, or U-listed wastes.

- **Vermont-listed wastes (“VT” codes)** – Vermont regulates eight specific wastes that are not regulated by the federal Environmental Protection Agency (EPA). Vermont-listed hazardous wastes include: wastes with >50 parts per million PCBs (VT01); wastes with >5% by weight petroleum distillates (VT02); water-soluble metal-working fluids (VT03); pesticides that are not federally regulated (VT06); antifreeze (ethylene glycol) (VT08); corrosive solids (VT20); liquid wastes containing perfluorooctanoic acid (PFOA) in concentrations equal to or greater than 20 parts per trillion (VT21); and liquid wastes containing perfluorooctanesulfonic acid (PFOS) in concentrations equal to or greater than 20 parts per trillion (VT22). *See VHWMR § 7-211.*
- **Wastes from non-specific sources (“F” codes)** - There are 28 “F-listed” wastes produced by general (non-specific) processes. Common examples include “spent halogenated solvents” such as trichloroethylene and tetrachloroethylene (F001, F002); “spent non-halogenated solvents” such as methyl ethyl ketone, xylene, acetone and toluene (F003, F005); and “electroplating solutions and treatment sludges” (F006). *See VHWMR § 7-210.*
- **Wastes from specific sources (“K” codes).** K-listed hazardous wastes are generated by specific processes such as organic chemical manufacturing, wood preservation and petroleum refining. *See VHWMR § 7-212, Appendix I.*
- **Acutely hazardous wastes (“P” codes).** P-listed hazardous wastes are extremely hazardous discarded or off-specification commercial chemical products. More protective management standards apply to these wastes as well as to “empty” containers that once held acutely hazardous wastes. Examples include many herbicides, pesticides, toxic metals, and unused pharmaceuticals such as epinephrine, nitroglycerine, and warfarin. *See VHWMR § 7-215, Appendix IV.*
- **Discarded Commercial Chemical Products (“U” codes).** U-listed hazardous wastes include (non-acute) discarded or off-specification commercial chemical products. *See VHWMR § 7-214, Appendix III.*

Characteristic wastes: A waste is also regulated as hazardous waste if it exhibits one (or more) of the following hazardous waste characteristics (all are identified by “D” codes):

- **Ignitability (D001 code)** Ignitable waste is liquid with a flash point of less than ~140° F; or is not a liquid and is capable under standard temperature and pressure of causing fire and creating a burning hazard; or is an ignitable compressed gas. Examples of ignitable wastes include petroleum-based parts washing solvents and strong oxidizers. *See VHWMR § 7-205.*
- **Corrosivity (D002 code)** Corrosive waste is liquid with a pH ≤ 2 or ≥ 12.5 ; or corrodes steel at a rate greater than ¼ inch/year. Examples of corrosive wastes are battery acid and caustic drain cleaner. **Note that “corrosive solids” are regulated as a “Vermont-listed waste” and are identified by the VT20 code.** *See VHWMR § 7-206.*

- **Reactivity (D003 code)** Reactive waste may have any of the following properties:
 - It is normally unstable and undergoes violent change without detonating;
 - It reacts violently with water;
 - It forms potentially explosive mixtures with water;
 - It produces toxic gases, vapors or fumes when mixed with water;
 - It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes;
 - It is capable of detonation if it is subjected to a strong initiating source or if heated under confinement;
 - It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

Examples of reactive wastes include sodium metal, dynamite (munitions), picric acid, and peroxide formers like diethyl ether. *See VHWMR § 7-207.*

- **Toxicity (D004 through D043 codes)** Wastes that exhibit the toxicity characteristic may leach any one of 40 specific contaminants to groundwater. These contaminants include eight metals (including arsenic, chromium, mercury, and lead), six pesticides, and 26 other organic compounds (including benzene which is a component of gasoline). The ***Toxicity Characteristic Leaching Procedure*** (TCLP) test method (i.e., EPA Publication SW-846, Method 1311) is used to determine if a waste exhibits the toxicity characteristic of hazardous waste. *See VHWMR § 7-208.*

Hazardous Waste Determination:

The process of deciding if your wastes are hazardous is called a *hazardous waste determination*. It is your responsibility as the generator of this waste to make this determination.

- 1) Determine if the waste is **exempt** from regulation as hazardous waste. *See VHWMR § 7-203, § 7-204.*
- 2) If the waste is not exempt, determine if the waste is **listed** as hazardous waste (i.e., it is assigned a VT, F, K, U or P code).
- 3) If the waste is not listed, determine if the waste exhibits is **characteristic** for ignitability, corrosivity, reactivity, and/or toxicity.

To determine if a waste is listed or exhibits a hazardous waste characteristic, a generator may either use **knowledge of the process** that produces the waste or have the waste **tested by a laboratory**. If you chose to base a determination on process knowledge, reliable information about each of the products/raw materials used in the process (e.g., product labels, Safety Data Sheets [SDS]) must be evaluated. You must be able to clearly demonstrate how the knowledge was applied in making the determination. Documentation of the laboratory test results or any other product information used to determine if a waste is hazardous must be maintained by the generator. Also, re-characterization of the waste must be done whenever there is a change in the process that is generating the waste.

Be aware that Safety Data Sheets may not provide all information necessary for making a hazardous waste determination. In most instances, Safety Data Sheets only identify hazardous constituents that

make up 1% or more of a product (1% = 10,000 parts per million). However, hazardous waste thresholds may be less than 1% of the product total (e.g. D018- benzene containing waste).

Additional Information about Determining if Waste is Hazardous Waste:

- Subchapter 2 of the Regulations (Identification and Listing of Hazardous Waste):
http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Regulations/VHWMR_Sub2.pdf
- “Making a Hazardous Waste Determination” Fact Sheet:
<http://dec.vermont.gov/sites/dec/files/ead/documents/FactSheets/hwdeterminationfs.docx>

For Assistance in Making Hazardous Waste Determinations, Contact:

- Vermont’s Hazardous Waste Management Program has technical specialists available to answer questions about all aspects of hazardous waste management and can be reached at **(802) 828-1138**.
- Vermont Environmental Assistance Office is a non-regulatory environmental compliance and technical assistance program and can be reached at **1-800-974-9559**.
- Trade Associations - National, regional or state-wide trade organizations (e.g., auto dealers, equipment rental industry, wood product manufacturers, drycleaners, ski areas) may be able to provide information about specific hazardous waste management issues that are of interest to their members.

Q1: Have you determined which wastes generated at your facility are hazardous wastes (i.e. made a hazardous waste determination)? See *VHWMR § 7-303*.

As a generator, you are required to assess all your waste and determine which wastes are hazardous. See above information for guidance.

Q2: Do you have supporting documentation for all hazardous waste determinations? See § 7-710(a)(2).

As a generator, it is your responsibility to retain records of information used to determine if wastes are hazardous. This may include product information (e.g. product labels, Safety Data Sheets), waste analyses or other determinations for at least three (3) years from the date the waste was last treated on-site or sent off-site for treatment, storage, or disposal. Additionally, if a waste is re-characterized (e.g. if a process changes), those records must also be kept for three (3) years.

Q3: Have you filed a Hazardous Waste Handler Site ID Form? See *VHWMR § 7-304(a)*, § 7-104.

Any facility that handles hazardous waste in Vermont must submit a **Vermont Hazardous Waste Handler Site ID Form** (“Site ID Form”) to the Agency. Upon submitting a Site ID Form, a site-specific EPA Identification Number is assigned to your facility. You must submit a revised Site ID Form if changes occur that substantively alter the information included on the previous Site ID Form on file with the Division (e.g. contact or generator status change).

The Site ID Form and instructions are available at:

<http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Forms/VTNotif2002form.pdf>

Q4: Is the Hazardous Waste Handler Site ID Form up to date – does it accurately describe current waste activity, waste generation, and provide current facility contact information? *See VHWMR § 7-304(b).*

Changes that would require a revised Site ID Form include:

- A change in facility ownership;
- A significant change to the type(s) or amount(s) of hazardous waste generated;
- A change in generator status;
- A change to facility contact information.

If your facility is **moving to a new location**, notify the Division of the change and submit a **new Site ID Form**. Since EPA Identification numbers remain with the physical location to which they were originally assigned, your facility will be issued a new EPA Identification number that is unique to the new location. In addition, all SQGs (and LQGs) are required to file a Pre-Closure Notification Form (link below) when ceasing operations at a particular location.

<http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Forms/Preclosurenotificationform.pdf>

Q5: Have you paid the annual hazardous waste registration fee (due April 30th)? *See VHWMR 7-307(c)(11).*

Once you determine you are a generator of hazardous waste and submit a Site ID Form to the Division, your facility will become registered. The Hazardous Waste Generator Registration Fee is an annual fee and registration requirement for all generators of hazardous waste. Fees are normally mailed out mid-March and payment is due by April 30th. The fee is currently \$125 for an SQG. Municipalities are exempt from the generator fee requirement.

Q6: If your facility treats or recycles hazardous waste on-site, have you submitted a “Generator Treatment” notification form to the Agency for each treatment activity? *See VHWMR § 7-502(o).*

Generators may treat hazardous waste on-site in containers or tanks (without obtaining a certification pursuant to VHWMR Subchapter 5) provided:

- A **Generator Treatment Notification Form** is submitted that includes:
 - Facility and contact information;
 - A description of the treatment process including design drawings or process diagrams;
 - An estimate of the frequency that treatment will occur;
 - The type(s) and estimated quantity of hazardous waste to be treated;
 - A detailed description of how treatment products and by-products will be managed.

Vermont’s Hazardous Waste Generator Treatment Notification Form is available at:

<http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Forms/GenTreatmentForm.pdf>

- Hazardous waste being treated is generated and treated on-site, managed according to the VHWMR prior to treatment, and counted for the purpose of determining generator status.
- Records are maintained for 3 years which document:
 - The type(s) and quantity of hazardous waste being treated;
 - The method(s) of treatment used;
 - The date(s) that treatment occurred.
- All hazardous waste generated from the treatment process is managed according to the VHWMR.
- No thermal treatment processes are used (distillation and wastewater evaporation are not considered thermal treatment).
- No mercury-containing wastes or devices are treated (e.g. fluorescent lamps, thermostats).
 - Drum-top crushing of mercury-containing lamps is specifically prohibited in Vermont.
- Treatment does not result in harm to human health or the environment.

Examples of generator treatment are: compaction, distillation, curing, and filtration.

Q7: With the exception of hazardous waste that is treated or recycled on-site, does your facility ship all hazardous waste off-site to a permitted treatment, storage or disposal facility for proper management? *See VHWMR § 7-309(b)(4).*

Most hazardous waste may only be shipped off-site to a permitted hazardous waste treatment, storage, or disposal facility, using a uniform hazardous waste manifest. The only exceptions to this are:

- Small quantity generators are not required to use a uniform hazardous waste manifest to ship hazardous waste that is being reclaimed under a contractual reclamation (“tolling”) agreement. *See VHWMR § 7-702(c).*
- Vermont-listed hazardous wastes may be shipped to an out-of-state facility (that is not a permitted hazardous waste treatment, storage or disposal facility) using a shipping paper other than a uniform hazardous waste manifest, provided that the receiving facility can accept such waste under applicable state and local laws, regulations, and ordinances. *See VHWMR § 7-309(b)(5) and (7).*

Q8: Has your facility reported all reportable discharges/releases of a hazardous waste or a hazardous material immediately by phone and in writing within 10 days? *See VHWMR § 7-105(a)(2).*

Discharges required to be reported include:

- Any release of hazardous waste or material that is more than 2 gallons;
- Any release of hazardous waste or material that is less than or equal to 2 gallons **and** poses a threat to human health and the environment;
- Any discharge of hazardous waste or material that must be reported under CERCLA. The National Response Center must also be notified at (800) 424-8802.

To report a release, call the Vermont Waste Management and Prevention Division at **(802) 828-1138 (7:45AM - 4:30PM)** or the Division of Emergency Management and Homeland Security at **(800) 641-5005 (24 hours/day)**. Written reports should be submitted to:

Vermont Department of Environmental Conservation
Waste Management & Prevention Division
1 National Life Drive – Davis 1
Montpelier, VT 05620-3704

All clean-up debris that is determined to be hazardous waste must be managed and disposed of in accordance with the VHWMR.

Q9: Do you ensure that no hazardous waste is evaporated? *See VHWMR § 7-302(a).*

Evaporation of hazardous waste is prohibited. All hazardous waste must be stored in containers that can be securely closed to prevent evaporation. *See Sections 2 & 3 of this guidance document.*

Q10: Do you ensure that no hazardous waste is diluted? *See VHWMR § 7- 302(b).*

Dilution of hazardous waste is prohibited. This ensures that wastes are treated properly and not merely diluted to decrease the concentration of hazardous constituents.

Q11: Do you ensure that no hazardous waste or hazardous material is disposed of on the ground, to surface waters, floor drains, storm drains, a sanitary sewer, or in the trash? *See VHWMR § 7-302(c).*

The release of hazardous material or hazardous waste onto the ground or into surface water, floor drains, storm drains, or the trash is prohibited. Such activity can contaminate ground and/or surface water and threaten drinking water supplies. Examples of wastes that inspectors have observed which have been illegally disposed of include: oily wastes, ignitable wastes, contaminated sorbents, contaminated rags, dry cleaning lint, partially full aerosol cans and fluorescent light bulbs.

If a hazardous material or waste is released or discharged to the environment, you must follow specific emergency action and reporting requirements. *See VHWMR § 7-105(a).*

More information about floor drains and spills/releases can be found at:

http://dec.vermont.gov/sites/dec/files/ead/documents/FactSheets/floordrain_fs.pdf

http://dec.vermont.gov/sites/dec/files/ead/documents/FactSheets/fs_spills_wm.pdf

SECTION 2 - Waste Accumulation and Container Management

Small Quantity Generators (SQGs) have two options for accumulating hazardous waste: accumulation of waste into containers maintained in satellite accumulation areas, or accumulation into shift accumulation containers and transferring the waste into a central accumulation container maintained in the short-term storage areas (STSA) at the end of each work shift (12 hours or less).

Depending on how hazardous waste is being accumulated at your facility, different regulatory requirements will apply to the management of the accumulation containers.

Section 2A. Satellite Accumulation

What is satellite accumulation?

Satellite accumulation is the collection of hazardous waste at the point of waste generation. Satellite accumulation areas hold waste containers that are intended for the temporary storage of such hazardous waste in a supervised work area. These containers may be in use for as long as it takes to fill them, but once full, must be moved out of the satellite accumulation area to a designated storage area or off-site for disposal. An example of a satellite accumulation container is a 55-gallon drum used for accumulating D001-listed waste from a printing process; this drum is located at or near the printing process line where the D001 waste is generated, and is overseen by the operator of the printing process.

Q1: For each waste stream accumulating in a satellite area, are you accumulating less than 55 gallons (one drum) of hazardous waste or one cubic yard of VT-listed non-liquid hazardous waste? See *VHWMR* § 7-310(a).

There are volume limits on the amount of hazardous waste that can be accumulated in each satellite areas, and for each waste stream being accumulated. A satellite accumulation container is limited to 55-gallons or less in volume for liquid hazardous waste, and one-cubic yard for Vermont-listed non-liquid hazardous waste (such as oil contaminated solids).

Q2: Is only one accumulation container per process waste stream being used to accumulate such waste in each satellite area? See *VHWMR* § 7-310(c).

In each satellite area, only ONE accumulation container **per process waste** may be used for accumulation of hazardous waste. Duplicate containers for a particular waste stream are not permissible. The size of each container must be less than 55 gallons. If you have multiple satellite accumulation areas at your facility for accumulation of the same waste stream (i.e.: three satellite areas for three separate printing process lines that all generate the same waste stream), you are permitted to have one container for the same waste stream at each of the distinct satellite accumulation areas.

Q3: Is each satellite area at or near the location where waste is generated? See *VHWMR* § 7-310(a).

Each satellite accumulation area must be established in the vicinity of the process where the waste stream is generated. If your facility has multiple process lines that generate the same waste, but are

located at a significant distance from each other, you will need to set up multiple satellite accumulation areas. Hazardous waste containers should never be placed in pathways where motor vehicles or people move.

Q4: In each satellite area, is the accumulating waste under the control of the operator of the process generating that waste? See VHWMR § 7-310(a).

All satellite accumulation containers must be under the control of the operator of the process that is generating the waste (i.e. facility representative(s) responsible for operating the equipment generating the waste). You should ensure that each person handling the satellite accumulation container is adequately trained and knows the container management requirements.

Q5: Are all satellite accumulation containers chemically compatible with the wastes that are being placed into them? See VHWMR § 7-310(a)(1).

Hazardous waste containers must be compatible with the waste stored in them (e.g., do not store acidic waste in a metal container as it may cause the container to corrode and eventually leak). Review any SDS sheets for the materials generating the waste to ensure that there is no incompatibility with the storage container.

Q6: Are the satellite containers in good condition? See VHWMR § 7-310(a)(2).

All containers holding hazardous waste must be in good condition and must be stored in a manner that does not subject them to physical damage or degradation due to contact with precipitation. Freezable hazardous waste must be managed in a manner that prevents the contents from freezing.

Q7: Are all satellite containers located within a structure that sheds rain and snow and has an impervious surface? See VHWMR 7-310(a)(3).

As with all hazardous waste containers, satellite accumulation containers must be kept on an impervious surface and containers must be protected from precipitation. Hazardous waste containers must never be placed directly on the ground. If the process generating the hazardous waste is out-of-doors, you may establish a satellite accumulation area out-of-doors as well, though you must ensure that the containers are stored on an impervious surface and protected from rain and snow.

An impervious surface must be sufficiently resistant to any waste material stored upon it to prevent that material from migrating to the soil, groundwater, or surface water. The type of surface material that is adequate to prevent any spilled waste from migrating through such surface will depend on the type(s) of waste that are being stored, and differs for liquid and solid hazardous wastes. For example, a hard plastic surface is an appropriate surface for storing containers of corrosive wastes (such as acids), while a metal surface is not appropriate for storing such wastes. In contrast, plastic surfaces should not be used for storing waste solvents (such as acetone), but metal surfaces will provide adequate protection in the event of a spill. Porous surfaces (such as wood) are always inappropriate surfaces for storing containers of liquid hazardous waste(s).



A good example of outdoor storage of hazardous waste containers. This outdoor shed provides both an impervious surface (hard plastic) and cover from rain and snow. Note that a shed like this would not prevent freezing during winter months; additional or alternative measures must be taken to ensure that freezable hazardous waste does not freeze.

Q8: Is each satellite container holding hazardous waste closed (except if actively adding or removing waste)? See *VHWMR 7-310(a)(4)*.

All hazardous waste containers must be kept closed except when adding waste to or removing waste from the container. A container equipped with a funnel does not meet the closed container requirement if the top of the funnel is exposed and not fitted with a lid. **Flip-top funnels** may be used, provided the lid is securely closed when the funnel is not in use.



The funnel screwed into the bung of this hazardous waste container has a flip-top lid that is closed and latched – this is a good example of a “closed” container.

Q9: Is each satellite container marked with the words "Hazardous Waste" and other words that identify the contents? See *VHWMR § 7-310(a)(5)*.

All satellite accumulation containers must be marked with the words “**Hazardous Waste**” **AND other words that identify the waste material stored in the container** (e.g., “acids,” “oil-contaminated sorbent”). This requirement can be met either by using a pre-printed label or by marking the required information directly on the container. Satellite accumulation containers do not have to be dated until they become full.

Q10: Are full satellite containers immediately dated? Are full satellite containers moved to a short-term storage area (or transported off-site) within three days of becoming full? See VHWMR § 7-310(a)(8).

Satellite containers must be marked with the date immediately upon becoming full, and they must be removed from the satellite area within three days. Full satellite containers can be moved to a short-term hazardous waste storage area (where the containers may be stored for up to 180 days), or transferred to an off-site Treatment, Storage and Disposal (TSD) facility by a permitted Hazardous Waste Transporter. Storage of full containers of hazardous waste in satellite areas beyond three days is not permitted.

Section 2B. Accumulation in Short Term Storage Areas (STSA)

What is a short-term storage area (STSA)?

A STSA is a designated location where hazardous waste containers are temporarily stored without the facility having to obtain a storage permit. Waste in STSAs has a defined storage time limits of 180 days, after which the waste containers must be transferred off-site to a treatment, storage, and disposal (TSD) facility. All STSAs must be established in accordance to specific design, operating and security standards.

Q11: For each waste stream accumulating in a STSA, are you accumulating less than 55 gallons (one drum) of hazardous waste or one cubic yard of VT-listed non-liquid hazardous waste? See VHWMR § 7-310(b).

Just as with satellite accumulation areas, if you're accumulating waste in your STSA, you are limited to collecting the waste into a container that is 55-gallons or less in volume for liquid waste, or one cubic yard of Vermont-listed non-liquid waste (such as oil-contaminated solids, managed as VT02). This volume restriction applies to each waste stream in accumulation; you may have multiple accumulation containers in the STSA, but each container must be used for accumulation of a different waste stream. Do not start a new accumulation container for a waste stream until the previous waste container for that waste stream has been determined full and has been marked with a date to indicate the fill date.

Q12: Is only one accumulation container per process waste stream being used to accumulate waste in a STSA? See VHWMR § 7-310(c).

Only ONE accumulation container per waste stream may be used for accumulation of hazardous waste. Duplicate containers for each particular waste stream are not permitted. The size of each container must be less than 55 gallons, for each liquid waste stream.

Q13: Is the waste collected at the point of generation using a shift accumulation container brought directly to the STSA by a trained employee at the end of each work shift (< 12 hours)? See VHWMR § 7-310(b)(1).

Waste that is accumulated in the STSA must be brought to the accumulation container in a shift accumulation container. "Shift accumulation containers" are containers used for collecting hazardous waste from a particular process by a trained employee, and must be emptied into a storage container at the end of a defined work shift (typically 12 hours or less). An example of a shift accumulation container is a five-gallon bucket used by a worker to drain cleaning solvent from a mixing drum; the

bucket is emptied into a larger accumulation container located in the short-term storage area at the end of that work shift.

Q14: Is each shift accumulation container in good condition, kept closed and labeled as "Hazardous Waste" and other words that identify its contents? *See VHWMR § 310(b)(1)(A)(ii, iii, iv).*

Container management requirements for shift accumulation containers are similar to those for satellite accumulation containers. All shift accumulation containers must be in good condition (check for leaks, bulging, severe rusting) and must be labeled with the words "Hazardous Waste" and other words that identify the contents.

Note that containers that are part of a process (i.e. container attached to a machine from which waste is continuously draining) are not considered shift accumulation containers and the labeling and management standards applicable to shift accumulation containers do not apply to such containers. However, you should ensure that such containers are placed in a safe and secure location, where the risk of waste spillage is minimized. Waste from these "part-of-the-process" containers should be transferred to either a satellite container or a short-term storage container, as soon as the container is filled, or when the process generating the waste is stopped (i.e. machine generating the waste is turned off).

Q15: Is each accumulation container in the STSA marked to indicate that it is an "accumulation container", and to identify the point of waste generation? *See VHWMR § 7-310(b)(2)(B).*

If you accumulate hazardous waste in a container maintained in the STSA, you must indicate (in writing) that the container is an "accumulation container" and state where the accumulating waste is being generated (example: "waste acetone from mixing room"). You may write this directly on the container or attach a label. Once the container is full and is no longer used to accumulate waste, remember to date it to indicate fill date, and remove the "accumulation container" wording from it.

Q16: Is each accumulation container in the STSA marked or labeled as required? (see Section 3, Questions 13 through 16 for specific requirements) *See VHWMR § 7-311.*

Each accumulation container maintained in the STSA must be marked or labeled with specific information to meet the STSA container management requirements. Please refer to Questions 13 through 15 of **Section 3: Short-Term Storage of Hazardous Waste** for a description of container labeling requirements that apply to all accumulation containers maintained in the STSA. You do not need to date an accumulation container until it is full.

Q17: Are accumulation containers located in the STSA dated immediately upon becoming full? *See VHWMR § 7-310(b)(2)(C).*

Once the accumulation container becomes full, or once you cease accumulating waste into the container for any reason (i.e. process discontinued), it must be dated immediately. You may store the container in your STSA for up to 180 days past this date before shipping the waste offsite for further management through a permitted hazardous waste transporter.

Section 2C. Management of Exempt Waste

What is exempt waste?

Some of the waste generated at your facility may be managed under a conditional or recycling exemption. Contingent on proper management, these wastes streams are exempt from the requirements of the VHWMR. Exempt wastes include used rags contaminated with oil or solvent which are laundered, used oil filters that are drained, used antifreeze that is recycled, and lead-acid batteries that are returned to the vendor or recycled. Used oil is also exempt from some of the requirements of VHWMR contingent on proper management; refer to Section 8 of this guidance for a comprehensive review of used oil management.

Wastes managed under conditional or recycling exemptions do *not* count toward generator status and should not be marked as “Hazardous Waste”. However, their exemption from the hazardous waste requirements is contingent upon following specific management practices. Improper management of exempt wastes makes them ineligible for an exemption from the VHWMR.

Q18: If you launder contaminated shop rags, are they stored in containers marked as "Destined for Laundering" or with similar language? See VHWMR § 7-203(w)(3)(A).

Q19: If you launder your contaminated shop rags, are they stored in containers that are kept closed, in good condition, stored on an impervious surface, and are protected from rain and snow? See VHWMR § 7-203(w)(3)(B), (C) and (D).

Many businesses generate used rags and shop towels that have been in contact with oil or solvents, such as tetrachloroethylene, methylene chloride, toluene, or methyl ethyl ketone. Rags contaminated with oil are considered VT02 wastes; rags that are contaminated with solvents are considered F-listed wastes, even if they appear dry. Used oil and solvent-contaminated rags that do not exhibit a hazardous waste characteristic (i.e. flammability) and that are laundered for re-use, can be managed as a conditionally exempt waste. In order to manage this waste stream as conditionally exempt, your facility must launder the rags through a commercial laundry service, and must accumulate the contaminated rags in a container that is kept closed and that is clearly labeled to indicate that the contents are destined for laundering (i.e. “rags for laundering”).

If you choose not to use a laundry service and instead dispose of the used rags/wipes, you must manage this waste stream as hazardous. Rags that have been contaminated with solvents must be managed under the F001, F002, F004, and/or F005 waste codes, as applicable; you may not dry the rags and then dispose of them as solid waste. Rags that are contaminated with oil (at more than 5% oil by weight) must be managed as VT02 waste.



Good example of conditionally exempt waste management - contaminated shop rags are accumulated into a closed container that is clearly labeled. Container with a large flip top lid allows for easy accumulation of contaminated rags into a hazardous waste container.

More information about shop rags contaminated with hazardous waste or used oil can be found at:

http://dec.vermont.gov/sites/dec/files/ead/documents/FactSheets/fs_ShopRags_wm.doc

Q20: If you generate used oil filters, do you gravity-drain them prior to disposal and do you manage the drained oil appropriately? See VHWMR § 7-203(o)(1) and (2).

Used oil filters may be thrown away or recycled as scrap metal provided they are gravity-drained using one of the following methods:

- Puncturing the filter anti-drain back valve or the filter dome end and hot draining;
- Hot draining and dismantling;
- Any other equivalent hot draining method that will remove used oil; or
- Draining and crushing using a mechanical, pneumatic, or hydraulic device designed for crushing oil filters.

Drained used oil must be managed according to used oil requirements (see Section 6).

Q21: If you generate used antifreeze for recycling or reuse, is it stored in containers that are marked with words that identify the contents? See VHWMR § 7-204(i)(2)(A).

Q22: If you generate used antifreeze for recycling or reuse, is it stored in containers that are kept closed; in good condition; stored on an impervious surface; and protected from rain and snow? See VHWMR § 7-204(i)(2)(B), (C), and (D).

Used antifreeze can be managed as a conditionally exempt waste if it will be recycled or reprocessed for reuse; check with your waste management company to confirm that it will be recycled. All spent antifreeze must be stored in containers that are labeled with the words, such as “Spent Antifreeze” or “Used Antifreeze” and not with the words “Hazardous Waste”.

Used antifreeze must be stored in closed containers that are in good condition. All containers must be stored on an impervious surface (such as a concrete floor), and if stored outside, containers must be stored within a structure that will protect the container from precipitation; containers should never be placed directly on the ground. If used antifreeze is mixed with water, you must ensure that the container is stored in such a manner to protect the contents from freezing.

Q23: If you generate used lead-acid batteries, do you store them under cover and on an impervious surface? See *VHWMR § 7-204(f)(1)*.

If you generate spent lead acid batteries, prior to recycling them, they must be stored on an impervious surface and under cover. If storing them outdoors, ensure that you store them in a structure that protects the batteries from rain and snow.



An example of inappropriate battery storage: batteries being stored outdoors with evidence of contact with precipitation.



An example of appropriate battery storage: batteries are stored indoors and on an impervious surface.

SECTION 3 - Short-Term Storage of Hazardous Waste

What is a Short-Term Storage Area (STSA)?

An STSA is a designated location where hazardous waste containers are temporarily stored without the facility having to obtain a storage permit. Waste in STSAs has a defined storage time limit of 180 days, after which the waste containers must be transferred off-site using a permitted hauler to a transfer, storage, and disposal (TSD) facility. All STSAs must be established in accordance to specific design, operating and security standards.

Q1: Can you demonstrate that full containers of hazardous waste are stored on-site for less than 180 days? See VHWMR § 7-307(c)(2)(A).

A small quantity generator may store hazardous waste on-site in a designated **short-term storage area** for up to 180 days. All hazardous waste must be shipped off-site to a permitted hazardous waste treatment, storage, or disposal facility within this timeframe. Storage of hazardous waste for more than 180 days is a violation of the VHWMR (unless the facility is permitted as a hazardous waste storage facility).

A one-time 30-day extension to the 180-day storage time limit may be granted at the discretion of the Agency, on a case-by-case basis for unforeseen, temporary and uncontrollable circumstances.

All containers in storage must be dated, in order to demonstrate that they have not been stored on-site for greater than 180-days.

Q2: Do you have less than 13,200 pounds of hazardous waste on site at any one time? See VHWMR § 7-304(a)(4).

In addition to the time requirement, small quantity generators may only have 13,200 lbs. (equivalent to thirty 55-gallon drums) of hazardous waste on site at any one time. This volume limit is for total waste on site and includes all of the hazardous waste in storage (STSA), as well as any waste that is being accumulated in satellite accumulation areas.

Q3: Does your STSA have an impervious storage surface (i.e. floor)? See VHWMR § 7-311(a)(1).

Q4: Is your STSA located in a structure that sheds rain, snow, and ice? See VHWMR § 7-311(a)(2).

Q5: Have measures been taken to prevent hazardous waste stored in your STSA from freezing (e.g. is the space heated)? See VHWMR § 7-311(a)(3).

Each STSA at your facility must meet required design standards. All hazardous waste present in the STSA must be stored on an impervious surface. A STSA may be located outdoors only if it is within a structure that sheds rain and snow. Hazardous wastes that are subject to freezing and expansion must be stored in a heated space sufficient to prevent freezing. Refer to Section 2A, Question 7 (impervious surface).

Q6: Is spill and fire control equipment available in the vicinity of each STSA? See VHWMR § 7-311(a)(4).

You must ensure that spill and fire control equipment are located within an immediate area of each STSA, where staff can quickly access the equipment in the event of an emergency.

Q7: Is aisle space between rows of containers at least 24 inches? See VHWMR § 7-311(b)(3).

Facility and emergency response personnel must be able to move freely about a STSA to conduct daily inspections, check the inventory and, if necessary, respond to emergencies. To ensure unobstructed movement of personnel and equipment (fire protection, spill control and decontamination), there must be at least two (2) feet of space between rows of hazardous waste containers.

Q8: Is hazardous waste labeling visible on all containers in the STSA? See VHWMR § 7-311(b)(2).

Containers stored inside each STSA must be clearly marked or labeled, and the contents of the label must be visible. When transferring containers to the STSA, each container must be placed in a way that the label is easily observable (i.e. labels are facing the aisle and not the wall).



A good example of container management in a STSA, with at least 2 feet of aisle space in between rows and visible waste labels.

Q9: Is each container in the STSA closed, except to add or remove waste? See VHWMR § 7-311(f)(4)(A).

As with all hazardous waste containers, those located in the STSA must be kept closed, except when adding or removing waste.

Q10: Are incompatible hazardous wastes segregated or stored in separate enclosures? See VHWMR § 7-311(b)(21).

Q11: Have you avoided placing incompatible wastes into the same container? See VHWMR § 7-311(f)(4)(C)(i).

Q12: Have you avoided placing waste into an unwashed container that previously held an incompatible waste or material? See VHWMR § 7-311(f)(4)(C)(ii).

Many hazardous wastes, when mixed together with other waste materials, can produce effects that are harmful to human health and the environment, such as heat, pressure, fire, explosion, violent reaction, toxic mists, fumes, gases, or flammable fumes or gases. Facilities may generate wastes that are incompatible, and it is important to take this into account when setting up the STSA. Examples of incompatible wastes are acids and bases, oxidizers and flammable/combustible wastes, organics and acids, cyanide and acids, and alkali metals and aqueous waste. Information on a specific product's chemical incompatibilities can be found on that product's Safety Data Sheet (SDS). A comprehensive list of potentially incompatible wastes can be found at:

http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Regulations/VHWMR_APP7.pdf

Wastes that could potentially react if mixed together must not be placed in the same container, an unwashed container that previously held an incompatible waste or material, or in an area where the wastes could mix together if spilled. Containers holding potentially incompatible hazardous wastes that are stored in the same STSA must be physically separated by a dike, berm, wall, or other device (e.g., a secondary containment tray).



This photograph depicts a violation - reactive hazardous waste (cyanide, D003) and corrosive hazardous waste (acids, D002) could potentially react if mixed and should not be stored next to each other.

Are containers in the STSA labeled with the following information:

Q13: Generator's name, address, and EPA ID number? See VHWMR § 7-311(f)(1)(A).

Q14: Name and hazardous waste ID code of the waste in the container? See VHWMR § 7-311(f)(1)(B).

Q15: The following language: "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the EPA"? See VHWMR § 7-311(f)(1)(D).

Q16: Date when the container was first used to store hazardous waste (date container became full)? See VHWMR § 7-311(f)(1)(C).

All containers of hazardous waste that are inside the STSA must be labeled with the following information:

- The generator's name, address, and EPA identification number;
- The name and hazardous waste code(s) of the hazardous waste stored in the container;
- The following language: "***Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.***"

More information about the accumulation of hazardous waste can be found at:

http://dec.vermont.gov/sites/dec/files/ead/documents/FactSheets/fs_HazWasteAccumulation.pdf

Each container storing hazardous waste in the STSA must be marked with a date to indicate when the container became full (storage start date). You have 180 days from this date to remove the container from your facility. Containers used to accumulate hazardous waste (waste from shift accumulation) do not need to be marked with the date that the container was first used to accumulate hazardous waste. These containers, like satellite accumulation containers, must be marked with the date immediately upon becoming full.



A pre-printed label such as this can be used for labeling your hazardous waste containers located in the STSA. Please note that “Accumulation Start Date” is the date that the container became full and went into storage - the container can remain in the STSA for up to 180 days.

Q17: Is a “Warning - Hazardous Waste” sign, visible from 25 feet, posted at each STSA? *See VHWMR § 7-311(e)(1).*

Q18: Is a "No Smoking" sign posted at each STSAs where ignitable wastes are stored? *See VHWMR § 7-311(e)(2).*

Q19: If your facility is located in a county that borders the province of Quebec, are warning signs written in both English and French? *See VHWMR § 7-311(e)(1).*

Each short-term hazardous waste storage area must be posted with a sign that reads “Danger-Hazardous Waste Storage Area-Authorized Personnel Only.” If your facility stores ignitable hazardous waste, then a “No Smoking” sign must also be posted if your facility. Both of these signs must be visible from a distance of at least 25 feet. In addition, if your facility is located in a county that borders Quebec, Canada, the sign(s) must be written in both English and French.



Correct signage at the entrance to a short-term hazardous waste storage area where ignitable waste is stored



English and French signage at the entrance to a short-term storage area

Is the following information posted in the vicinity of each short-term storage area (STSA):

Q20: Name and telephone numbers (office, cell, and home) of the emergency coordinator(s)?

See VHWMR § 7-307(c)(14)(B)(i).

You are required to post contact information for each designated emergency coordinator in the vicinity of each STSA. This information will be used to alert the emergency coordinator in an event of an emergency. The emergency coordinator's name and phone numbers (work, cell, and home) must be posted.

Q21: Location of fire extinguishers, spill control material, and, if present, fire alarm?

See VHWMR § 7-307(c)(14)(B)(ii).

Information regarding the location of the spill control material(s), a fire extinguisher, and a fire alarm must be posted in the vicinity of each STSA. This information will assist staff or designated responders to quickly and efficiently locate the necessary equipment in the event of an emergency.

Q22: The telephone number of the fire department?

See VHWMR § 7-307(c)(14)(B)(iii).

Unless your facility has a direct alarm that alerts the fire department in case of an emergency, you must post the telephone number of the local fire department at or in the vicinity of each STSA. Ensure that the posting is easy to locate and read, as staff will need quick access to this information in the event of an actual emergency.

Q23: Do you maintain an up-to-date inventory of hazardous waste in each STSA, and is this inventory kept at a location apart from the STSA?

See VHWMR § 7-311(d)(1).

Your facility must keep an accurate list (i.e., an inventory) of all hazardous waste that is both accumulating and being stored in a short-term storage area; if your facility maintains more than one short-term storage area, a separate inventory must be maintained for each area. To help ensure that first responders can be informed of potential hazards in the event of an emergency, inventory records must be kept at a location apart from the short-term storage area(s); electronic records are an adequate way to satisfy requirements. The inventory must identify the type of waste held in each container of hazardous waste in the short-term storage area.

An electronic inventory is acceptable provided it is available for review during an unannounced inspection by the Agency. Below is an example of an acceptable inventory log:

HAZARDOUS WASTE INVENTORY LOG				
Waste Type	Container Size	Accumulation or Full Container (circle one)	Date Full (Accumulation Date)	Date Shipped
		A F		
		A F		
		A F		
		A F		
		A F		
		A F		
		A F		
		A F		

Q24: Do you complete and document daily inspections of each STSA? See VHWMR § 7-311(d)(2).

Daily inspections of short-term storage areas are required during regular business days, which are days when personnel are normally scheduled to be on-site, and when containers of hazardous waste are present in the STSA. If your facility has multiple STSAs, you must complete a separate inspection for each area.

Q25: Are your daily inspection records kept for at least 3 years? See VHWMR § 7-311(d)(2)

Daily inspection logs must be retained on-site for a minimum of three years. These records may be requested for review by Agency inspectors conducting a hazardous waste inspection at your facility.

Does your daily inspection log include the following criteria:

Q26: Condition of hazardous waste drums? See VHWMR § 7-311(d)(2)(A).

Q27: Presence and condition of Safety and Emergency Equipment? See VHWMR § 7-311(d)(2)(B).

Q28: Adequate aisle space (minimum 24 inches)? See VHWMR § 7-311(d)(2)(C).

Q29: Description of problems encountered and corrective actions taken? See VHWMR § 7-311(d)(2)(D).

Q30: Date of Inspection and Inspector's Signature? See VHWMR § 7-311(d)(2)(E).

Your daily STSA inspection routine must include specific components. At a minimum, on a daily basis (when facility is operating and hazardous waste is present in the STSA), you must inspect the following:

- Condition of hazardous waste drums, including signs of bulging or leaking;
- The presence of the required safety and emergency equipment such as spill control and fire extinguishers; and
- The adequacy of aisle space between row of containers (at least 24”).

The inspection log must also include the following:

- Space to record any problems/issues encountered and any corrective actions taken by the facility to resolve the problem(s);

- The date that each inspection is completed; and
- Signature or initials of the staff completing the inspection for the day.

Inspections must be completed by a staff member that is trained to conduct hazardous waste inspections. While many facilities have only one staff member that is responsible for completing the daily inspections, it is a good idea to have a second staff member designated as a back-up, in case the primary inspector is not available (vacation, sick, etc.).

While the exact format of the inspection form is up to each individual generator to develop, below (page 37) is an example of the form that meets all of the requirements set by the VHWMR and can be used by any facility to complete inspections.

Q31: If you use tanks to store hazardous waste, are the tanks marked with the words "Hazardous Waste" and other words to identify the contents of the tank? See VHWMR § 7-311(g)(1)

If you use tanks to store hazardous wastes, each tank must be labeled with the words “Hazardous Waste” and the contents of the tank are clearly identified on the unit.

EXAMPLE: HAZARDOUS WASTE SHORT-TERM STORAGE AREA DAILY INSPECTION CHECKLIST

Year _____		Month _____			
Day	Rusting, bulging or leaking drums?	Availability of safety and emergency equipment (alarm system, fire extinguisher, spill control / decontamination equipment)?	Minimum 24-inch aisle space?	Problem area(s) encountered and corrective action(s) taken (method and date of correction)?	Signature or initials of inspector
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

SECTION 4 - Hazardous Waste Manifests and Land Disposal Restrictions (LDR)

Q1: Do you use a uniform Hazardous Waste Manifest for each hazardous waste shipment? *See VHWMR § 7-702(a)(1).*

A manifest is a standard federal form consisting of a multi-copy shipping document that tracks hazardous waste from “cradle to grave” and must be signed by the generator, transporter(s), and designated hazardous waste treatment, storage or disposal facility. Manifests are initiated by the hazardous waste generator and must identify (among other things) the names, and EPA Identification numbers of the generator, transporter(s), and the designated receiving facility. A copy of each manifest must also be retained by the generator, transporter(s) and designated facility for at least three years.

While transporters and designated treatment, storage or disposal facilities often provide customers with blank manifest forms, these documents may also be obtained from an EPA-approved printing company.

Q2: Is hazardous waste offered for shipment only to transporters and TSDFs with EPA ID numbers? *See VHWMR § 7-309(b)(2).*

You must ensure that any hazardous waste that your company offers for shipment to a designated receiving facility is only handled by transporters who hold a current permit to transport hazardous waste in the state of Vermont and is received by treatment, storage, recycling, or disposal facilities that have an EPA Identification number.

Q3: Do you verify that each section of the manifest is completed accurately? *See VHWMR § 7-702(a).*

Except for hazardous waste subject to a tolling (reclamation) agreement, small quantity generators must prepare a **Uniform Hazardous Waste Manifest** (manifest) when shipping hazardous waste off-site. Regardless of who fills out the manifest, it is always the generator’s responsibility to ensure that the information included is legible, correct and complete. [Instructions for completing a manifest are available at:](#)

http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Regulations/VHWMR_APP5.pdf

All applicable sections of the manifest document must be completed prior to shipping hazardous waste off-site. Among other things, your facility’s name and EPA Identification number must be identified, along with the names and EPA Identification numbers for the hazardous waste transporter(s) and designated treatment, storage or disposal facility selected to transport and receive the waste. The waste must also be described accurately in the space provided.

An example of a properly completed Hazardous Waste Manifest:

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number VTD012345678	2. Page 1 of 1	3. Emergency Response Phone 802-123-4567	4. Manifest Tracking Number 000110763 ABC		
5. Generator's Name and Mailing Address Fender Bender Autobody, Inc. 123 Dingsanddents Drive, Pothole, Vermont 05123-1234							
Generator's Phone: 802-123-4567				Generator's Site Address (if different than mailing address)			
6. Transporter 1 Company Name On The Road Transport, Inc.					U.S. EPA ID Number NJD012345678		
7. Transporter 2 Company Name Stay-Put Transport, Inc.					U.S. EPA ID Number NJD012345679		
8. Designated Facility Name and Site Address All Gone, Inc. 21 Roadways End Cleveland, Ohio 87654					U.S. EPA ID Number OHD012345670		
Facility's Phone:							
9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit WT./Vol.	13. Waste Codes	
		No.	Type				
	1. Non-Regulated Materials (VT Regulated Wastes)	001	DM	365	P	VT02	
	2. Waste Toluene/Xylene, Flammable Liquid N.O.S., 3, UN1993, PG II	001	DM	55	G	F003 F005	D001
	3. Waste Petroleum Distillates, N.O.S., 3, UN1268, PG II	001	DM	55	G	D001 VT02	
	4. Waste Toxic Solid, Inorganic, N.O.S., 6.1, UN3288, PG II	001	DM	235	P	D006 D007	
14. Special Handling Instructions and Additional Information 1. Oil soaked absorbents 2. Spray gun cleaning solvent & "puck" solids 3. Petroleum Naphtha Solvent 4. Sanding dust (cadmium & chromium from red paint chips)							
15. GENERATOR/SUPPLIER'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator/Officer's Printed/Typed Name Will J. Greene				Signature <i>Will J. Green</i>		Month Day Year 11 30 11	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Joe Transporter				Signature <i>Joe Transporter</i>		Month Day Year 11 30 11	
Transporter 2 Printed/Typed Name Antonia Hauler				Signature <i>Antonia Hauler</i>		Month Day Year 12 06 11	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number: _____							
18b. Alternate Facility (or Generator)					U.S. EPA ID Number		
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator)						Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H061		2. H061		3. H061		4. H010	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a							
Printed/Typed Name Rosa Recycler				Signature <i>Rosa Recycler</i>		Month Day Year 12 07 11	

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Q4: Do you confirm that a completed copy of each manifest is returned to your facility from the designated TSD within 35 days? See VHWMR § 7-702(b)(9).

Q5: If a completed copy of a manifest was not received by your facility within 45 days of the initial shipment, did you submit an exception report to the Agency? See VHWMR § 7-707(b).

Upon accepting a shipment of hazardous waste, both the transporter(s) and the designated treatment, storage or disposal facility must sign and date the manifest in the appropriate spaces. The designated

facility is then required to send a copy of the **completed manifest** (i.e., a copy that has been signed by each handler) back to your facility. **This copy documents that the designated facility received your waste.**

If you do not receive a completed manifest within **35 days** of initial shipment, you must contact the designated facility and attempt to locate the manifest (and, if necessary, the shipment).

If you have not received a completed manifest within **45 days** of initial shipment, you must immediately submit an **Exception Report** to the Agency (*See VHWMR § 7-707*).

Q6: Have you confirmed that completed copies of each manifest have been received by the Agency? *See VHWMR § 7-702(b)(10).*

Hazardous waste manifests are the means for tracking shipments of hazardous waste from “cradle to grave” (i.e., point of generation to the designated treatment, storage or disposal facility). In addition to verifying that all manifested shipments have been received by the designated facility (by ensuring that you receive a completed manifest within 35 days), you must **ensure that a completed copy of each manifest is sent to the Agency**, as this information is used to monitor hazardous waste activity in Vermont. This can be accomplished by tracking manifested shipments using the Agency’s **Waste Management Interactive Database-Environmental Research Tool** (link below):

<https://anrweb.vt.gov/DEC/ERT/GlobalSearch.aspx>

Once in the database, choose “**Hazardous Waste Generators**,” enter your facility’s EPA ID number and click “**Search**” – this will bring up your facility’s name, address, etc. Click the “**View**” button to the left of the facility name. After locating your facility’s information, click “**View Manifest Report**” at the bottom of the page, enter a date range and click “**Run Report**.” Generators are encouraged to check this manifest report at least once a year. Keep in mind manifest records generated in the last 30-60 days may not yet be listed in the database due to delays in manifest transmittals.

Q7: Do you retain copies of completed manifests for at least 3 years? *See VHWMR § 7-702(b)(5).*

You are required to retain end copies of all manifests used for shipment of hazardous waste for a minimum of three years. These manifests are likely to be requested by the Agency during a routine hazardous waste inspection at your facility.

Q8: For applicable hazardous wastes, do you retain Land Disposal Restrictions (LDR) paperwork on file? *See VHWMR § 7-106(a).*

Certain hazardous wastes may not be disposed of in or on the land. Land Disposal Restriction records are required for federally-listed hazardous wastes generated at your facility; Vermont-listed hazardous wastes, such as VT02, do not require LDRs. Information provided on LDRs is used to ensure that hazardous waste has been properly treated (if necessary) prior to disposal in a hazardous waste landfill. Even though landfills are required to comply with strict requirements designed to protect their liners, and employ leak detection systems and groundwater monitoring equipment, the LDRs provide additional information to protect landfills from potential impacts of disposed hazardous waste. In short, hazardous waste landfill operators must be informed of the types of hazardous waste being disposed (i.e., hazardous waste codes) and of any underlying hazardous constituents that may be present in the waste in low concentrations.

Prior to the initial shipment of each hazardous waste stream, an accurately completed **LDR notification record** must be provided to the designated end facility. Transporters usually provide (and often complete) such forms for their customers (i.e., generators). The regulations do not require the use of a specific format for the form, and only specify the required information that must be provided to the designated facility. As the generator of the waste, it is **your responsibility** to ensure that an accurate and complete LDR notification is provided to the designated end facility, and to retain a copy of this notification for your facility's records.

An example of a Land Disposal Restriction notification:

LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM PHASE IV

Page ____ of ____

Generator Name: _____ EPA ID # _____ State Manifest No. _____

1. If waste is a wastewater (see 40 CFR 268.2) place "w" next to the applicable code(s) Profile # _____

2. CODES WITH SUBCATEGORIES (place appropriate letter from section 8 before each code that applies) (See 40 CFR 268 for details)
- | | | | | |
|---------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| ___ D001 Hi-TOC | ___ D008 Lead acid batteries | ___ K069 Not Calcium Sulfate | ___ P065 Lo RMERC Res. | ___ U151 Hi Hg |
| ___ D001 Except Hi-TOC | ___ D009 Organic Hg > 260ppm | ___ K071 Rmerc Res. | ___ P065 Not Inc./RMERC Res. | ___ U240 2, 4 D |
| ___ D003 Reactive Cyanide | ___ D009 Inorg. Hg > 260 | ___ K106 Lo Rmerc Res. | ___ P065 Hi Inc./RMERC Res. | ___ U240 2, 4 esters & Salts |
| ___ D003 Reactive Sulfide | ___ D009 Hg < 260 | ___ K106 Lo Rmerc Res. | ___ P092 Lo Inc. Res. | |
| ___ D003 Explosive | ___ F025 Light ends | ___ K106 Not Rmerc Res. | ___ P092 Lo RMERC Res. | |
| ___ D003 Water Reactives | ___ F025 Spent filter | ___ K106 > 260 ppm Hg | ___ P092 Not Inc./RMERC Res. | |
| ___ D003 Unexp Ord. Emg | ___ K006 Hydrated | ___ P047 Salts | ___ P092 Hi Inc./RMERC Res. | |
| ___ D003 Other Reactives | ___ K006 Anhydrous | ___ P047 Nonsalts | ___ U151 Lo RMERC Res. | |
| ___ D006 Batteries | ___ K069 Calcium Sulfate | ___ P065 Lo Inc. Res. | ___ U151 Lo Not RMERC Res. | |

The subcategory for D018-D043 waste is "treated in nonCWA/nonSDWA facility" unless the following box is checked: "treated in CWA/SDWA facility"

3. COMMON CODES (Place appropriate letter from section 8 before each code that applies)
- | | | | | | | | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| ___ D002 | ___ P012 | ___ P030 | ___ P051 | ___ P098 | ___ P105 | ___ P205 | ___ F006 | ___ F007 | ___ F008 | ___ F009 | ___ F010 | ___ F011 | ___ F012 | ___ F019 | ___ F039 |
| ___ D004 | ___ D005 | ___ D006 | ___ D007 | ___ D008 | ___ D009 | ___ D010 | ___ D011 | ___ D012 | ___ D013 | ___ D014 | ___ D015 | ___ D016 | ___ D017 | ___ D018 | ___ D019 |
| ___ D020 | ___ D021 | ___ D022 | ___ D023 | ___ D024 | ___ D025 | ___ D026 | ___ D027 | ___ D028 | ___ D029 | ___ D030 | ___ D031 | ___ D032 | ___ D033 | ___ D034 | ___ D035 |
| ___ D036 | ___ D037 | ___ D038 | ___ D039 | ___ D040 | ___ D041 | ___ D042 | ___ D043 | ___ F001 | ___ F002 | ___ F003 | ___ F004 | ___ F005 | ___ U002 | ___ U003 | ___ U006 |
| ___ U007 | ___ U044 | ___ U061 | ___ U072 | ___ U080 | ___ U108 | ___ U117 | ___ U122 | ___ U123 | ___ U136 | ___ U154 | ___ U188 | ___ U213 | ___ U220 | ___ U226 | ___ U279 |
| | | | | | | | | | | | | | | | ___ K061 |

ADDITIONAL CODES (Enter all codes not identified above which are associated with waste)

4. USEPA HAZARDOUS WASTE CODE(S)	5. TREATMENT STANDARDS FOR NON-PHASE II STATES (INDICATE THE APPLICABLE TREATMENT STANDARD 268.41, 268.43 OR SPECIFIED TECHNOLOGY BELOW)	6. HOW MUST THE WASTE BE MANAGED? ENTER THE LETTER FROM BELOW

To identify F039, or UHCs managed in non-CWA, use the "F039/Underlying Hazardous Constituents Form" provided and check here:
 If no UHCs are present upon generation check here: Check here if disposal facility will check for all UHCs (i.e. no UHC form required)
 To list additional EPA waste code(s), use the supplemental sheet and check here: In lieu of supplemental sheet you may use multiple copies of this form.

7. SOLVENT CONSTITUENTS (F001 - F005) Check here if disposal facility will check for all spent solvents _____
- | | | | |
|--------------------------------|-----------------------------|--|-----------------------|
| ___ Acetone | ___ Benzene | ___ n-Butyl alcohol | ___ Carbon disulfide |
| ___ Carbon Tetrachloride | ___ Chlorobenzene | ___ O-Cresol | ___ Cresols (m&p) |
| ___ Cyclohexanone | ___ o-Dichlorobenzene | ___ 2-Ethoxyethanol | ___ Ethyl acetate |
| ___ Ethyl benzene | ___ Ethyl ether | ___ Isobutanol | ___ Methanol |
| ___ Methylene chloride | ___ Methyl ethyl ketone | ___ Methyl isobutyl ketone | ___ Nitrobenzene |
| ___ 2-Nitropropane | ___ Pyridine | ___ Tetrachloroethylene | ___ Toluene |
| ___ 1,1,1 Trichloroethane | ___ 1, 1, 2-Trichloroethane | ___ 1, 1, 2-Trichloro, 1, 2, 2-trifluoroethane | ___ Trichloroethylene |
| ___ Trichloromonofluoromethane | ___ Xylenes | | |

8. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.)
- A. or **RESTRICTED WASTE REQUIRES TREATMENT**
 This waste must be treated to the applicable treatment standards set forth in 40 CFR Part 268.40.
 For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45."
- B.1 **RESTRICTED WASTE TREATMENT TO PERFORMANCE STANDARDS**
 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40 without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."
- B.2 **(CERTIFICATION REMOVED BY PHASE IV)**
- B.3 **GOOD FAITH AND ANALYTICAL CERTIFICATION - FOR INCINERATED ORGANICS**
 "I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion units as specified in 268.42, Table 1. I have been unable to detect the nonwastewater organic constituents, despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- B.4 **DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS**
 "I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."
- C. **RESTRICTED WASTE SUBJECT TO A VARIANCE**
 This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
 For hazardous debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45."
- D. **RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT**
 "I certify under penalty of law that I have personally examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."
- E. **WASTE NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS**
 This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature _____

Title _____ Date _____

GENERATOR COPY

FORM # OES-78B

SECTION 5 - Emergency Preparedness

Q1: Is your facility operated in a manner that minimizes the potential for emergencies involving hazardous waste? *VHWMR § 7-307(c)(5), § 7-309(a).*

You must operate in a manner that minimizes the possibility of fire, explosion, or release of hazardous waste to the air, soil, or water, which could threaten human health or the environment. This can be accomplished through implementing standard operating procedures, effective maintenance schedules, and comprehensive emergency response procedures. The potential for incidents can be further minimized through “common sense” prevention measures such as:

- Locating hazardous waste containers away from high-traffic areas and floor drains;
- Providing secondary containment in container storage and accumulation areas;
- Repairing cracked or damaged floors in waste handling and storage areas;
- Minimizing the movement of hazardous waste containers;
- Ensuring that designated storage areas are kept at a temperature appropriate for the wastes; and
- Ensuring containers are kept closed;
- Ensuring containers are not overfilled.

Q2: Have you designated at least one employee to serve as the “emergency coordinator” for your facility and is that person familiar with the specific responsibilities of that position? *See VHWMR § 7-307(c)(14)(A).*

All SQG facilities must designate at least one employee to serve as an emergency coordinator for the facility. This individual must have the authority to commit the resources needed to carry out an emergency response and must be routinely on-site or available on call any time when an emergency may arise (i.e. 24-hour/day and 7 days per week). An emergency coordinator is responsible for:

- Coordinating all response measures in an event of an emergency at the facility;
- Being thoroughly familiar with all aspects of facility operations, activities, and layout;
- Knowing the location and characteristics of wastes handled; and
- Knowing the location of all hazardous waste-related records within the facility.

Q3: Is at least one emergency coordinator either on the premises or on call at all times? *See VHWMR § 7-307(c)(14)(A).*

The designated emergency coordinator(s) must either be on premises or on call at all times. Staff that needs to be away from the facility and may not always be available to respond to an emergency within a short period of time may not be the most appropriate staff to serve as the emergency coordinator.

Q4: Is emergency response information posted in the immediate vicinity of all short-term storage areas and locations where hazardous wastes are accumulated? *See VHWMR 7-307(c)(14)(B).*

In addition to designating an emergency coordinator(s) for your facility, SQGs must post the following up-to-date information in the vicinity of all short-term storage areas and other locations where hazardous wastes are accumulated:

- Name and telephone number(s) of each designated emergency coordinator (work and off-site phone numbers);
- Telephone number of the fire department unless the facility has a direct alarm; and
- Location of fire extinguishers, spill control materials and, if present, the location of the fire alarm.

An example of an emergency response posting:

Emergency Response Information		
Emergency Coordinator(s)	Work Phone	Pager # or Home Phone
Fire Department	Phone	_____
Police Department	Phone	_____
Hospital	Phone	_____
Vermont DEC Spill Response Team	Phone	<u>802-828-1138</u>
Vermont 24-hour Emergency Response Line	Phone	<u>800-641-5005</u>
National Response Center (24-hour)	Phone	<u>800-424-8802</u>
Location of Emergency Response Equipment		
Fire Extinguishers	_____	_____
Fire Alarm (if present)	_____	_____
Spill Control Materials	_____	_____
Special Equipment (if present)	_____	_____

Q5: Is the emergency coordinator(s) able to perform the required emergency responses? *See VHWMR § 7-307(c)(14)(D).*

- In the event of a fire, call the fire department or, if appropriate, attempt to extinguish the fire;
- In the event of a discharge of hazardous waste or a release of hazardous material, take appropriate actions to protect human health and the environment including, but not limited to, emergency containment measures and further clean-up actions or corrective actions as may be required and approved by federal, state, or local authorities;
- In the event of a discharge of hazardous waste or release of hazardous materials that could threaten the environment or human health outside the facility, notify the following:
 - During normal business hours: Vermont Waste Management & Prevention Division **802-828-1138**; or
 - Vermont Department of Public Safety, Division of Emergency Management and Homeland Security (24 hours/day) **800-641-5005**; or
 - If local evacuation is necessary, the National Response Center, **800-424-8802**.

Q6: Is each employee with hazardous waste management responsibilities thoroughly familiar with the emergency procedures, proper waste handling procedures relevant to their job responsibilities, and evacuation signals/routes? *See VHWMR § 7-307(c)(14)(C).*

Small quantity generators must ensure that all employees who handle or otherwise manage hazardous waste or sign hazardous waste manifests are familiar with proper waste handling procedures (relevant to their responsibilities during normal facility operations), facility evacuation routes and emergency response procedures. There are no specific requirements for the format of the training that SQG staff must complete, or specific topics that each training session must include. Each facility must develop its own effective training plan. Suggested hazardous waste training topics include:

- How to make a hazardous waste determination;
- Proper marking/labeling of hazardous waste containers;
- Hazardous waste container handling;
- Conducting daily inspections and maintaining an inventory of hazardous waste containers in a short-term storage area;
- Emergency response procedures and equipment (i.e., fire extinguishers, spill control material, fire alarms);
- Management of used oil, conditionally-exempt and universal wastes;
- Hazardous waste manifest requirements.

While not required, the Agency suggests initial hazardous waste training for new employees (within a month of hire) and annual refresher training for all employees with hazardous waste responsibilities.

In a typical facility, personnel who should be trained include employees who:

- Place hazardous waste in containers or move containers of hazardous waste;
- Conduct daily short-term storage area (STSA) inspections;
- Complete and/or sign Hazardous Waste Manifests or Land Disposal Restriction notifications;
- Track manifests and have record-keeping responsibilities;
- Are designated as the emergency coordinator or an alternate emergency coordinator.

Q7: Have you determined what types of emergency response equipment your facility is required to have? *See VHWMR § 7-309(a)(1)(A) through (D).*

It is your responsibility to determine which emergency equipment must be present at your facility. Emergency response equipment typically includes:

- An internal communication or alarm system capable of providing emergency instructions to facility personnel.
- A device that is immediately available on-site and capable of summoning emergency assistance (e.g., cellular telephone).
- Fire-control equipment, spill-control equipment and decontamination equipment; and
- Availability of water, foam-producing equipment, or automatic sprinklers as appropriate for facility operations.

All facility communications or alarm systems, fire protection equipment, spill-control equipment, and decontamination equipment must be tested and maintained as necessary to ensure it is in proper working order in time of emergency.

Q8: Is all emergency equipment tested and maintained as necessary to ensure its proper operation in time of emergency? *See VHWMR § 7-309(a)(2).*

All communication and alarm systems, fire protection and spill control equipment, and decontamination equipment must be tested and maintained to ensure that it will operate properly in the event of an emergency. Contact your local fire department for information on testing and maintenance.

Q9: Have you familiarized emergency response organizations with the information pertaining to potential hazards posed by your facility? *See VHWMR § 7-309(a)(4).*

Your facility must attempt to familiarize local emergency response organizations (e.g., fire and police departments, hospitals, and emergency response contractors, as appropriate) with the types and properties of hazardous waste handled, facility layout, and evacuation routes. Hospitals should also be made aware of the types of injuries or illnesses that could result from wastes handled at your facility.

Communication with the emergency response organizations should be in writing, and copies of communications should be retained for your records.

SECTION 6 - Used Oil Management

Although used oil is exempt from regulation as hazardous waste under **Section 7-203(n)**, it is subject to and regulated under the Used Oil Management Standards of VHWMR **Subchapter 8**, which is available online at:

http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Regulations/VHWMR_Sub8.pdf

VHWMR subchapter 8 identifies those materials that can be managed as used oil and establishes standards for the handling, storage, transportation, aggregation, collection, and burning used oil as fuel. Since used oil that meets fuel burning specifications has value as a commodity, “used oil fuel” is distinguished in subchapter 8 from “used oil” by allowing used oil fuel to be managed according to abbreviated standards.

Used oil is defined as any petroleum product refined from crude oil or any synthetic oil that has been used and has been contaminated as a result of that use. Used oil is a free-flowing liquid at standard temperature and pressure and has a flash point greater than 100 degrees (F). Examples of used oil include:

- Vehicle crankcase oils, transmission fluids and power steering fluids;
- Hydraulic, compressor and straight cutting oils;
- Machine gearbox oil, tramp oil and oil drained from evaporators.

See the *Used Oil* fact sheet (link below) for more information about used oil:

http://dec.vermont.gov/sites/dec/files/ead/documents/FactSheets/fs_usedoil_wm.pdf

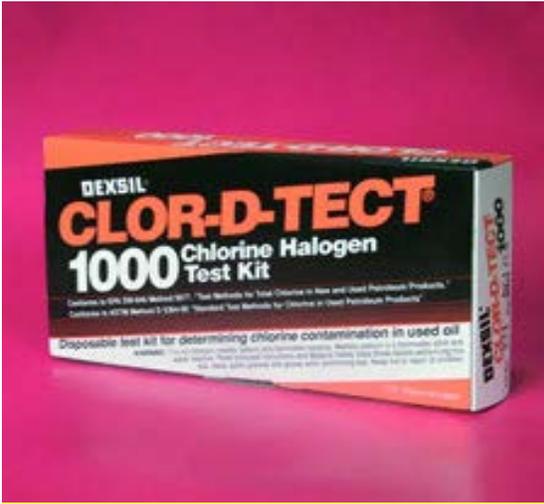
Q1: If used oil is burned as fuel at your facility, have you tested the used oil for chlorine contamination? *See VHWMR § 7-812(c)(1).*

In Vermont, used oil may be burned as fuel provided that certain minimal requirements are met. If you burn your own used oil on-site, or receive off-site generated used oil in shipments of 55-gallons or less, you must test the used oil from each source for total halogens prior to burning it as fuel. If you receive off-site generated used oil in shipments of more than 55 gallons, either you or the used oil generator must test the used oil to verify that all used oil fuel specifications are met.

Only used oil that passes the total halogens test or meets all of the used oil fuel specifications may be managed as Used Oil Fuel. If the used oil fails the test for total halogens or fails to meet the used oil fuel specifications, it **cannot** be burned in small fuel-burning equipment (e.g. space heaters).

Contact the Agency for information about screening test kits for total halogens. Used oil from a specific source only needs to be tested one time. However, if an oil-generating process changes or if you have reason to believe that the quality of the used oil has changed, you must retest the used oil.

You must retain records documenting that your used oil fuel has been evaluated for used halogens and/or used oil fuel specification for a period of three years.



Used Oil Fuel Specifications

Constituent / Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash Point	100°F minimum
Total Halogens	1000 ppm maximum
PCBs	< 2 ppm maximum
Net Heat of Combustion	8000 BTU/lb minimum

Used oil test kit for evaluation of total halogens in used oil fuel prior to burning. You may use this type of kit for evaluating oil that your facility generates or that you receive from off-site facilities in shipments of 55 gallons or less.

Used oil fuel specifications – if you receive off-site used oil in shipments of greater than 55-gallons, you must ensure that all of these specifications are met prior to burning the used oil as fuel.

In addition to burning used oil fuel that is generated on site, burners may accept used oil fuel from:

- Do-it-yourselfers (households that generate used oil);
- Off-site facilities that are owned and operated by the burner; or
- Other businesses and municipalities.

See the *Burning Used Oil Fuel* fact sheet below:

http://dec.vermont.gov/sites/dec/files/ead/documents/FactSheets/fs_usedoilburning_wm.pdf

Q2: Are containers of used oil/used oil fuel closed when not adding or removing used oil/used oil fuel? See VHWMR § 7- 806(b)(1).

All containers holding used oil must be kept closed, except when actively adding or removing the used oil. A container equipped with a funnel does not meet the closed container requirement unless the funnel is fitted with a lid and fastened securely to the drum. Flip-top funnels that are screwed into the bung may be used, provided the lid is securely closed when the funnel is not in use.



Q3: Are containers holding used oil/used oil fuel managed in a manner to prevent the container from rupturing or causing a release? See *VHWMR § 7-806(b)(2)*.

If a container holding used oil ruptures or leaks, the used oil must be immediately transferred from the leaking container to a container that is in good condition.



Improper storage of used oil containers

Q4: Are containers holding used oil/used oil fuel compatible with oil? See *VHWMR § 7-806(b)(3)*.

Q5: Are containers holding used oil/used oil fuel in good condition? See *VHWMR § 7-806(b)(4)*.

Q6: Are containers holding used oil/used oil fuel marked with the words "Used Oil"? See *VHWMR § 7-806(b)(5)*.

Q7: Are containers holding used oil/used oil fuel stored on an impervious surface? See *VHWMR § 7-806(b)(6)*.

Q8: Are containers of used oil/used oil protected from rain and snow? See *VHWMR § 7-806(b)(7)*.

Used oil must be stored in containers that are made of, or lined with compatible material. These containers must be in good condition, with no severe rusting, apparent structural defects or deterioration. Used oil containers must be marked or labeled with the words "Used Oil", which must be clearly visible. Containers must be stored on an impervious surface that is sufficiently resistant to prevent the oil from migrating to the soil, groundwater, or surface water. Porous surfaces (such as wood) are not appropriate for storing containers of used oil. Containers holding used oil may be stored outdoors only if the containers are placed in a structure that sheds both rain and snow.

Q9: Are containers holding used oil/used oil fuel and water mixtures protected from freezing? See *VHWMR § 7-806(b)(8)*.

Any container holding a mixture of used oil and water must be placed in a structure that protects the container from freezing.



Improper outdoor storage of used oil containers – they are not on an impervious surface or protected from precipitation.



Proper outdoor storage of used oil containers – containers are protected from precipitation and are stored on an impervious surface.

Q10: If you store used oil in an above-ground storage tank, is the tank marked with the words "Used Oil" or "Used Oil Fuel"? See VHWMR § 7-806(d)(2).

Q11: If you store used oil in an aboveground storage tank located outdoors, is the tank equipped with secondary containment? See VHWMR § 7-806(d)(4).

All aboveground tanks storing used oil/used oil fuel must be marked or labeled as "Used Oil" or "Used Oil Fuel". If located outdoors, tanks must be equipped with a secondary containment. This containment system must consist of dikes, berms, or retaining walls, as well as a floor, covering the entire area. The whole containment area must be impervious to oil to prevent any spilled oil from migrating to soil, groundwater, or surface water. Porous surfaces (such as wood) are not appropriate for storage of used oil. Alternatively, a double-walled storage tank may be used; double walled tanks do not require separate secondary containment.



Proper secondary containment for an aboveground storage tank holding used oil outdoors



Improper secondary containment for aboveground storage of used oil outdoors - single-walled, unlabeled tank trailer

SECTION 7 - Universal Waste

Some commonly-used items in businesses contain hazardous materials. Upon becoming spent, these items may release hazardous materials to the environment if not properly managed. Collectively called “Universal Waste”, these wastes are generated by a wide variety and large number of businesses and pose a relatively low risk compared to other hazardous wastes. In order to streamline the hazardous waste management of these items, alternative management standards have been established for the following:

- Batteries;
- Certain pesticides;
- Mercury thermostats;
- PCB-containing fluorescent light ballasts;
- Lamps (e.g. fluorescent bulbs);
- Mercury-containing devices (e.g. switches and gauges);
- Cathode ray tubes (e.g. older computer monitors and TV screens);
- Post-consumer paint (e.g. unused latex architectural paint). For more information about post-consumer paints, visit:

<http://dec.vermont.gov/waste-management/solid/product-stewardship/paint>

These wastes have been designated for management according to the streamlined Universal Waste standards of **VHWMR Subchapter 9**. Managing these hazardous wastes using the Universal Waste standards is optional; a benefit of opting into these alternative standards is that wastes managed as Universal Waste are exempt from regulation as hazardous waste [**See VHWMR § 7-203(s)**] *and therefore do not count towards the quantity of hazardous waste generated by your facility each month*. All universal wastes must be managed in a way that prevents breakage and releases to the environment. Additionally, your employees must be informed of proper waste handling and emergency response procedures when managing universal waste.

In general, universal waste handlers (i.e. a generator of universal waste or a facility that receives universal waste from other generators) must meet only basic standards for:

- Waste management (waste stream-specific);
- Container labeling/marketing;
- A one-year-per-container waste accumulation time limit (beginning when waste is first accumulated in a container);
- Employee training (e.g., waste handling, emergency response procedures);
- Response to releases;
- Off-site shipments and exports.

Universal Waste is regulated under the Universal Waste Management Standards of **VHWMR Subchapter 9**, which is available online at:

http://dec.vermont.gov/sites/dec/files/wmp/HazWaste/Documents/Regulations/VHWMR_Sub9.pdf

Universal Waste Lamps

Q1: Are universal waste lamps packaged in containers that are structurally sound, adequate to prevent breakage, and kept closed? See VHWMR § 7-912(d)(5)(A)(i).

Spent lamps, such as fluorescent bulbs and tubes, are often hazardous because they contain mercury. All universal waste lamps must be packaged in structurally sound containers, which must be kept closed (except when adding to them) and not show any damage, leakage, or spillage. The boxes that new lamps come in may be used for the storage of spent lamps; fiberboard drums may also be used. Any lamps that get broken must be managed as hazardous waste, as the residue contains mercury (D009 hazardous waste code); the broken pieces must be immediately cleaned up and placed into an appropriate container (see Section 2 for hazardous waste container management and requirements and VHWMR § 7-912(d)(5)(C)).

Intentional breaking or crushing of mercury-containing lamps is prohibited in Vermont under the VHWMR [See § 7-912(b)(2)].

Q2: Are full containers of waste lamps sealed with tape? See VHWMR § 7-912(d)(5)(A)(ii).

As soon as a container is filled with waste lamps, it must be securely sealed with tape around the box openings.



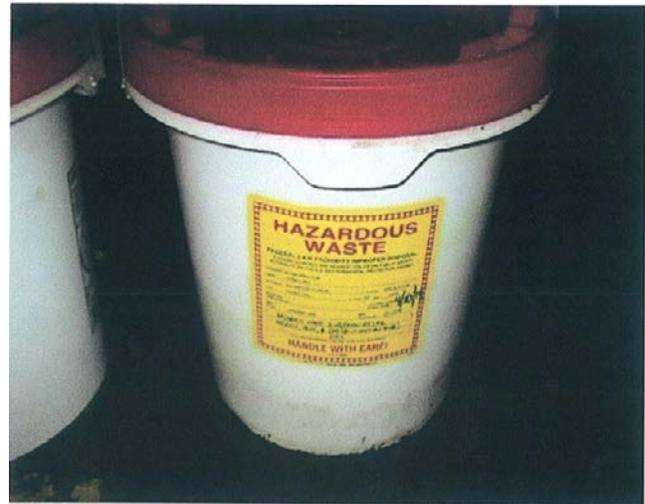
Improper storage of waste lamps – lamps are not packaged in containers adequate to prevent breakage



Proper storage of waste lamps- closed box of used bulbs is labeled and dated



Improper management of broken fluorescent lamps- accumulation in an open container



Proper management of broken fluorescent lamps- accumulation in a closed and labeled container

Q3: Are containers of waste lamps stacked no higher than 5 feet? See *VHWMR* § 7-912(d)(5)(A)(iii).

Containers of lamps must not be stacked more than 5 feet high. This prevents crushing of lamps stored in containers on the bottom and reduces the chance for containers to tip over. However, waste lamp containers may be stored in an area which is higher than 5 feet, such as up on a shelf away from foot or vehicle traffic.

Q4: Are all containers holding waste lamps marked as “Universal Waste - Lamps” or “Used Lamps”? See *VHWMR* § 7-912(e)(6).

All containers holding waste lamps must be clearly labeled or marked with any of the following phrases: “Universal Waste – Lamps”, “Waste Lamps”, or “Used Lamps”.

Q5: Can you demonstrate waste lamps have been accumulated/stored for less than one year? See *VHWMR* § 7-912(f)(3).

Universal waste may not be stored on-site for longer than one year from the date the waste is first generated (e.g., when you start accumulating universal waste in a container). To demonstrate this, waste lamp containers can be marked with the date the waste is first placed in them (i.e. accumulation start date). Alternatively, storage time can also be demonstrated by maintaining an inventory system on site showing the earliest date waste lamps were added to a container.

If you generate a low volume of any type of Universal Waste, you may be able to accumulate it for longer than one year. See *VHWMR* § 7-912(f)(2) or contact the Agency.



Proper storage and labeling for waste lamps – boxes are closed and labeled.

Mercury-Containing Devices (Switches, Relays)

Devices such as switches, relays, gauges (e.g. temperature), manometers, and barometers contain small amounts of mercury necessary for their operation (Note: batteries, lamps, and thermostats are not included in this category).

Q6: Are mercury-containing devices packaged in containers that are structurally sound and adequate to prevent breakage, and are the containers kept closed? See VHWMR § 7-912(d)(6)(A).

All mercury-containing devices must be packaged in structurally sound containers, which must remain closed (except when adding to them) and not show any damage or leakages.

Q7: Are containers holding mercury-containing devices marked as “Universal Waste-Mercury Device(s)”, “Waste Mercury Device(s)”, or “Used Mercury Device(s)”? See VHWMR § 7-912(e)(7).

All containers holding universal waste mercury-containing devices must be clearly labeled or marked with any of the following phrases: “Universal Waste – Mercury Devices”, or “Waste Mercury Devices”, or “Used Mercury Devices”.

Q8: Can you demonstrate mercury-containing devices have been accumulated/stored for less than one year? See VHWMR § 7-912(f)(3).

Universal waste may not be stored on-site for longer than one year from the date the waste is first generated (e.g., when you start accumulating universal waste in a container). To demonstrate this, containers holding mercury-containing devices can be marked with the date that waste is first placed in them (i.e. starting accumulation date). Alternatively, storage time can also be demonstrated by

maintaining an inventory system on site showing the earliest date waste mercury-containing devices were added to a container.

If you generate a low volume of any type of Universal Waste, you may be able to accumulate it for longer than one year. See **VHWMR § 7-912(f)(2)** or contact the Agency.

Light Ballasts

The use of polychlorinated biphenyls (PCBs) in light ballasts was not regulated prior to 1978, and many fluorescent light ballasts manufactured prior to 1978 contain PCBs. The Environmental Protection Agency (EPA) banned the manufacture of PCBs in 1978, therefore, all light ballasts manufactured in 1979 or later should not contain PCBs. Additionally, EPA required that light ballasts manufactured after 1979 be labeled by the manufacturer indicating that the ballast does not contain PCBs (“NO PCB” notation). If a light ballast is not labeled as “NO PCB” and if you cannot confirm its manufacture year, it should be assumed that it contains PCBs and managed accordingly.

Q9: Are PCB-containing fluorescent light ballasts managed to prevent releases to the environment? See **VHWMR § 7-912(d)(4)**.

Light ballasts containing PCBs must be managed to avoid breakage and the release of contaminants into the environment. Ballasts showing evidence of leakage or damage must be contained and transferred to an appropriate hazardous waste container (see Section 2 for hazardous waste container management and requirements).

Q10: Are PCB-containing fluorescent light ballasts, or their containers, marked as "Universal Waste- PCB Ballast(s)", "Waste PCB Ballast(s)", or "Used PCB Ballast(s)"? See **VHWMR § 7-912(e)(5)**.

Each universal waste light ballast containing PCBs, as well as all containers holding these light ballasts, must be labeled or clearly marked with any of the following phrases: “Universal Waste – PCB Ballast(s)”, or “Waste PCB Ballast(s)”, or “Used PCB Ballast(s)”.

Q11: Can you demonstrate light ballasts have been accumulated/stored for less than one year? See **VHWMR § 7-912(f)(3)**.

Universal waste PCB-containing light ballasts may not be stored on site for longer than one year from the date the waste is first generated (e.g., when you start accumulating universal waste). To demonstrate this, the waste ballast, or containers containing the ballasts, can be marked with the starting accumulation date. Alternatively, storage time can also be demonstrated by maintaining an inventory system on site showing the earliest date the ballast(s) became a waste.

If you generate a low volume of any type of Universal Waste, you may be able to accumulate it for longer than one year. See **VHWMR § 7-912(f)(2)** or contact the Agency.

Cathode Ray Tubes

Cathode Ray Tubes (CRTs) were a major component of older-style computer monitors and television screens. These units contain glass that may contain lead to protect the user from x-rays present inside the actual CRT.

Q12: Are CRTs packaged to prevent breakage during storage, handling, and transportation?

See *VHWMR* § 7-912(d)(7).

Waste CRTs must be packaged in a manner that prevents breakage during storage, handling, and transportation. CRTs must also be protected from precipitation while in storage or transportation. Used, broken CRTs should be placed in a container that is structurally sound, kept closed and managed according to standards listed in Questions 13 and 14 below.

Q13: Are CRTs, or their containers, marked as “Universal Waste – Cathode Ray Tube(s)”, “Waste Cathode Ray Tube(s)”, “Used Cathode Ray Tube(s)”, “Universal Waste – CRT(s)”, “Waste CRT(s)” or “Used CRT(s)”? See *VHWMR* § 7-912(e)(8).

All waste CRTs and containers holding waste CRTs must be labeled or clearly marked with one of the following phrases: “Universal Waste – Cathode Ray Tube(s)”, “Waste Cathode Ray Tube(s)”, “Used Cathode Ray Tube(s)”, “Universal Waste – CRT(s)”, “Waste CRT(s)”, or “Used CRT(s)”.



Proper storage and marking of container holding mercury-containing devices



Proper Labeling of CRTs while in storage

Q14: Can you demonstrate CRTs have been accumulated/stored for less than one year? See *VHWMR* § 7-912(f)(3).

Universal waste CRTs may not be stored on-site for longer than one year from the date the waste is first generated (i.e., when you start accumulating universal waste). To demonstrate this, each CRT, or containers holding the CRTs, can be marked with the starting accumulation date. As an alternative, storage time can also be demonstrated by maintaining an inventory system on site showing the earliest date the CRT(s) became a waste.

If you generate a low volume of any type of Universal Waste, you may be able to accumulate it for longer than one year. See *VHWMR* § 7-912(f)(2) or contact the Agency.

APPENDIX A: Determining your Hazardous Waste Generator Status

In Vermont, generators fall into three categories. These include large quantity generators (LQGs), small quantity generators (SQGs), and conditionally exempt generators (CEGs). Simplified, LQGs generate the largest amount of waste, CEGs generate the least amount of waste, and SQGs fall somewhere in between. Generator classification is *not* based on how much you ship offsite for disposal per month. Although this is an indication of how much you produce, your classification is based on generation and *not* disposal volume. As the generator categories increase from CEG to SQG to LQG, so do the compliance obligations. These three classifications are summarized below:

- You are a **Large Quantity Generator** if:
 - You generate 2,200 pounds (1000 kilograms) or more of hazardous waste per calendar month; or
 - You generate 2.2 pounds (1 kilogram) or more of acutely hazardous waste per calendar month; or
 - You generate 220 pounds (100 kilograms) or more of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a discharge of any acutely hazardous waste per calendar month; or
 - The quantity of hazardous waste accumulated on-site exceeds 13,200 pounds (6,000 kilograms) at any one time; or
 - The quantity of acutely hazardous waste accumulated on-site equals or exceeds 2.2 pounds (1 kilograms) at any one time; or
 - The quantity of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a discharge of any acutely hazardous waste, accumulated onsite equals or exceeds 220 pounds (100 kilograms) at any one time.

- You are a **Small Quantity Generator** if:
 - You generate greater than or equal to 220 pounds (100 kilograms) but less than 2,200 pounds (1,000 kilograms) of hazardous waste in a calendar month; or
 - Less than 2.2 pounds (1 kilogram) of acutely hazardous waste per calendar month; or
 - Less than 220 pounds (100 kilograms) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a discharge of any acutely hazardous waste per calendar month; or
 - The quantity of hazardous waste accumulated on-site never exceeds 13,200 pounds (6,000 kilograms).

- You are a **Conditionally Exempt Generator** if:
 - You generate less than 220 pounds (100 kilograms) of hazardous waste per calendar month; and
 - You generate less than 2.2 pounds (1 kilogram) of acutely hazardous waste per calendar month; and
 - You generate less than 220 pounds (100 kilograms) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a discharge of any acutely hazardous waste in a calendar month; and
 - The quantity of hazardous waste accumulated on-site does not exceed 2,200 pounds (1000 kilograms).

TIP:

You can estimate the amount of hazardous waste you generate by comparing it to water: ½ of a 55-gallon drum of water weighs about 230 pounds, and five 55-gallon drums of water weigh about 2,300 pounds. Keep in mind that the density of each type of hazardous waste is likely to be different from that of water. For example, contaminated paint filters may weigh as little as 60 pounds per 55-gallon drum, while oily absorbents may weigh as much as 800 pounds per 55-gallon drum.

For Vermont-listed wastes only (“VT” wastes), a generator can average the amount of waste generated over a six-month period and use that value when calculating generator status. For example, if a business generates 600 pounds of oily absorbents (VT02) in January, but none in February, March, April, May and June, the generation rate for that waste for the purpose of calculating generator status is 100 pounds per month.

Conditionally exempt wastes do ***not*** count toward generator status. Examples of these wastes are:

- Oily rags that are laundered;
- Used antifreeze that will be recycled or reused;
- Used lead-acid batteries that will be recycled;
- Used oil filters that have been punctured and drained; and
- Used oil that is processed, reused or burned for energy recovery.

APPENDIX B: Requirements for Large Quantity Generators (LQG), Small Quantity Generators (SQG) and Conditionally Exempt Generators (CEG) of Hazardous Waste in Vermont

Selected Regulatory Requirements	LQG	SQG	CEG
File a Vermont Hazardous Waste Handler Site ID Form	Yes	Yes	yes
Must determine Generator Status	Yes	Yes	yes
Maximum amount of hazardous waste generated per month *	no limit	2,200 pounds	220 pounds
Maximum amount of hazardous waste that may be stored on-site at any one time *	no limit	13,200 pounds	2,200 pounds
Maximum length of time hazardous waste may be stored on site *	90 days**	180 days**	no limit
Must follow hazardous waste storage requirements, including:			
Keep waste under cover to protect from precipitation	Yes	Yes	yes
Store waste on impervious surface	Yes	Yes	yes
Keep waste container(s) closed	Yes	Yes	yes
Assure waste containers are in good condition	Yes	Yes	yes
Assure waste containers are compatible with waste	Yes	Yes	yes
Protect freezable wastes from freezing	Yes	Yes	yes
Maintain aisle space of 24 inches or greater	Yes	Yes	no
Post "Danger- Hazardous Waste Storage Area – Authorized Personnel Only" warning sign(s)	Yes	Yes	no
Post "No Smoking" sign(s) (only if store ignitable waste)	Yes	Yes	no
Conduct daily inspection of hazardous waste storage area and maintain inspection log	Yes	Yes	no
Maintain an inventory of hazardous wastes in storage	Yes	Yes	no
Store ignitable waste at least 50 feet from the property line	Yes	Yes	no
Must label hazardous waste containers with:			
The words "Hazardous Waste"	Yes	Yes	yes
Words to identify the container's contents	(accumulating waste only)	(accumulating waste only)	yes

* Generation or storage of more than 2.2 pounds of acutely hazardous waste confers LQG status. Acutely hazardous wastes – identified by the waste code "P" followed by three numbers – are listed in Appendix IV of the regulations.

** Section 7-311(c) of the regulations allows generators to request up to a 30-day extension "due to unforeseen temporary and uncontrollable circumstances," to be granted at the Secretary's discretion.

Selected Regulatory Requirements (cont'd)	LQG	SQG	CEG
The words "Federal Law Prohibits Improper Disposal, If found, contact the nearest police or public safety authority or the US Environmental Protection Agency"	Yes	Yes	no
The generator's name, address and EPA ID number	Yes	Yes	no
The waste's name and hazardous waste ID number	Yes	Yes	no
The date that waste was placed into storage	Yes	Yes	no
Hazardous waste disposal			
Must use a Uniform Hazardous Waste Manifest to ship waste	Yes	Yes	no
Must ship hazardous wastes with a certified transporter	Yes	Yes	no
Must comply with Federal land disposal restrictions	Yes	Yes	no
Must follow emergency preparedness measures			
Report spills or releases of greater than two gallons	yes	Yes	yes
Have at least one person on-site or on-call at all times to respond to emergencies	yes	Yes	no
Post emergency information near phones where hazardous waste is handled	no	Yes	no
Provide hazardous waste training to employees	annually	initial***	no
Provide emergency communication device at hazardous waste storage area(s)	yes	Yes	no
Provide fire & spill control equipment	yes	Yes	no
Make arrangements with local emergency services	yes	Yes	no
Maintain a written contingency plan	yes	No	no
Maintain a written training plan	yes	No	no
Reporting			
Submit biennial report on hazardous wastes generated	yes	No	no
Must certify facility closure if no longer generate hazardous waste	yes	Yes	no

*****SQG Training Requirement:** Ensure that each employee is thoroughly familiar with evacuation signals and routes, proper waste handling, and emergency procedures relevant to their responsibilities during normal facility operations, as well as in emergencies.

APPENDIX C: Glossary of Useful Terms

Abbreviation/ Term	Definition	Additional information
Agency	When we refer to "the Agency" we mean the Hazardous Waste Regulatory Program within the Vermont Agency of Natural Resources	
ANR	Vermont Agency of Natural Resources	The Agency that promotes sustainable use of Vermont's natural resources, protects and improves the health of the people and ecosystems of Vermont, and promotes sustainable outdoor recreation.
CEG	Conditionally Exempt Generator of hazardous waste	The classification of hazardous waste generator that generates the least amount of hazardous waste, see Appendix A for more information
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act, known also as Superfund	
DEC	Vermont Department of Environmental Conservation	Department that oversees the preservation, enhancement, restoration and conservation of Vermont's natural resources.
DOT or USDOT	U.S. Department of Transportation	Federal department concerned with transportation.
EPA or USEPA	U.S. Environmental Protection Agency	Federal agency which oversees protection of human health and the environment.
Exempt Waste	Wastes that meet the criteria for hazardous waste but may be managed using waste-specific standards (e.g, safe handling, labeling and recycling of waste) that allow them to be exempt from the VHWMR	
Hazardous Waste	Waste that would be harmful to humans or the environment if mismanaged	Defined in the Vermont Hazardous Waste Management Regulations and described in Section 1 of this guidance.
Hazardous Waste Determination	The process by which a generator determines if a waste is regulated as a hazardous waste	
Hazardous Waste Generator	Any person, by site, whose act or process produces hazardous waste.	
LDR	Land Disposal Restrictions	The rules that require hazardous waste to be treated before land disposal
LQG	Large Quantity Generator of hazardous waste	see Appendix A for more complete description
Manifest	A form required by EPA and the DOT for generators who transport (or offer for transport) hazardous waste for off-site treatment, recycling, storage or disposal.	
Satellite Accumulation	The practice of accumulating hazardous waste in containers or tanks at or near the point of generation	
SDS	Safety Data Sheet	An SDS is required by federal regulations for each hazardous chemical to

Abbreviation/ Term	Definition	Additional information
		communicate the hazards to users. The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.
SQG	Small Quantity Generator of hazardous waste	see determining generator status page for more info
STSA	Short Term Storage Area	A designated location where hazardous waste containers are temporarily stored.
TCLP	Toxicity Characteristic Leaching Procedure	TCLP is a sample extraction method for chemical analysis using an analytical method to simulate leaching through a landfill
TSD	Treatment Storage and Disposal	Usually used to describe an end facility that is permitted to treat, store or dispose of hazardous waste
Universal Waste	Common wastes (such as batteries, fluorescent bulbs, and mercury thermostats) that meet the criteria for hazardous waste but can be managed according to streamlined standards because they are relatively low-risk	
VHWMR	Vermont Hazardous Waste Management Regulations	http://dec.vermont.gov/waste-management/hazardous/regulations
WMPD	Waste Management and Prevention Division	A Division within the Department of Environmental Conservation that oversees the use, treatment, and handling of solid and hazardous waste

APPENDIX D: Contact for the Waste Management & Prevention Division

Division Phone Numbers

Division Main Number (Weekdays 7:45AM-4:30PM) (802) 828-1138
Environmental Assistance Hotline..... (800) 974-9559
Pollution Prevention Program.....(802) 522-0469

Other Phone Numbers

National Response Center.....(800) 424-8802
Emergency Hazardous Materials Spill Reporting (Business Hours)(802) 828-1138
Vermont 24-hour Emergency Spill/Release Reporting Line..... (800) 641-5005

Web Sites

State of Vermont Home Page: <http://vermont.gov/portal/>

Vermont Department of Environmental Conservation: <http://dec.vermont.gov/>

Waste Management & Prevention Division: <http://dec.vermont.gov/waste-management>

Vermont Hazardous Waste Program: <http://dec.vermont.gov/waste-management/hazardous>

Vermont Hazardous Waste Management
Regulations (VHWMR): <http://dec.vermont.gov/waste-management/hazardous/regulations>

Resources for Hazardous
Waste Generators: <http://dec.vermont.gov/waste-management/hazardous/resources>

Mailing Address

Agency of Natural Resources
Vermont Department of Environmental Conservation
Waste Management & Prevention Division- Hazardous Waste Program
1 National Life Drive – Davis 1
Montpelier, VT 05620-3704