

HAZARDOUS WASTE MANAGEMENT REGULATIONS

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Subchapter 1: GENERAL PROVISIONS

7-101 AUTHORITY

These regulations are promulgated by the Secretary of the Vermont Agency of Natural Resources pursuant to the authority granted by **10 V.S.A. Chapter 159**.

Note: The term “these regulations”, when used within this document, means Chapter 7 of the Vermont Environmental Protection Rules (Hazardous Waste Management Regulations).

7-102 PURPOSE

These regulations are intended to protect public health and the environment by comprehensively regulating the generation, storage, collection, transport, treatment, disposal, use, reuse, and recycling of hazardous waste in Vermont.

7-103 DEFINITIONS

As used in these regulations, all terms not defined herein shall have the meaning given them in 40 CFR Parts 260 through 266, 268, and 270. Terms that are used only in subchapter 8 (Used Oil Management Standards) or subchapter 9 (Universal Waste Management Standards) are defined therein.

"Active life of a facility" means the period from the initial receipt of hazardous waste at the facility until the Secretary receives certification of final closure.

"Agency" means the Vermont Agency of Natural Resources.

“Board” means the solid waste and air quality variance board established by **10 V.S.A. Section 553**.

“Boiler” means an enclosed device using controlled flame combustion and either:

(a) Having the following characteristics:

- (1) Having physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and
- (2) Being of integral design, in that the combustion chamber and the primary energy recovery section(s) (such as waterwalls and superheaters) are physically formed into

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- one manufactured or assembled unit, except that process heaters (units that transfer energy directly to a process stream) and fluidized bed combustion units are not precluded from being boilers solely because they are not of integral design. A unit in which the combustion chamber and the primary energy recovery section(s) are joined only by ducts or connections carrying flue gas is not of integral design; however, a unit may be of integral design even though secondary energy recovery equipment (such as economizers or air preheaters) is not physically formed into the same unit as the combustion chamber and the primary energy recovery section; and
- (3) Maintaining while in operation a thermal energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and
 - (4) Exporting and utilizing at least 75 percent of the recovered energy, calculated on an annual basis, not including recovered heat used internally in the same unit, such as the preheating of fuel or combustion air, the driving of induced or forced draft fans or feed-water pumps; or
- (b) The device is one which the Secretary has determined, on a case-by-case basis, to be a boiler, after considering the standards in **40 CFR Section 260.32**.

"Carbon regeneration unit" means any enclosed thermal treatment device used to regenerate spent activated carbon.

"Certificate of Need" means a certificate issued by the Secretary under **10 V.S.A. Section 6606a** that must be obtained before a person may begin site preparation for or construction of a hazardous waste management facility.

"Certified Hazardous Waste Facility" means a treatment, storage, or disposal facility which is authorized to operate under a federally approved state hazardous waste program, the federal hazardous waste program, or a foreign government.

"Completed Copy" means any copy of the manifest which has been signed by the generator, designated transporter, any continuing transporters, and the designated certified hazardous waste treatment, storage, or disposal facility.

"Consignee" means the ultimate treatment, storage or disposal facility in a receiving country to which the hazardous waste will be sent.

"Container" means any portable device in which a material is stored, transported, treated, disposed of or otherwise handled.

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“Containment building” means a hazardous waste management unit that is used to store or treat hazardous waste under the provisions of subpart DD of parts 264 or 265 of 40 CFR (incorporated by reference in subchapter 5).

“Control” over a waste means the possession, ownership or physical control of such waste, including but not limited to the following activities: (a) generation; (b) treatment; (c) storage; (d) transportation; or (e) disposal, whether or not such activity is authorized by law.

“Designated Facility” means a certified hazardous waste treatment, storage or disposal facility or a facility that is regulated under **Section 7-605(a)**, **Section 7-606(a)**, or **Subpart F of 40 CFR Part 266** (Refer to **Section 7-204(g)** / Recyclable Materials Utilized for Precious Metal Recovery) that has been designated on the manifest pursuant to subchapter 7.

“Discarded” A material is discarded if it is:

- (a) Abandoned;
- (b) Disposed of;
- (c) Recycled, until the recycling process has been completed;
- (d) Burned or incinerated;
- (e) Accumulated, stored, or treated in lieu of or before being discarded; or
- (f) Applied to or placed on the land in a manner that constitutes disposal or used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land.

“Discharge” or **“hazardous waste discharge”** means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

“Disposal” means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any ground or surface waters.

“Disposal facility” means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation

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wastes are placed.

“Drip pad” is an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.

“Economic poison” means

- (a) Any substance produced, distributed or used as a plant regulator, defoliant, or desiccant;
- (b) Any substance produced, distributed or used for preventing, destroying, or repelling any insects, rodents, nematodes, fungi, weeds, or other forms of plant or animal life or viruses, except viruses on or in living man or other animals, which the Commissioner of Agriculture, Food & Markets shall declare to be a pest.

“Environmental Protection Agency” or **“EPA”** means the United States Environmental Protection Agency.

“EPA Acknowledgement of Consent” means the cable sent to EPA from the U. S. Embassy in a receiving country that acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment.

“Facility” means:

- (a) All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).
- (b) For the purpose of implementing corrective action under **40 CFR Section 264.101** (incorporated by reference under subchapter 5), all contiguous property under the control of the owner or operator seeking certification under subchapter 5 of these regulations. This definition also applies to facilities implementing corrective action under **RCRA Section 3008(h)**.

“Final closure” means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under subchapter 5 of these regulations are no longer conducted at the facility unless subject to the requirements for hazardous waste generators in subchapter 3.

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“Generator” means a generator as defined in **Section 7-305**.

“Hazardous material” means all petroleum and toxic, corrosive or other chemicals and related sludge included in any of the following:

- (a) Any substance defined in Section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980;
- (b) Petroleum, including crude oil or any fraction thereof; or
- (c) Hazardous waste, as determined under this Section.

Note: “Hazardous material” does not include herbicides and pesticides when applied consistent with good practice conducted in conformity with federal, state and local laws and regulations and according to manufacturers' instructions. Nothing in this subdivision shall affect the authority granted and the limitations imposed by **10 V. S. A. Section 6608a**.

“Hazardous Waste” means any waste or combination of wastes of a solid, liquid, contained gaseous, or semi-solid form, including but not limited to those which are toxic, corrosive, ignitable, reactive, strong sensitizers, or which generate pressure through decomposition, heat or other means, which in the judgment of the Secretary may cause, or contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, taking into account the toxicity of such waste, its persistence and degradability in nature, and its potential for assimilation, or concentration in tissue, and other factors that may otherwise cause or contribute to adverse acute or chronic effects on the health of persons or other living organisms, or any matter which may have an unusually destructive effect on water quality if discharged to ground or surface waters of the state. All special nuclear, source, or by-product material, as defined by the Atomic Energy Act of 1954 and amendments thereto, codified in 42 U. S. C. Section 2014, is specifically excluded from this definition.

“Hazardous waste management” means the systematic and comprehensive management of the generation, storage, transport, treatment, including recycling and recovery, or disposal of hazardous waste materials.

“Hazardous waste management unit” is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

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“Hazardous waste management plan” means the plan adopted by the Secretary under **10 V.S.A. Section 6604(a)**.

“Household Sewage” means untreated sanitary wastes from a household which pass through a sewage system to a sewage treatment plant.

“Household Waste” means any waste material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas).

“Identification Number” means the location specific number assigned by either EPA or the Secretary to each generator, transporter and treatment, storage, or disposal facility.

“Impervious Surface” means a surface that is sufficiently impervious to any waste material stored thereon to prevent that material from migrating to the soil, groundwater, or surface water.

“Incinerator” means any enclosed device that:

- (a) Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or
- (b) Meets the definition of infrared incinerator or plasma arc incinerator as defined in **40 CFR Section 260.10**.

“Incompatible Waste” means a hazardous waste which is unsuitable for:

- (a) Placement in a particular device or facility because it may cause corrosion or decay of containment materials (e. g., container inner liners or tank walls); or
- (b) Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases (examples in **Appendix VII**).

“Industrial furnace” means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy:

- (a) Cement kilns;
- (b) Lime kilns;

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- (c) Aggregate kilns;
- (d) Phosphate kilns;
- (e) Coke ovens;
- (f) Blast furnaces;
- (g) Smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces);
- (h) Titanium dioxide chloride process oxidation reactors;
- (i) Methane reforming furnaces;
- (j) Pulping liquor recovery furnaces;
- (k) Combustion devices used in the recovery of sulfur values from spent sulfuric acid;
- (l) Halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least 3%, the acid product is used in a manufacturing process, and, except for hazardous waste burned as fuel, hazardous waste fed to the furnace has a minimum halogen content of 20% as-generated; and
- (m) Such other devices as the Secretary may, after notice and comment, add to this list on the basis of one or more of the following factors:
 - (1) The design and use of the device primarily to accomplish recovery of material products;
 - (2) The use of the device to burn or reduce raw materials to make a material product;
 - (3) The use of the device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;
 - (4) The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;
 - (5) The use of the device in common industrial practice to produce a material product;and

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(6) Other factors, as appropriate.

“Investigator” means an investigator designated and duly authorized by the Secretary pursuant to 10 V.S.A. § 8002(3).

“Land Disposal” means placement in or on the land and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, concrete vault or bunker intended for disposal purposes.

“Landfill” means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.

“Manifest” means the form adopted by the Secretary and used for identifying the generator, transporter(s), quantity, composition, origin, and destination of hazardous waste during its transportation from the site of generation to the point of treatment, storage, or disposal.

“Manufacturing or Mining By-Product” is a material that is not one of the primary products of a particular manufacturing or mining operation, is a secondary and incidental product of the particular operation and would not be solely and separately manufactured or mined by the particular manufacturing or mining operation. The term does not include an intermediate manufacturing or mining product which results from one of the steps in a manufacturing or mining process and is typically processed through the next step of the process within a short time.

“Miscellaneous unit” means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under **40 CFR Part 146**, containment building, corrective action management unit, or unit eligible for a research, development, and demonstration certification under **Section 7-511(c)** of these regulations.

“Notice of Intent” means the notice required under **10 V.S.A Section 6606a(b)(2)**.

“Obsolete Pesticide Products” means concentrated pesticide products which are unusable due to damage to containers or the pesticide formulation; in damaged containers; pesticide products whose U. S. EPA registration number has been canceled or suspended leaving no valid registered uses on the label; or unwanted registered pesticide compounds which the generator wishes to dispose of.

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“On-site” means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which that person controls and to which the public does not have access, is also considered on-site property.

“Partial closure” means the closure of a hazardous waste management unit in accordance with the applicable closure requirements under subchapter 5 of these regulations at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

“Person” means any individual, partnership, company, corporation, association, unincorporated association, joint venture, trust, municipality, the State of Vermont or any agency, department, or subdivision of the state, federal agency, or any other legal or commercial entity.

“Pesticide” means an “economic poison” as defined in this Section.

“Pesticidal Wastes” means unwanted pesticide dilutions, rinses, and containers.

“Pile” means any non-containerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.

“Primary Exporter” means any person who is required to originate the manifest for a shipment of hazardous waste in accordance with subchapter 7 when the manifest specifies a treatment, storage, or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.

“RCRA” means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. section 6901 et seq.

“Reclaimed” means that a hazardous waste is processed to recover the hazardous component of the waste as a usable product, or that it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

“Receiving Country” means any foreign country to which hazardous waste is sent for the purpose of treatment, storage, or disposal (except short-term storage incidental to transportation).

“Release” means any intentional or unintentional action or omission resulting in the spilling, leaking, pumping, pouring, emitting, emptying, dumping, or disposing of hazardous materials

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into the surface or groundwaters, or onto the lands in the state, or into waters outside the jurisdiction of the state when damage may result to the public health, lands, waters or natural resources within the jurisdiction of the state.

"Remediation waste" means all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under 40 CFR Section 264.101 (incorporated by reference under subchapter 5) and RCRA section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA sections 3004(v) or 3008(h) for releases beyond the facility boundary.

"Replacement unit" means a landfill, surface impoundment, or waste pile unit (1) from which all or substantially all of the waste is removed, and (2) that is subsequently reused to treat, store, or dispose of hazardous waste. "Replacement unit" does not apply to a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with an approved closure plan or EPA or State approved corrective action.

"Re-refining distillation bottoms" means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.

"Scrap metal" is bits and pieces of metal parts (e. g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e. g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

"Secretary" means the Secretary of the Agency of Natural Resources or his or her duly authorized representative. When implementing the provisions of 10 V. S. A. Sections 6608a and 6608b relating to economic poisons and low level radioactive wastes, the term Secretary includes the Commissioner of Agriculture, Food & Markets and the Commissioner of Health.

"Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

"Sludge dryer" means any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total thermal input, excluding the heating value of the sludge itself, of 2,500 Btu/lb of sludge treated on a wet-weight basis.

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“Solid Waste” means any discarded garbage, refuse, septage, sludge from a waste treatment plant, water supply plant, or pollution control facility and other discarded material including solid, liquid, semi-solid, or contained gaseous materials resulting from industrial, commercial, mining, or agricultural operations and from community activities but does not include animal manure and absorbent bedding used for soil enrichment or solid or dissolved materials in industrial discharges which are point sources subject to permits under the Water Pollution Control Act, Chapter 47 of this title.

“Sorbent” means a material that is used to soak up free liquids by either adsorption or absorption, or both. Sorb means to either adsorb or absorb, or both.

“Staging” means the temporary placement of off-site generated recyclable materials within a recycling facility for a period of time no longer than three (3) days.

“Storage” means the actual or intended containment of wastes, either on a temporary basis or for a period of years; in such a manner as not to constitute disposal of such wastes. Hazardous waste that is being staged at a recycling facility for no more than three (3) days is not considered to be in storage.

“Storage Above Ground” means the containment of hazardous waste in a discrete vessel on or above ground level, excluding surface impoundments.

“Sump” means any pit or reservoir that meets the definition of tank and those troughs/trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that as used in the landfill, surface impoundment, and waste pile rules, “sump” means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.

“Surface Impoundment” means a natural topographic depression, artificial excavation, or dike arrangement, including a pit, pond, or lagoon, whether or not it has a permeable bottom or sides allowing seepage of its contents, which is:

- (a) Used primarily for the storage, treatment, or disposal of hazardous waste in liquid, semi-solid, or solid form; and
- (b) Constructed on, below, or partially in the ground.

“Tank” means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e. g., wood, concrete, steel, plastic) which provide structural support.

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“Transfer facility” means any transportation related facility including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste are held during the normal course of transportation.

“Transit Country” means any foreign country, other than a receiving country, through which a hazardous waste is transported.

“Transport” or **“Transportation”** means the movement of wastes by air, rail, highway, or water.

“Treatment” means any method, technique, or process, including neutralization, designed to change the physical, chemical or biological character or composition of any hazardous or solid waste, so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste safer for transport, amenable for recovery, amenable for storage, or reduced in volume, or for hazardous wastes, so as to render such waste non-hazardous.

“TSCA” means the Toxic Substances Control Act, 15 U.S.C. 2601 et seq.

“Universal waste” means any of the following hazardous wastes that are subject to the universal waste requirements of **subchapter 9**:

- (a) Batteries as described in **Section 7-902**;
- (b) Pesticides as described in **Section 7-903**;
- (c) Thermostats as described in **Section 7-904**;
- (d) Fluorescent light ballasts as described in **Section 7-905**; and
- (e) Mercury-containing lamps as described in **Section 7-906**.

“Used or Reused” means that a hazardous waste is either:

- (a) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a hazardous waste will not satisfy this condition if distinct components of the waste are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or
- (b) Employed in a particular function or application as an effective substitute for a commercial

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product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

“Used Oil” means any petroleum product that has been refined from crude oil (in whole or in part), or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Used oil is a free-flowing liquid at standard temperature and pressure and has a flash point of greater than 140 degrees (F).

“Waste” means a material that is discarded or is being accumulated, stored, or physically, chemically or biologically treated prior to being discarded or has served its original intended use and is normally discarded or is a manufacturing or mining by-product and is normally discarded.

“Waste facility panel” means the panel created under **10 V.S.A. Section 6101(a)**.

7-104 NOTIFICATION REQUIREMENTS

- (a) Any person who generates or transports hazardous waste or who owns or operates a transfer facility or a facility for the treatment, storage, use, disposal, or recycling of hazardous waste shall notify the Secretary of such activity. In addition, persons managing waste under the provisions of either the Used Oil Management Standards of **subchapter 8**, or the Universal Waste Management Standards of **subchapter 9**, shall notify the Secretary of such activity as required under those subchapters. Notification shall be made using the Notification of Regulated Waste Activity form provided by the Secretary and shall include the following information:
- (1) The name and mailing address of the generator, transporter or facility;
 - (2) The address of the site for which notification is being given;
 - (3) The EPA identification number of the generator, handler, transporter, user, or facility if one has been assigned;
 - (4) The name and telephone number of the individual who should be contacted regarding information contained in the notification;
 - (5) The type of regulated waste activity for which notification is being given;
 - (6) A description of the waste generated, handled, transported, and/or treated, stored or disposed;

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- (7) The monthly volume and weight of such waste handled, determined from actual waste handling records, or, if a new or proposed activity, from an estimation; and
 - (8) Whether waste is being received from a conditionally exempt generator pursuant to the provisions of **Section 7-306(c)(2)(D)**.
- (b) Notification is required upon transferral of ownership of an entity that was required to notify the Secretary under **subsection (a)** above.
- (c) Persons subject to the requirements of this Section shall maintain an up-to-date Notification of Regulated Waste Activity form filed with the Secretary which accurately describes current waste activity and waste generation.

7-105 EMERGENCY AND CORRECTIVE ACTIONS

(a) Emergency Actions

- (1) In the event of a discharge of hazardous waste or a release of a hazardous material which when released becomes a hazardous waste, the person in control of such waste shall:
 - (A) Take all appropriate immediate actions to protect human health and the environment including, but not limited to, emergency containment measures and notification as described below; and
 - (B) Take any further clean up actions as may be required and approved by federal, state, or local officials, or corrective actions as specified under **subsection (b)**, below, so that the discharge and related contaminated materials no longer present a hazard to human health or the environment.

(2) Reporting

- (A) All discharges and/or releases that meet any of the following criteria shall be immediately reported to the Secretary by the person or persons exercising control over such waste by calling the Waste Management Division at (802) 241-3888, Monday through Friday, 7:45 a.m. to 4:30 p.m. or the Department of Public Safety, Emergency Management Division at (800) 641-5005, 24 hours/day:
 - (i) A discharge of hazardous waste, or release of hazardous material, that when released becomes hazardous waste, which exceeds 2 gallons; or

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- (ii) A discharge of hazardous waste, or release of hazardous material, that when released becomes hazardous waste, that is less than or equal to 2 gallons and poses a potential or actual threat to human health or the environment; or
- (iii) A discharge of hazardous waste, or release of hazardous material, that when released becomes hazardous waste, that equals or exceeds its corresponding reportable quantity under CERCLA as specified under **40 CFR Section 302.4**.

Note: Under the Federal Water Pollution Control Act, certain spills of “oil” and/or “hazardous substances” are prohibited and must be reported pursuant to the requirements of **40 CFR Part 110 / Discharge of Oil**. Certain spills of hazardous substances must also be reported pursuant to CERCLA. In both cases, the National Response Center must be notified at (800) 424-8802. Finally, in addition to federal and state spill reporting, EPCRA requires that spills are also reported to local authorities.

- (B) A written report shall be submitted to the Secretary within ten (10) days following any release or discharge subject to **subsection (1)**, above. The report should be sent to: The Vermont Department of Environmental Conservation, Waste Management Division, 103 South Main Street, Waterbury, VT 05671-0404. The person responsible for submitting the written report may request that it not be submitted for small discharges and/or releases that were reported pursuant to subsection (A), above, and that have been entirely remediated within the ten (10) day period immediately following the discharge and/or release
- (3) If the discharge or release occurred during transportation, the transporter shall, in addition to notifying the Secretary:
- (A) Notify the National Response Center at (800) 424-8802 or (202) 426-2675, if required by **49 CFR Section 171.15**; and
 - (B) Report in writing to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590, if required by **49 CFR Section 171.16**; and
 - (C) A water (bulk shipment) transporter who has discharged hazardous wastes must give the same notice as required by **33 CFR 153.203** for oil and hazardous substances.

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- (4) If a discharge or release occurs and the Secretary determines that immediate removal of the waste is necessary to protect human health or the environment, the Secretary may authorize its removal by unpermitted transporters without the preparation of a manifest. Such hazardous waste may be transported to a site authorized by the Secretary under the provisions of **Section 7-503** to temporarily accept hazardous waste generated during an emergency cleanup of a discharge or release.
- (5) All clean up debris and residues that are hazardous waste must be transported ultimately to either:
 - (A) A designated facility;
 - (B) A person authorized by the Secretary to use such waste if the waste has been delisted in accordance with **Section 7-218**;
 - (C) Some other location specified and authorized by the Secretary to receive clean up debris and residues if the waste has been delisted in accordance with **Section 7-218**; or
 - (D) For hazardous waste not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), to a facility, that is not a designated facility, located in a state other than Vermont provided the facility can receive such waste under applicable state and local laws, regulations and ordinances.
- (b) Corrective Actions
 - (1) If a discharge of hazardous waste, or a release of hazardous material resulting in hazardous waste, has occurred that has not been adequately addressed under **subsection (a)(1)(A)**, above, the Secretary may require that the person or persons responsible pursuant to **10 V.S.A. Section 6615** complete the following:
 - (A) Engage the services of an environmental consultant experienced in the investigation and remediation of hazardous waste-contaminated sites; and
 - (B) Within thirty (30) days from either the date of the discharge/release or the date that the release was discovered if the date of discharge/release is not known, or within a period of time established by an alternative schedule approved by the Secretary, submit for approval by the Secretary a work plan for an investigation of the contaminated site (i.e., site investigation) prepared by the environmental consultant. The site investigation shall define the nature, degree and extent of the contamination; and shall assess potential impacts to human health and the

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environment (refer to the document titled: "Site Investigation Guidance" which is available from the Secretary upon request); and

- (C) Perform the site investigation within either ninety (90) days of receiving written approval of the work plan by the Secretary, or a period of time established by an alternative schedule approved by the Secretary. A report detailing the findings of the site investigation shall be sent to the Secretary for review; and
- (D) Within either thirty (30) days from the date of final acceptance of the site investigation report by the Secretary, or a period of time established by an alternative schedule approved by the Secretary, submit a corrective action plan prepared by the environmental consultant (refer to the document titled: "Corrective Action Guidance" which is available from the Secretary upon request); and
- (E) Implement the corrective action plan within either ninety (90) days of receiving written approval of the plan by the Secretary, or a period of time established by an alternative schedule approved by the Secretary. The corrective action activity shall continue until the contamination is remediated to levels approved by the Secretary; and
- (F) Submit to the Secretary all investigative, corrective action and monitoring reports, and all analytical results related to subsections (C) through (E) above, as they become available.

7-106 LAND DISPOSAL RESTRICTIONS

- (a) Certain hazardous wastes shall not be disposed of in or on the land. **40 CFR Part 268**, which is hereby incorporated by reference, except for 40 CFR Sections 268.5, 268.6, and 268.42(b), identifies those wastes which shall not be land disposed and describes the limited circumstances under which an otherwise prohibited waste may continue to be land disposed. The authority for implementing the CFR Sections not incorporated by reference remains with the EPA.

Note: A copy of 40 CFR Part 268 (the Land Disposal Restrictions rule), as incorporated by these regulations, is available from the Secretary upon request.

- (b) In addition to the prohibitions of **40 CFR Part 268**, the Secretary may restrict the land disposal of any hazardous waste in the State of Vermont:
 - (1) Which may present an undue risk to human health or the environment, immediately or

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over a period of time; or

- (2) Which would be incompatible with the **Groundwater Protection Rule and Strategy** of Chapter 12 of the Environmental Protection Rules.

7-107 ENFORCEMENT

- (a) Information that the generation, transportation, treatment, storage or disposal of hazardous waste may present an actual or potential threat to human health or the environment, or is a violation of the 10 V.S.A. Chapter 159, or these regulations, or any term or condition of certification, order, or assurance, may serve as grounds for an enforcement action by the Secretary, including, but not limited to:
 - (1) After notice and opportunity for hearing, issuing an order directing any person to take such steps as are necessary to:
 - (A) Immediately cease and desist any operation or practice;
 - (B) Correct or prevent environmental damage likely to result from any deficiency in operation or practice;
 - (C) Suspend or revoke any certification and require temporary or permanent cessation of the operation of such facility;
 - (2) A request that the Attorney General or appropriate State's Attorney commence an action for injunctive relief, the imposition of penalties and fines provided in **10 V.S.A. Section 6612** and other relief as may be appropriate.
 - (3) An order for reimbursement to any agency of federal, state, or local government from any person whose act caused governmental expenditures under **10 V.S.A. Section 1283**.
 - (4) All other powers of enforcement available to the Secretary through **10 V.S.A., Chapter 201**.
- (b) The hearing by the Secretary under **subsection (a)(1)** of this Section shall be conducted as a contested case. Pursuant to **10 V.S.A. Section 6610(b)**, the Secretary may issue an emergency order without a prior hearing when an ongoing violation presents an immediate threat of substantial harm to the environment or an immediate threat to public health. An emergency order shall be effective upon actual notice to the person against whom the order

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is issued. Any person to whom an emergency order is issued shall be given the opportunity for a hearing within five (5) business days of the date the order is issued.

(c) Inspections, Investigations, and Property Access (**10 V.S.A. Section 8005**)

(1) Inspections and investigations

- (A) An investigator may perform routine inspections to determine compliance.
- (B) An investigator may investigate upon receipt or discovery of information that an activity is being or has been conducted that may constitute or cause a violation.
- (C) An investigator, upon presentation of credentials, may seek permission to inspect or investigate any portion of the property, fixtures, or other appurtenances belonging to or used by a person whose activity is required to be in compliance. The investigator shall state the purpose of the inspection or investigation. An inspection or investigation may include monitoring, sampling, testing, and copying of any records, reports, or other documents relating to the purposes to be served by compliance.
- (D) If permission for an inspection or investigation is refused, the investigator may seek an access order from the district or superior court in whose jurisdiction the property is located enabling the investigator to perform the inspection or investigation.

(2) Access Orders

- (A) If access has been refused, an access order may be sought pursuant to either **10 V.S.A. Section 8005** or **10 V.S.A. Section 6609**.
- (B) Issuance of an access order shall not negate the Secretary's authority to initiate criminal proceedings in the same matter by referring the matter to the office of the attorney general or a state's attorney.

- (d) In an action to enforce these regulations, anyone raising a claim that a certain material is not a hazardous waste, or is exempt from regulation as hazardous waste, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. Appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation, must be provided. Owners and operators of facilities claiming that they are actually recycling materials must show that they have the necessary equipment to do so.

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7-108 SIGNATORIES TO CERTIFICATION APPLICATIONS AND REPORTS

- (a) All certification applications shall be signed as follows:
 - (1) For a corporation, by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:
 - (A) A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - (B) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having a gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - (2) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
 - (3) For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this Section, a principal executive officer of a federal agency includes:
 - (A) The chief executive officer of the agency; or
 - (B) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- (b) All reports required by certifications and other information requested or required by the Secretary shall be signed by a person described in **Section 7-108(a)**, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described in **Section 7-108(a)**;
 - (2) The authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

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- (3) The written authorization is submitted to the Secretary.
- (c) If an authorization under **Section 7-108(b)** is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirement of **Section 7-108(b)** must be submitted to the Secretary prior to or together with any documents signed by an authorized representative.
- (d) Certification. Any person signing a document under **Section 7-108(a)** or **7-108(b)** shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- (e) The certification in **Section 7-108(d)** need not appear on a manifest completed in accordance with Subchapter 7 of these regulations.

7-109 INCORPORATIONS BY REFERENCE

- (a) When reference is made to CFR titles, their parts, subparts, or sections, the reference is to titles of the Code of Federal Regulations as they existed on July 1, 1999, except that references to the regulations regarding land disposal restrictions include the amendments made on October 20, 1999 at 64 Fed. Reg. 56469 et seq.
- (b) When reference is made to forms, the following forms are incorporated by reference:
 - (1) Uniform Certification Conditions [October 1997];
 - (2) Notification of Regulated Waste Activity Form [June 1999];
 - (3) Exemption Procedures for the Recycle and Reuse of Hazardous Waste (Recycle and Reuse Form) [October 1997];
 - (4) Petition Procedure for the Listing and Delisting of Hazardous Waste (Listing and Delisting Form) [October 1997];

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- (5) Uniform Hazardous Waste Manifest (Manifest) [September 1988].
- (c) The Project XL Site-specific Rulemaking for University Laboratories, adopted September 28, 1999, at 64 Fed. Reg. 52379 et seq., as it applies to the University of Vermont (UVM) is hereby incorporated by reference. Provided UVM implements and complies with this Project XL rule, including the “Laboratory Environmental Management Standard”, the “Minimum Performance Criteria”, and the facility-specific “Environmental Management Plan” described by the Final Project Agreement (FPA) signed September 28, 1999, UVM is not subject to the requirements of **Sections 7-202, 7-301, 7-303, 7-305(b), and 7-310** as specified in **Appendix VI**. This Project XL rule expires on September 30, 2003.

7-110 IMPLEMENTATION

The Secretary shall consult with other agencies of state government if he or she has reason to conclude that any action or decision hereunder may conflict with any statute or regulation within the authority of such other agency.

7-111 ACCESS TO PUBLIC RECORDS

- (a) Purpose, Scope, Applicability
 - (1) All public records relating to these regulations shall be available to the public unless they are exempt under **Section 7-111(b)**.
 - (2) This Section describes requirements for the availability of public information concerning facilities and sites where hazardous wastes are generated, handled, treated, stored, recycled, or disposed, or where wastes are managed pursuant to either the Used Oil Management Standards or the Universal Waste Management Standards.
 - (3) As specified in **1 V.S.A. Section 316(e)**, information concerning facilities and sites for the treatment, storage, and disposal of hazardous waste shall be made available to the public in substantially the same manner and to the same degree as such information is made available under the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. Section 82, subchapter 3, and the Federal Freedom of Information Act, 5 U.S.C. Section 552 et seq. In the event that there is a conflict between state requirements for access to public records under 1 V.S.A. Chapter 5, subchapter 3 and the cited federal laws, federal law shall govern.
 - (4) For the purposes of this Section, the term "public record" or "public document" means

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all papers, documents, machine readable materials or any other written or recorded matters, regardless of their physical form or characteristics, that are produced or acquired in the course of Agency business. Individual salaries and benefits of and salary schedules relating to elected or appointed officials and employees of public agencies shall not be exempt from public inspection and copying.

(b) Exemption Categories

No request for the review or a copy of an existing public record in the Secretary's possession shall be denied unless the public record contains material that is exempt from disclosure under **1 V.S.A. Section 317(c)**.

(c) Procedural Requirements

- (1) In responding to requests for public records, the Secretary shall use the procedures established by **1 V.S.A. Section 318** and this Section.
- (2) If a request for a public record is denied by the Secretary, the requestor may appeal to the Secretary as specified in **1 V.S.A. Section 318**.
- (3) If the Secretary denies an appeal, or if the Secretary fails to comply with the applicable time limit provisions of **1 V.S.A. Section 318**, the requestor may appeal to the appropriate superior court as specified in **1 V.S.A. Section 319**.

(d) Public Review of Files

- (1) The public may review files in possession of the Secretary, except those exempted under **Section 7-111(b)**, after having set up an appointment with the documents control officer for the Division in which the documents are located. The documents control officer may waive the requirement for an appointment if they determine that a waiver is appropriate. Factors to be considered in making such a determination include the time involved to locate and make available requested files, other duties or responsibilities at the time of the request, and whether the files have been reviewed to assure that no records exempted under **Section 7-111(b)** are present.
- (2) In responding to requests for appointments to review files, the Secretary shall use the procedures established by **1 V.S.A. Section 318**.
- (3) When reviewing files, the public may not remove any records from the files, nor may the public remove any of the files from the area designated by the Secretary for file review. If copies are desired, the appropriate records shall be tagged or otherwise

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designated and presented to the document control officer for copying.

(e) Fees: Payment; Waiver

- (1) Fees for copies of public records related to these regulations, such as photocopies, photographs, microfilms, magnetic tapes or diskettes, are established by Agency policy and are due upon receipt of the records unless otherwise specified. Requests for information concerning fees should be directed to the Waste Management Division's document control officer at (802) 241-3888.
- (2) The fee chargeable under this Section shall be reduced or waived if the Secretary determines that a waiver or reduction of the fee is in the public interest because furnishing the information can be considered as primarily benefitting the general public. Reduction or waiver of fees shall be considered (but need not necessarily be granted) in connection with each request from a representative of the press or other communications medium, or from a public interest group.

(f) Confidential Business Information

- (1) As is specified by **Section 7-111(b)**, certain confidential business information may be exempted from public disclosure. Any such information shall be determined by the Secretary to be confidential if it is determined to be confidential business information under **1 V.S.A. Section 316(k)** or **317(c)**.
- (2) If a business does not assert a claim of business confidentiality at the first opportunity provided by the Secretary, the information will be released upon request without further notice to the business. In addition, for any information submitted in connection with an application for certification under **Section 7-505**, any business confidentiality claim must be asserted at the time of submission of the information to the Secretary.
- (3) Claims of confidentiality for the name and address of any applicant for certification or certified facility shall be denied.

Subchapter 2: IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

7-201 PURPOSE, SCOPE, APPLICABILITY

This subchapter identifies or otherwise describes those wastes subject to regulation as hazardous wastes under this chapter, and assigns EPA or Vermont “hazardous waste numbers” to them. It establishes procedures for determining whether a waste is hazardous waste and for petitioning the addition or removal of a waste to or from the lists of hazardous wastes identified in this subchapter. It also identifies or references sampling, analytical and testing methods and procedures to be used for the purpose of establishing whether or not a waste is hazardous.

7-202 HAZARDOUS WASTE DETERMINATION

- (a) "Hazardous Waste" means any waste or combination of wastes which meets the definition in **Section 7-103**, including but not limited to:
- (1) Any waste which exhibits one or more of the characteristics described in **Sections 7-205 through 7-208**;
 - (2) Any waste which is listed in **Sections 7-210 through 7-215**;
 - (3) Any mixture of a solid waste and a hazardous waste except as exempted in **Section 7-203(k)**;
 - (4) Any waste generated from the treatment, storage, disposal, or use of a hazardous waste including any sludge, spill residue, ash, emission control dust, leachate, and precipitation runoff which comes in contact with the waste itself. However, a material that is reclaimed from a waste and that is used beneficially is not a waste and hence not a hazardous waste under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal;
 - (5) Any waste derived from a waste listed in **Sections 7-210 through 7-215**;
 - (6) Any waste generated from the discharge or release of a material which exhibits a characteristic described in **Sections 7-205 through 7-208** or is listed in **Sections 7-210 through 7-215**;
 - (7) Any residues from a container or from the inner liner of a container which held a material which exhibits a characteristic described in **Sections 7-205 through 7-208** or is listed in **Sections 7-210 through 7-215**, except as exempted in **Section 7-203(j)**; and

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- (8) Any waste transported into the State of Vermont which is classified as a hazardous waste in the state in which that waste was generated.
- (b) A person who generates or who is in control of a waste must determine if that waste is a hazardous waste as described in **subsection (a)** above by using the following procedure:
 - (1) Determine if the waste is excluded from regulation under **Sections 7-203 or 7-204**.
 - (2) If the waste is not excluded from regulation, determine if the waste is listed as a hazardous waste in **Sections 7-210 through 7-215**.
 - (3) For purposes of compliance with 40 CFR part 268 (incorporated by reference through **Section 7-106** of these regulations), or if the waste is not listed in **Sections 7-210 through 7-215**, determine whether the waste exhibits a hazardous waste characteristic as identified in **Sections 7-205 through 7-208** by either:
 - (A) Testing or analyzing the waste according to the methods and procedures set forth in **Sections 7-205 through 7-208 and 7-219** as appropriate; or
 - (B) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.
- Note:** Waste that is listed as Vermont regulated hazardous waste under **Section 7-211** must be evaluated to determine whether or not it exhibits a hazardous waste characteristic.
- (4) If the waste is determined to be hazardous, the generator must refer to 40 CFR part 268 (incorporated by reference through **Section 7-106** of these regulations), and Subchapters 1, 3, 5, 6, 8 and 9 for possible exclusions or restrictions pertaining to management of the specific waste.
- (c) The determination of whether a waste is hazardous waste shall be made using either suitable available constituent product information or the sampling, analytical and test methods and procedures specified in **Sections 7-205 through 7-208 and 7-219**, as appropriate. The Secretary may require information to be submitted that either has been used to determine whether or not a waste is hazardous waste or that is necessary to make such a determination.
- (d) A copy of any test results, waste analysis or other information used to determine whether or not a waste is hazardous waste must be retained by all generators in accordance with **Section 7-710(a)(2)**.

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- (e) Each hazardous waste listed in **Sections 7-210 through 7-215** is assigned an EPA (or Vermont) Hazardous Waste Number which precedes the name of the waste. This number must be used in complying with the notification requirements of **Section 7-104**, the land disposal restriction requirements of **Section 7-106**, and all applicable manifest, recordkeeping and reporting requirements under these regulations.
- (f) A waste which exhibits a hazardous characteristic as described in **Sections 7-205 through 7-208** is assigned every EPA (or Vermont) Hazardous Waste Number that is applicable as set forth in **Sections 7-205 through 7-208**. This number must be used in complying with the notification requirements of **Section 7-104**, the land disposal restriction requirements of **Section 7-106** and all applicable manifest, recordkeeping and reporting requirements under these regulations.
- (g) If a waste is identified by both EPA and Vermont hazardous waste numbers and descriptions, the EPA hazardous waste number and description shall be used for the purposes of these regulations.

7-203 GENERAL EXEMPTIONS

The following wastes are exempted from the provisions of these regulations:

- (a) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused;
- (b) Household sewage and any mixture of household sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment in accordance with the provisions of a permit issued under **10 V.S.A. Chapter 47**;
- (c) Fly ash waste, bottom ash waste, slag waste and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace as provided by **40 CFR Section 266.112** (incorporated by reference through **Section 7-512** of these regulations);
- (d) Mining overburden returned to the mine site;
- (e) Waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock and overburden from the mining of uranium ore), except residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace as provided by **40 CFR Section 266.112** (incorporated by reference through **Section 7-512** of these regulations). For purposes of this Section, beneficiation of ores

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and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting [and/or autoclaving and/or chlorination]/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching. For the purposes of this Section, waste from the processing of ores and minerals includes only those listed by **40 CFR Section 261.4(b)(7)(ii)** as generated.

- (f) Waste which is regulated because it exhibits one or more of the characteristics of hazardous waste identified in **Sections 7-205 through 7-208**, when the waste no longer exhibits any characteristic. However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of **40 CFR Part 268**, even if they no longer exhibit a characteristic at the point of land disposal. Moreover, a waste that exhibits the characteristic of toxicity that has been land disposed shall never cease to be a hazardous waste.
- (g) In the case of any waste consisting of, containing, or derived from any waste or any product or constituent listed in **Sections 7-210 through 7-215** of this subchapter, when it has been determined by the Secretary that the waste is not hazardous pursuant to the delisting procedures of **Section 7-217 or 7-218**.
- (h) A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste treatment manufacturing unit until it exits the unit in which it was generated provided:
 - (1) The unit is not a surface impoundment; and
 - (2) The hazardous waste remains in the unit for less than ninety (90) days after the unit ceases to be operated for manufacturing, storage, or transportation of a product or raw material.
- (i) Samples as follows:
 - (1) Except as provided in **subsection (i)(2)** below, samples collected for the sole purpose of testing to determine their properties, characteristics or composition when:
 - (A) The sample is being transported to a laboratory for the purpose of testing;

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- (B) The sample is being transported back to the sample collector after testing;
 - (C) The sample is being stored by the sample collector before transport to a laboratory for testing;
 - (D) The sample is being stored in a laboratory before testing;
 - (E) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or
 - (F) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).
- (2) In order to qualify for the exemption in **subsections (i)(1)(A) and (B)** of this Section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:
- (A) Comply with U. S. Department of Transportation (DOT), U. S. Postal Service (USPS) and any other applicable shipping requirements; or
 - (B) Comply with the following requirements if the sample collector determines that DOT, USPS or other shipping requirements do not apply to the shipment of the sample:
 - (i) Assure that the following accompanies the sample:
 - (aa) The sample collector's name, mailing address and telephone number;
 - (bb) The laboratory's name, mailing address and telephone number;
 - (cc) The quantity of the sample;
 - (dd) The date of shipment; and
 - (ee) A description of the sample.
 - (ii) Package the sample so that it does not leak, spill, or vaporize from its packaging.

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- (3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in **subsection(i)(1)** of this Section.
- (4) Treatability Study Samples as provided in **40 CFR Sections 261.4(e) & (f)**.
- (j) Containers and inner liners from containers of hazardous waste, provided that the containers and inner liners are empty. Containers and inner liners are empty under the following conditions:
 - (1) For those containers or inner liners which have held hazardous waste, when all material has been removed using the practices commonly employed to remove materials from that type of container, and
 - (A) No more than one inch of residue remains on the bottom of the container or inner liner; or
 - (B) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gallons in size; or
 - (C) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.
 - (2) For those containers that held a hazardous waste that is a compressed gas, when the pressure in the container approaches atmospheric pressure.
 - (3) For those containers or inner liners which have held acutely hazardous waste, pesticidal waste, or obsolete pesticide products:
 - (A) When the container or inner liner has been triple rinsed with a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
 - (B) When the container or inner liner is cleaned by a method which the generator has demonstrated to achieve equivalent removal; or
 - (C) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.

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(k) Mixtures of solid waste and hazardous waste provided that:

- (1) The hazardous waste in the mixture is listed in **Sections 7-210 through 7-215** solely because it exhibits one or more of the characteristics of hazardous waste identified in **Sections 7-205 through 7-208**, and the resultant mixture no longer exhibits any characteristic.
- (2) The hazardous waste in the mixture is listed in **Sections 7-210 through 7-215** solely because it exhibits one or more of the characteristics of hazardous waste identified in **Sections 7-205 through 7-208**, and the solid waste is excluded from regulation under **Section 7-203(e)**, and the resultant mixture no longer exhibits any hazardous waste characteristic for which the hazardous waste in the mixture was listed.
- (3) The hazardous waste in the mixture is listed in **Sections 7-210 through 7-215** and the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either **Section 402 or Section 307(b) of the Clean Water Act** (including wastewater at facilities which have eliminated the discharge of wastewater) as specified in **40 CFR Section 261.3(a)(2)(iv)**.
- (4) Nonwastewater mixtures are still subject to the requirements of **40 CFR Part 268** (incorporated by reference by **Section 7-106** of these regulations), even if they no longer exhibit a characteristic at the point of land disposal.

Note: Dilution of hazardous waste subject to the land disposal restrictions of 40 CFR Part 268 is prohibited pursuant to **40 CFR Section 268.3** (incorporated by reference through **Section 7-106** of these regulations).

(l) Water-miscible metal cutting and grinding fluid waste provided that:

- (1) It does not exhibit a characteristic of hazardous waste as defined in **Sections 7-205 through 7-208**; and
- (2) It is recycled or treated on-site (e.g., centrifugation, evaporation, filtration and ultrafiltration) or sent off-site for treatment; and

Note: Evaporation equipment must be approved in accordance with Vermont's Air Pollution Control Regulations.

- (3) Containers holding water-miscible metal cutting and grinding fluid waste that is being managed according to this Section are marked with words that identify the

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contents; and

- (4) Any residue resulting from on-site recycling or treatment is managed as a hazardous waste; and
 - (5) Any contaminated water resulting from on-site treatment is discharged in accordance with **10 V.S.A. Chapters 47** (for indirect injection well, and direct discharges) and **48** (for groundwater protection); and
 - (6) Any water-miscible metal cutting and grinding fluid waste sent off-site for treatment are offered for transport only to a transporter permitted according to the requirements of **Subchapter 4**.
- (m) Spent antifreeze that is subject to regulation as hazardous waste only because it meets the criteria of the VT08 hazardous waste number provided that:
- (1) The spent antifreeze is either recycled for reuse (e.g., filtered) and/or treated for reuse (e.g., additives added); and
 - (2) Containers holding spent antifreeze to be recycled and/or treated remain closed except to add or remove waste and are marked with words that identify the contents; and
 - (3) Any residue resulting from on-site recycling and/or treatment that is hazardous waste is managed as hazardous waste.
- (n) Used oil that is hazardous waste because it meets the criteria of the VT02 hazardous waste number and/or exhibits a hazardous characteristic, provided the used oil is managed in accordance with **Subchapter 8** of these regulations.
- Note:** Pursuant to **10 V.S.A. Section 6621a**, no person shall knowingly dispose of used oil in a landfill.
- (o) Non-terne plated used oil filters that are not mixed with wastes listed in **Sections 7-210** through **7-215** if:
- (1) These oil filters have been gravity hot-drained using one of the following methods:
 - (A) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;

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- (B) Hot-draining and crushing;
 - (C) Dismantling and hot-draining; or
 - (D) Any other equivalent hot-draining method that will remove used oil; and
- (2) All drained oils are collected and managed subject to these regulations.

Note: The Agency recommends that drained oil filters be recycled as scrap metal.

- (p) Soil or debris containing petroleum distillates (i.e., meets the criteria of the VT02 hazardous waste number) provided:
- (1) The petroleum contaminated soil or debris does not exhibit a characteristic of hazardous waste as defined in **Sections 7-205 through 7-208**, with the exception that soils or debris subject to regulation under the underground storage tank requirements of **40 CFR Part 280** are not subject to regulation for the waste codes of D018 through D043 of **Section 7-208**; and
 - (2) The petroleum contaminated soil or debris does not contain wastes listed in **Sections 7-210 through 7-215**, with the exception that soil or debris may contain wastes identified by the VT02 hazardous waste number; and
 - (3) The petroleum contaminated soil or debris is evaluated by field screening, review of any available information about the contaminant (e.g., Materials Safety Data Sheet information) and, if necessary, laboratory analysis and/or testing to establish the type and concentration of the contaminant(s) present; and
- [**Note:** Field screening and laboratory analysis and/or testing must be conducted by an independent professional consulting firm or laboratory using a method or methods that are either identified under **Section 7-219** of these regulations or that are otherwise approved by the Secretary.]
- (4) The petroleum contaminated soil or debris is managed (e.g., assessed, monitored, excavated, stored, treated, transported, or stockpiled) in a manner that is protective of human health and the environment (refer to the document titled: “Agency Guidelines for Petroleum Contaminated Soil and Debris” which is available from the Secretary upon request); and
 - (5) For petroleum contaminated soil or debris that is excavated and/or treated on-site:
 - (A) The excavation and/or treatment activity does not pose an increased risk to

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sensitive receptors (e.g., public or private water supplies; surface waters; wetlands; sensitive ecological areas; and outdoor / indoor air); and

- (B) The excavated soil or debris is kept secure from public access; and
 - (C) The Secretary is notified in writing of the excavation and, if applicable, the treatment method used, within thirty (30) days of the date when the soil or debris was first excavated and/or treated; or
- (6) For petroleum contaminated soil or debris that is transported off-site for treatment and/or disposal:
- (A) Before shipping any soil or debris for off-site management, the person or persons in control of that material must receive written approval from the Secretary; and
 - (B) Except for petroleum contaminated soil or debris sent to a commercial facility that is permitted to manage such material, the person or persons in control of petroleum contaminated soil or debris must provide written notification to the municipality where the soil or debris is to be sent that includes the following information:
 - (i) The specific location (e.g., street address) where the soil or debris is to be sent for treatment or disposal; and
 - (ii) The name and telephone number of the owner of the property where the soil or debris is to be sent for treatment or disposal; and
 - (iii) A description of the type and amount of material to be sent; and
 - (iv) If applicable, a description of the treatment method to be used; and
 - (v) If applicable, a description of how the soil or debris is to be disposed; and
 - (vi) The name and telephone number of a contact person that can provide additional information about the soil or debris.
 - (C) The soil or debris must be kept secure from public access.
- (q) Industrial discharges subject to regulation under the Water Pollution Control Act, **10 V.S.A. Chapter 47**. This exemption applies only to the actual point source discharge. It

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does not exclude wastewaters while they are being collected, stored, or treated before discharge nor does it exclude sludges that are generated by industrial wastewater treatment.

- (r) Pesticidal wastes that are both generated and disposed of by the same farmer provided:
 - (1) The emptied pesticide container is triple rinsed in accordance with the provisions of **Section 7-203(j)**; and
 - (2) The pesticide residues are disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label.
- (s) The wastes listed below are exempt from regulation under Subchapters 1 through 7 of these regulations except as specified in **Subchapter 9** of these regulations. The following wastes are subject to regulation as universal wastes under Subchapter 9:
 - (1) Batteries as described in **Section 7-902**;
 - (2) Pesticides as described in **Section 7-903**;
 - (3) Thermostats as described in **Section 7-904**;
 - (4) Fluorescent light ballasts as described in **Section 7-905**; and
 - (5) Mercury-containing lamps as described in **Section 7-906**.
- (t) PCB-containing dielectric fluid and, with the exception of fluorescent light ballasts, electric equipment containing such fluid authorized for use and regulated under **40 CFR Part 761** of the Toxic Substances Control Act and that are hazardous only because they either meet the criteria of the VT01 hazardous waste identification number or fail the test for the Toxicity Characteristic (Hazardous Waste Codes D018 through D043 only).

Note: The Section 7-203(t) exemption is not applicable to media or debris contaminated with PCB-containing dielectric fluid.
- (u) The following materials provided they do not exhibit a characteristic identified in **Sections 7-205 through 7-208**:
 - (1) Hazardous debris as defined in 40 CFR Part 268 (Land Disposal Restrictions incorporated by reference through **Section 7-106**) that has been treated using one of the required extraction or destruction technologies specified in **Table 1 of 40 CFR Section 268.45**; persons claiming this exclusion in an enforcement action

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will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

- (2) Debris as defined in 40 CFR Part 268 (Land Disposal Restrictions incorporated by reference through **Section 7-106**) that the Secretary, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.
- (v) Waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood product for these materials' intended end use.
- (w) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products.
- (x) Reusable absorbent material contaminated with used oil that does not exhibit a hazardous waste characteristic provided that:
 - (1) The contaminated absorbent material is processed and reused on-site and any residual material that results from processing is managed in accordance with these regulations; or
 - (2) The contaminated absorbent material is picked up, cleaned, and delivered back to the generator under a contractual agreement with a commercial laundering service and:
 - (A) Free liquid is not present in the absorbent material as per test method 9095 of EPA Publication SW 846 (the paint filter liquids test); and
 - (B) Prior to being picked up by the launderer, the absorbent material is:
 - (i) Stored in closed bags or other containers in an area on-site that meets the design standards of **Section 7-311(a)(1) through (4)**; and
 - (ii) Identified as used absorbent material destined for laundering.

7-204 RECYCLING EXEMPTIONS

The following wastes are exempted from the provisions of these regulations if they are recycled

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as specified:

- (a) Hazardous wastes that are recycled by being:
 - (1) Used or reused as ingredients in an industrial process to make a product, provided the wastes are not first being processed or reclaimed; or
 - (2) Used or reused as effective substitutes for commercial products, provided the wastes are not first being processed or reclaimed; or
 - (3) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The wastes must be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the wastes must be managed such that there is no placement on the land.
- (b) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose.
- (c) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.
- (d) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.
- (e) Scrap metal that is recycled.
- (f) Spent lead-acid batteries that are reclaimed (or that are regenerated) provided:
 - (1) Persons who generate or collect spent lead-acid batteries, who regenerate spent lead-acid batteries, or who store spent lead-acid batteries but do not reclaim them (other than spent lead-acid batteries that are to be regenerated) store such batteries under cover on an impervious surface; and
 - (2) Transport of spent lead-acid batteries is done in compliance with **49 CFR Parts 171 through 177**; and
 - (3) Owners or operators of facilities which store lead-acid batteries (other than spent lead-acid batteries that are to be regenerated) before reclaiming them are subject

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to the requirements of **40 CFR Part 266, Subpart G** as they existed as of July 1, 1994.

- (g) Recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these metals provided:
 - (1) Persons who generate, transport, store or recycle these recyclable materials comply with **40 CFR Part 266, Subpart F**.
 - (2) Any generator or facility accumulating or storing these recyclable materials from which precious metals are reclaimed comply with any additional standards and requirements specified by the Secretary as necessary to protect human health and the environment. In making such determination, the Secretary shall use the standards and procedures specified in **40 CFR Sections 260.40 and 260.41**.
- (h) Shredded circuit boards being recycled provided that they are:
 - (1) Stored in containers sufficient to prevent a release to the environment prior to recovery; and
 - (2) Free of mercury switches, mercury relays and nickel-cadmium batteries and lithium batteries.

7-205 CHARACTERISTIC OF IGNITABILITY

- (a) A waste is an ignitable hazardous waste if a representative sample of the waste has any of the following properties:
 - (1) It is a liquid and has a flash point of less than 60°C, which is approximately 140°F as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80 (incorporated by reference, see **Section 7-219(d)**), or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78 (incorporated by reference, see **Section 7-219(d)**), or as determined by an equivalent test method approved by the EPA Administrator and the Secretary in accordance with **Section 7-219(e)**. However, an aqueous solution of alcohol which contains less than 24 percent alcohol by volume will not be considered an ignitable waste;
 - (2) It is not a liquid and is capable under standard temperature and pressure of causing fire through friction, absorption of moisture, or spontaneous chemical

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changes and, when ignited, burns so vigorously and persistently that it creates a hazard;

- (3) It is an ignitable compressed gas as defined in **49 CFR 173.300** and as determined by the test methods described in that regulation or equivalent test methods approved in accordance with **Section 7-219(e)**; or
 - (4) It is an oxidizer, such as chlorate, perchlorate, nitrate, nitrite, permanganate, or inorganic peroxide that yields oxygen readily to stimulate the combustion of organic matter.
- (b) A waste which exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

7-206 CHARACTERISTIC OF CORROSIVITY

- (a) A waste is a corrosive hazardous waste if a representative sample of the waste has any of the following properties:
- (1) It is an aqueous solution which has a pH of less than or equal to 2 or greater than or equal to 12.5 as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference, see **Section 7-219(d)**); or
 - (2) It is a liquid and corrodes steel (type SAE 1020) at a rate greater than 0.250 inch per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference, see **Section 7-219(d)**); or
 - (3) It is a non-aqueous waste which when mixed 50% by weight with distilled water, or a gaseous material which when mixed with distilled water to form a 2 molar solution, yields a pH less than or equal to 2 or greater than or equal to 12.5 as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference, see **Section 7-219(d)**).
- (b) A waste that exhibits the characteristic of corrosivity because it meets the criteria of **subsection 7-206(a)(1) or (2)** has the EPA Hazardous Waste Number of D002. A waste that exhibits the characteristic of corrosivity because it meets the criteria of **subsection 7-**

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206(a)(3) has the Hazardous Waste Number of VT20.

7-207 CHARACTERISTIC OF REACTIVITY

- (a) A waste is a reactive hazardous waste if a representative sample of the waste has any of the following properties:
- (1) It is normally unstable and readily undergoes violent change without detonating;
 - (2) It reacts violently with water;
 - (3) It forms potentially explosive mixtures with water;
 - (4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or to the environment;
 - (5) It is a cyanide or sulfide bearing waste which, when exposed to a pH condition between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or to the environment;
 - (6) It is capable of detonation or an explosive reaction if it is subjected to a strong initiating source or if heated under confinement;
 - (7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure;
 - (8) It is a forbidden explosive as defined in **49 CFR Section 173.51**, or a Class A explosive as defined in **49 CFR Section 173.53**, or a Class B explosive as defined in **49 CFR Section 173.88**.
- (b) A waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

7-208 CHARACTERISTIC OF TOXICITY

- (a) A waste is a hazardous waste if, using the Toxicity Characteristic Leaching Procedure (TCLP), test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference, see **Section 7-219(d)**), the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 at the concentration equal to or greater than the

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respective value given in that Table. Where the waste contains less than 0.5% filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purposes of this Section.

- (b) A waste that exhibits the characteristic of toxicity has all applicable EPA Hazardous Waste Numbers specified in Table 1 which correspond to any of the toxic contaminants listed in Table 1 that cause it to be hazardous.

Note: “CAS” Number means Chemical Abstract Service Number.

Table 1

MAXIMUM CONCENTRATION OF CONTAMINANTS FOR THE CHARACTERISTIC OF TOXICITY

Hazardous Waste Number	Contaminant	CAS Number	Regulatory Level (milligrams per liter)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D006	Cadmium	7440-43-9	1.0
D007	Chromium	7440-47-3	5.0
D008	Lead	7439-92-1	5.0
D009	Mercury	7439-97-6	0.2
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D012	Endrin(1,2,3,4,10,10-Hexachloro-1,7-epoxy-1,4,4a,5,6,7,8 8a-octahydro-1,4-endo, endo-5,8-dimethano-naphthalene)	72-20-8	0.02
D013	Lindane (1,2,3,4,5,6-Hexachlorocyclohexane, gamma isomer)	58-89-9	0.4
D014	Methoxychlor (1,1,1-Trichloro-2,2-bis[p-methoxyphenyl] ethane)	72-43-5	10.0

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Hazardous Waste Number	Contaminant	CAS Number	Regulatory Level (milligrams per liter)
D015	Toxaphene (C ₁₀ H ₁₀ C ₁₈ , Technical chlorinated camphene, 67 to 69 percent chlorine)	8001-35-2	0.5
D016	2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	10.0
D017	2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	93-72-1	1.0
D018	Benzene	71-43-2	0.5
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D023	o-Cresol	95-48-7	200.0 ¹
D024	m-Cresol	108-39-4	200.0 ¹
D025	p-Cresol	106-44-5	200.0 ¹
D026	Cresol	200.0 ¹
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	0.13 ²
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13 ²

¹ If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

² Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

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Hazardous Waste Number	Contaminant	CAS Number	Regulatory Level (milligrams per liter)
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0 ²
D039	Tetrachloroethylene	127-18-4	0.7
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D043	Vinyl Chloride	75-01-4	0.2

² Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

7-209 LISTS OF HAZARDOUS WASTES

- (a) **Sections 7-210 through 7-215** contain five lists of hazardous wastes. **Section 7-210** contains a list of hazardous wastes from non-specific sources. **Section 7-211** contains a list of Vermont listed hazardous wastes. **Section 7-212** contains a list of hazardous wastes produced by specific industries. **Section 7-213** is a list of hazardous constituents which may render hazardous a waste which contains any such constituents. **Section 7-214** is a list of commercial chemical products which, if discarded or intended to be discarded in pure or off-specification form, constitute hazardous waste. **Section 7-215** is a list of acutely hazardous wastes.
- (b) The following hazardous wastes listed in **Section 7-210** are subject to the exclusion limits for acutely hazardous wastes established in **Section 7-306(a)**: Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.

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- (c) The wastes listed in **Sections 7-210, 7-211, 7-212, 7-214 and 7-215** are identified as toxicity characteristic waste (E), toxic waste (T), reactive waste (R), corrosive waste (C), ignitable waste (I), acutely hazardous waste (H), or a combination thereof.

7-210 HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES

The following wastes are listed hazardous wastes from non-specific sources:

Industry & EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
Generic F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1- trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F002	The following spent halogenated solvents:Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluor- oethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing,before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004 or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F003	The following spent non-halogenated solvents:Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)
F004	The following spent non-halogenated solvents:Cresols and cresylic acid and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)

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Industry & EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I,T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating of carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F007	Spent cyanide plating bath solutions from electroplating operations.	(R,T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	(R,T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R,T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R,T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	(R,T)
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.	(T)
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol).	(H)
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)

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Industry & EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol).	(H)
F024	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in Appendix I).	(T)
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	(T)
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, or hexachlorobenzene under alkaline conditions.	(H)
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component).	(H)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F023, F026, and F027.	(T)

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Industry & EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with 40 CFR Section 261.35 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F037	Petroleum refinery primary oil/water/solids separation sludge-Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in 40 CFR Section 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. (Refer to 40 CFR Section 261.31(b) for listing specific definitions.)	(T)

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Industry & EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge-Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in dissolved air flotation (DAF) units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in 40 CFR Section 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing. (Refer to 40 CFR Section 261.31(b) for listing specific definitions.)	(T)
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of 40 CFR Part 261 (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.).	(T)

7-211 VERMONT LISTED HAZARDOUS WASTES

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The following wastes are listed in Vermont as hazardous wastes:

Note: A characteristic waste or a federally listed waste must be identified by its EPA waste code - see **Section 7-202(g)**.

Hazardous Waste Number	Hazardous Waste	Hazard Code
VT01	<p>Wastes containing polychlorinated biphenyls (PCB) in concentrations equal or greater than 50 parts per million.</p> <p>Note: Certain waste PCB-containing dielectric fluids, and electric equipment containing such fluid are exempted under Section 7-203(t); PCB-containing fluorescent light ballasts managed in accordance with the universal waste management standards of Subchapter 9 are exempted under Section 7-203(s).</p>	(T)
VT02	<p>Waste containing greater than 5% by weight of petroleum distillates with melting points of less than 100°F, including but not limited to kerosene, fuel oil, hydraulic oils, lubricating oils, penetrating oils, tramp oils, quenching oils, and crankcase and automotive oils which have not been exempted under Section 7-203(n), (o), and (p).</p> <p>Note: Waste petroleum distillates with a flashpoint less than 140°F are classified as D001 (ignitable).</p> <p>Note: Section 7-203(n) provides an exemption for used oil managed in accordance with the Used Oil Management Standards of Subchapter 8, Section 7-203(o) provides an exemption for certain non-terne plated oil filters, and Section 7-203(p) provides an exemption for certain petroleum contaminated soil or debris.</p>	(I,T)
VT03	<p>Water-miscible metal cutting and grinding fluid waste.</p> <p>Note: Water-miscible metal cutting and grinding fluid waste managed in accordance with Section 7-203(l) is exempt from the remaining provisions of these regulations.</p>	(T)
VT06	<p>Pesticidal wastes and obsolete pesticidal products not specifically listed in Subchapter 2.</p> <p>Note: Certain pesticides managed in accordance with the universal waste management standards of Subchapter 9 are exempted under Section 7-203(s).</p>	(T)
VT08	<p>Waste ethylene glycol based coolants, antifreezes and solutions containing greater than 700 ppm of ethylene glycol.</p>	(T)
VT11	<p>Wastes determined to be hazardous under provisions of Section 7-213 or 7-216.</p>	(I,T,C,R, H)

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Hazardous Waste Number	Hazardous Waste	Hazard Code
VT20	A solid material that when mixed with an equal weight of distilled water causes the liquid fraction of the mixture to exhibit the properties of the corrosivity characteristic as specified under Section 7-206(a)(3) .	(C,R)
VT99	Non-hazardous waste. Note: This hazardous waste number is to be used only for non- hazardous waste shipped using a hazardous waste manifest.	N/A

Note: The Vermont hazardous waste numbers VT04, VT05, VT07, VT09 and VT10 are no longer in use. Wastes previously identified by the hazardous waste numbers VT04, VT05, VT09 and VT10 frequently meet the criteria of one or more of the following: the VT02 hazardous waste number, the ignitability characteristic (**Section 7-205**), and the toxicity characteristic (**Section 7-208**).

7-212 HAZARDOUS WASTES FROM SPECIFIC SOURCES

Hazardous wastes from specific sources are listed in **Appendix I**.

7-213 HAZARDOUS CONSTITUENT WASTES

Wastes containing any of the hazardous constituents listed in **Appendix II** are hazardous wastes when:

- (a) The waste is not excluded from regulation under **Sections 7-203 or 7-204** ; and
- (b) The Secretary concludes, following the listing procedures in **Section 7-216**, that the waste meets the definition of hazardous waste in **Section 7-103**.

7-214 HAZARDOUS WASTES WHICH ARE DISCARDED COMMERCIAL CHEMICAL PRODUCTS

The following materials or items are hazardous waste if and when they are discarded or intended to be discarded, when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use, when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a

fuel.

- (a) Any commercial chemical product or manufacturing chemical intermediate having the generic name listed in **Appendix III**;

Note: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in..." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in **Appendix III**. Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in **Appendix III**, such waste will be listed in either **Section 7-210** or **Section 7-212** or will be identified as a hazardous waste by the characteristics set forth in **Sections 7-205 through 7-208**.

- (b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in **Appendix III**;
- (c) Any residue from a container or from the inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in **Appendix III**, unless the container is an empty container as defined in **Section 7-203(j)**.
- (d) Any residue from a container or from an inner liner that has held any off-specification chemical product and manufacturing chemical intermediate, which, if it met specifications, would have the generic name listed in **Appendix III**, unless the container is empty as defined in **Section 7-203(j)**.

Note: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, re-use, recycling or reclamation, the Secretary considers the residue to be intended for discard, and thus, a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.

- (e) Any residue or contaminated soil, water or other debris resulting from the clean-up of a release or discharge into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in **Appendix III**, or

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any residue or contaminated soil, water or other debris resulting from the clean-up of a release or discharge into or on any land or water of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in **Appendix III**.

Note: The primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability), and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity.

7-215 ACUTELY HAZARDOUS WASTES

The following materials or items are acutely hazardous wastes if and when they are discarded or intended to be discarded, when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use, when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of the original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

- (a) Any commercial chemical product or manufacturing chemical intermediate having the generic name listed in **Appendix IV**;

Note: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in **Appendix IV**. Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in **Appendix IV**, such waste will be listed in either **Section 7-210** or **Section 7-212** or will be identified as a hazardous waste by the characteristics set forth in **Sections 7-205 through 7-208**.

- (b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in **Appendix IV**.
- (c) Any residue from a container or from the inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in **Appendix IV**, unless the container is an empty container as

defined in **Section 7-203(j)**.

- (d) Any residue from a container or from an inner liner that has held any off-specification chemical product and manufacturing chemical intermediate, which, if it met specifications, would have the generic name listed in **Appendix IV**, unless the container is empty as defined in **Section 7-203(j)**.

Note: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, re-use, recycling or reclamation, the Secretary considers the residue to be intended for discard, and thus, a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.

- (e) Any residue or contaminated soil, water or other debris resulting from the clean-up of a release or discharge into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in **Appendix IV**, or any residue or contaminated soil, water or other debris resulting from the cleanup of a release or discharge into or on any land or water of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in **Appendix IV**.

Note: The primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound is only listed for toxicity.

7-216 LISTING OF A HAZARDOUS WASTE

- (a) Any person requesting the addition of a generic class of wastes to the lists at **Sections 7-210 through 7-215**, must file a petition for rulemaking with the Secretary.
- (b) The Secretary, upon petition or on his or her own motion, may, on a case-by-case basis, make the determination that a waste generated by a particular generator or treated, stored or disposed of by a particular facility, meets the definition of hazardous waste at **Section 7-103**.
 - (1) Upon making the determination that a particular waste is hazardous, the Secretary shall notify the waste generator of this determination by certified letter. The letter shall include a fact sheet which briefly sets forth the principal facts and significant

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factual, methodological, and policy questions concerning the hazard determination.

- (2) Within 30 days following receipt of a hazard determination, the generator may request a hearing before the Secretary to contest that determination. The request for hearing shall state the technical and legal questions at issue and shall contain the necessary documents to support the request.
 - (3) If no request for hearing is filed within 30 days, the generator shall be deemed to have accepted the hazard determination for the waste in question.
- (c) When making a determination under this Section, the Secretary shall examine and consider the following factors:
- (1) The nature of the hazard presented by the waste;
 - (2) The amount and concentration of all hazardous constituents in the waste;
 - (3) The potential of all hazardous constituents in the waste or any toxic degradation product of such hazardous constituents to migrate from the waste into the environment;
 - (4) The persistence of all hazardous constituents in the waste or any toxic degradation product of such hazardous constituents;
 - (5) The degree to which all hazardous constituents in the waste or any toxic degradation product of such hazardous constituents bioaccumulate in ecosystems;
 - (6) The plausible types of improper management to which the waste could be subjected;
 - (7) The quantity of waste involved;
 - (8) The nature and severity of the damage to human health and the environment that has occurred as a result of the improper management of the type of waste involved;
 - (9) Actions taken by other governmental agencies or regulatory programs based on the hazard to human health or the environment posed by the waste or any hazardous constituent in the waste; and
 - (10) Such other factors as may be appropriate.

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- (d) Prior to making any determination under this Section, the Secretary shall give notice to the Commissioner of Health and the Commissioner of Labor and Industry and may then receive advice and information on the health effects of such determination.

7-217 DELISTING OF A HAZARDOUS WASTE

- (a) Generators may petition the Secretary to classify their waste as non-hazardous, if they generate either a waste listed at **Sections 7-210 through 7-215** or a mixture which contains a waste listed at **Sections 7-210 through 7-215**.
- (b) The Secretary, upon petition or his or her own motion, may make the determination that a waste which is generated by a particular generator or treated, stored, or disposed of by a particular facility does not meet the definition of hazardous waste at **Section 7-103** subject to the restrictions listed below.
- (c) Any person seeking to exclude a waste at a particular generating facility from lists in **Subpart D of 40 CFR Part 261** may petition for a regulatory amendment under **40 CFR Sections 260.20 and 260.22**. The Administrator of EPA shall retain the authority to exclude such wastes.
- (d) For any waste listed at **Sections 7-210 through 7-215** of this subchapter and not listed by EPA as a hazardous waste, the petition to delist shall be made on the delisting form entitled "Petition Procedures for the Listing and Delisting of Hazardous Waste", provided by the Secretary.
- (e) After receipt of a petition under this Section, the Secretary may request any additional information which may be reasonably required to evaluate the petition.
- (f) The Secretary shall evaluate each delisting petition using the procedures described in **Section 7-216(b)**.
- (g) When making a determination under this Section, the Secretary shall examine and consider the factors in **Section 7-216(c)**.
- (h) Except as provided in **Section 7-218**, prior to making any determination under this Section, the Secretary shall give notice to the Commissioner of Health and the Commissioner of Labor and Industry and may then receive advice and information on the health effects of such determination.

7-218 DELISTING OF SPILL CLEAN-UP DEBRIS AND RESIDUES

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The Secretary may delist clean-up debris and residues which are not regulated by EPA as hazardous wastes resulting from an emergency action in **Section 7-105**, after considering the factors in **Section 7-216(c)**, without consulting the Commissioners of Health and Labor and Industry.

7-219 SAMPLING, ANALYTICAL AND TESTING METHODOLOGIES

- (a) The appropriate analytical and test methods to determine whether a sample exhibits a hazardous waste characteristic are specified in **Sections 7-205** through **7-208**.
- (b) The appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two ("Choosing the Correct Procedure") of EPA Publication SW-846 ("Test Methods for Evaluating Solid Waste Physical/Chemical Methods"), as incorporated by reference in **subsection (d)** below. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation.

- (c) **Representative Sampling Methods**

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed in **Appendix V**, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

- (d) When used in 40 CFR parts 260 through 270 or in these regulations, the publications listed in **40 CFR Section 260.11(a)** are hereby incorporated by reference.
- (e) Any person seeking to add a sampling, analytical or test method to the methods referenced by this Section shall petition the Administrator of EPA in accordance with **40 CFR Sections 260.20 and 260.21**.

Subchapter 3: REQUIREMENTS FOR GENERATORS OF HAZARDOUS WASTE

7-301 PURPOSE, SCOPE, APPLICABILITY

This subchapter establishes requirements for hazardous waste generators. It also distinguishes between conditionally exempt generators, small quantity generators and large quantity generators of hazardous waste and specifies the requirements that each must meet.

7-302 PROHIBITIONS

- (a) Disposal of hazardous waste by evaporation is prohibited.
- (b) Dilution of hazardous waste subject to the land disposal restrictions of 40 CFR Part 268 is prohibited pursuant to **40 CFR Section 268.3** (incorporated by reference through **Section 7-106** of these regulations).
- (c) The release of hazardous material into the surface or groundwater, or onto the land of the state is prohibited pursuant to **10 V.S.A. Section 6616**.

7-303 HAZARDOUS WASTE DETERMINATION

Any person who generates a waste shall determine if that waste is a hazardous waste in accordance with **Section 7-202**.

7-304 NOTIFICATION AND IDENTIFICATION NUMBERS

- (a) No generator shall treat, recycle, store, dispose of, transport, or offer for transport hazardous waste without having obtained a permanent EPA identification number by applying to the Secretary on the Notification of Regulated Waste Activity form in accordance with **Section 7-104**. Generators awaiting assignment of a permanent EPA identification number after submitting a Notification of Regulated Waste Activity form shall request a temporary identification number from the Secretary for the purpose of completing a manifest.
- (b) In accordance with **Section 7-104**, a generator shall maintain an up-to-date Notification of Regulated Waste Activity form filed with the Secretary which accurately describes current waste activity and waste generation.
- (c) A revised Notification of Regulated Waste Activity form must be submitted to the

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Secretary in order for the Secretary to recognize a shift by a generator to a less regulated category.

7-305 DEFINITION OF GENERATOR

- (a) A generator is any person, by site, whose act or process produces hazardous waste or whose act first causes hazardous waste to become subject to regulation. This definition includes:
 - (1) Any person who imports hazardous waste into Vermont from a foreign country;
 - (2) Any owner or operator of a treatment, storage or disposal facility who initiates a shipment of hazardous waste from such facility using a manifest;
 - (3) Any transporter who mixes wastes of different U.S. DOT shipping descriptions; and
 - (4) Any owner or operator of a facility, the organizer or operator of an event, or a small or large quantity generator, that accepts hazardous waste from conditionally exempt generators.
- (b) In determining the quantity of hazardous waste generated, a person shall count all hazardous wastes except:
 - (1) Wastes exempted from regulation under **Sections 7-203 and 7-204**;
 - (2) Hazardous waste when it is removed from on-site short-term storage (it is counted when first generated);
 - (3) Spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once;
 - (4) Hazardous waste produced by on-site treatment (including reclamation) of hazardous waste, so long as the hazardous waste that is treated was counted once;
 - (5) Used oil managed in accordance with the standards set forth under **Subchapter 8** of these regulations; or
 - (6) Wastes managed in accordance with the universal waste standards set forth under **Subchapter 9** of these regulations.

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Note: As provided for by **Section 7-203(s)**, wastes managed according to the standards of Subchapter 9 are exempt from regulation under Subchapters 1 through 7 except as specified in Subchapter 9.

- (c) A generator is regulated as a conditionally exempt generator, small quantity generator, or large quantity generator based upon the types and quantities of hazardous waste produced or handled. For the purpose of establishing generator status, a person may evaluate either:
 - (1) The amount of hazardous waste generated in each calendar month; or
 - (2) For any hazardous waste not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), the average amount generated over the six month period elapsed just prior to making the determination.

7-306 CONDITIONALLY EXEMPT GENERATOR

- (a) A generator is a conditionally exempt generator if that person generates less than:
 - (1) 220 pounds (100 kilograms) of hazardous waste in a calendar month; and
 - (2) 2.2 pounds (1 kilogram) of acutely hazardous waste in a calendar month; and
 - (3) 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

has accumulated less than 2,200 pounds (1000 kilograms) of hazardous waste, 2.2 pounds (one kilogram) of acutely hazardous waste, or 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 at any time.
- (b) If any person generates or accumulates hazardous wastes in amounts exceeding the limits specified in this Section, that person becomes at least a small quantity generator and is subject to full regulation under these regulations.
- (c) A conditionally exempt generator is exempt from the requirements of these regulations except as provided for in **subsections (1), (2), and (3)** below:
 - (1) A conditionally exempt generator must:
 - (A) Determine if waste generated is hazardous waste in accordance with the

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requirement of **Section 7-303**;

- (B) Maintain an up-to-date Notification of Regulated Waste Activity form and obtain an identification number in accordance with **Section 7-304**;
 - (C) Manage containers holding hazardous wastes in accordance with the container management standards of **Sections 7-311(f)(2) through (4)**, and as specified below:
 - (i) A container must be in good condition and chemically compatible with any waste stored therein;
 - (ii) A container must remain closed except to add or remove waste; and
 - (iii) Containers must be marked with the words "Hazardous Waste" and other words that identify the contents;
 - (D) Store wastes in an area that meets the design standards of **Section 7-311(a)(1) through (4)**;
 - (E) Manage tanks holding hazardous waste in accordance with the tank management requirements of **40 CFR 265.201**;
 - (F) Submit a biennial report, if requested by the Secretary under **Section 7-709**; and
 - (G) In the event of a release of hazardous waste, comply with the applicable emergency action requirements of **Section 7-105**.
- (2) A conditionally exempt generator shall manage his or her own hazardous waste by any one of the following methods:
- (A) Ensure delivery of the waste to an off-site hazardous waste treatment, storage or disposal facility which if located in the United States is permitted under 40 CFR Part 270, is in interim status under 40 CFR Parts 270 and 265, or is authorized to manage hazardous waste by a state with a hazardous waste management program approved under 40 CFR Part 271;
 - (B) Ensure delivery of the waste to a certified solid waste management facility allowed to accept such waste under the terms of its certification;

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Note: Waste that is identified as hazardous waste under these regulations, including that generated by conditionally exempt generators, is prohibited from disposal in all Vermont certified discrete disposal facilities (landfills).

Note: Hazardous waste may be sent by Vermont conditionally exempt generators to municipal solid waste landfills or to non-municipal non-hazardous waste landfills in other states only as authorized by **40 CFR Sections 261.5(f)(3)(iv) and (v) and (g)(3)(iv) and (v)**.

- (C) Ensure delivery of the waste to a facility which beneficially uses or reuses or legitimately recycles or reclaims its waste or treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation;
 - (D) Ensure delivery of the waste to another site in Vermont that is owned and operated by the owner / operator of the conditionally exempt generator site and that meets either the small quantity generator standards set forth in **Section 7-307**, or the large quantity generator standards set forth in **Section 7-308**.
 - (E) Ensure delivery of the waste to a collection event authorized by the Secretary to accept conditionally exempt generator waste.
 - (F) Ensure delivery of universal waste to a universal waste handler or destination facility in accordance with the standards set forth in **Subchapter 9**.
 - (G) Otherwise treat, store, or dispose of the waste if the generator has submitted a written request for an alternative handling method to the Secretary and the Secretary has determined that the proposed handling method will not have an adverse impact on human health and the environment. A conditionally exempt generator shall not treat, store, or dispose of waste under this Section until receiving written approval from the Secretary for such method.
- (3) A conditionally exempt generator may transport his or her own hazardous waste to a facility or an event described under **Section 7-306(c)(2)** without complying with the transporter permitting requirements of Subchapter 4 provided he or she complies with the requirements of **Section 7-105** (in the event of a release), with all applicable federal Department of Transportation (DOT) regulations, the regulations of states he or she transports waste through or delivers waste to, and any applicable Vermont Agency of Transportation regulations. A manifest is not

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required for such transport.

7-307 SMALL QUANTITY GENERATOR

- (a) A generator is a small quantity generator if:
 - (1) That person generates 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; and
 - (2) The quantity of hazardous waste accumulated on-site never exceeds 13,200 pounds (6,000 kilograms).
- (b) If any person generates or accumulates hazardous wastes in amounts exceeding the limits specified in this Section, that person becomes a large quantity generator and is subject to the requirements of **Section 7-308**.
- (c) A small quantity generator must:
 - (1) Determine if any waste generated is a hazardous waste in accordance with the requirement of **Section 7-303**;
 - (2) Ensure transport of hazardous waste off-site either within 180 days of the date when the waste first started to accumulate, or, for waste accumulated in containers according to **Section 7-310**, within 180 days of the date when the waste began to accumulate an amount in excess of the maximum amount allowed under that Section. Hazardous waste shall not be stored on-site for a period of time greater than 180 days without first obtaining certification under **subchapter 5**;
 - (3) Maintain an up-to-date Notification of Regulated Waste Activity form and obtain an identification number in accordance with **Section 7-304**;
 - (4) Comply with the 40 CFR Part 268 Land Disposal Restrictions incorporated by reference through **Section 7-106** of these regulations;
 - (5) Comply with the general management standards of **Section 7-309**;
 - (6) Accumulate hazardous waste in accordance with **Section 7-310**;
 - (7) Comply with the Short-Term Storage Area Standards of **Section 7-311**;

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- (8) Submit a biennial report, if required under **Section 7-709**; and
- (9) Comply with the following emergency preparedness requirements:
 - (A) At all times there must be at least one employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility of implementing the emergency response procedures specified in **Section 7-308(b)(9)(E)**, and completing the incident reporting requirement of **Section 7-308(b)(9)(F)(i) and (iii)**. This employee is the emergency coordinator.
 - (B) The small quantity generator must post the following information next to each telephone located in the vicinity of where hazardous wastes are managed:
 - (i) The name and telephone numbers (office and home) of the emergency coordinator(s);
 - (ii) Location of fire extinguishers and spill control material, and, if present, fire alarm; and
 - (iii) The telephone number of the fire department, unless the facility has a direct alarm.
 - (C) The small quantity generator must provide annual training for all employees to ensure that each employee is thoroughly familiar with evacuation signals and routes, and proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations as well as emergencies. The small quantity generator must maintain records that document the date of training for each employee.

Note: Documentation of training is required for at least one employee per satellite accumulation area.

7-308 LARGE QUANTITY GENERATOR

- (a) A generator is a large quantity generator if:
 - (1) That person generates 2,200 pounds (1,000 kilograms) or more of hazardous waste in a calendar month; or

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- (2) That person generates 2.2 pounds (1 kilogram) or more of acutely hazardous waste in a calendar month; or
 - (3) That person generates 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 in a calendar month; or
 - (4) The quantity of hazardous waste accumulated on-site exceeds 13,200 pounds (6,000 kilograms) at any one time; or
 - (5) The quantity of acutely hazardous waste accumulated on-site equals or exceeds 2.2 pounds (1 kilograms) at any one time; or
 - (6) 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 on-site equals or exceeds 220 pounds (100 kilograms) at any one time.
- (b) A large quantity generator must:
- (1) Determine if any waste generated is a hazardous waste in accordance with the requirement of **Section 7-303**;
 - (2) Ensure transport of hazardous waste off-site either within 90 days of the date when the waste first started to accumulate, or, for waste accumulated in containers according to **Section 7-310**, within 90 days of the date when the waste began to accumulate an amount in excess of the maximum amount allowed under that Section. Hazardous waste shall not be stored on-site for a period of time greater than 90 days without first obtaining certification under **subchapter 5**;
 - (3) Maintain an up-to-date Notification of Regulated Waste Activity form and obtain an identification number in accordance with **Section 7-304**;
 - (4) Comply with the 40 CFR Part 268 Land Disposal Restrictions incorporated by reference through **Section 7-106** of these regulations;
 - (5) Comply with the general management standards of **Section 7-309**;
 - (6) Accumulate hazardous waste in accordance with **Section 7-310**;
 - (7) Comply with the short-term storage area standards of **Section 7-311**;
 - (8) Submit a biennial report in accordance with **Section 7-708(a)**;

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- (9) Maintain a written contingency plan for the facility as described below:

The written contingency plan for the facility shall be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, ground water, or surface water. The plan must be carried out immediately whenever there is a fire, explosion or discharge of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

- (A) The contingency plan must contain:

- (i) A description of the actions facility personnel must take to comply with **Sections 7-308(b)(9)(A) and 7-308(b)(9)(E)** in response to fires, explosions or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, groundwater, or surface water at the facility.
- (ii) If the owner or operator has already prepared a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with **40 CFR Part 112 or 1510**, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements in this subchapter.
- (iii) Arrangements agreed to by local police departments, fire departments, hospitals, contractors and state and local emergency response teams to coordinate emergency services pursuant to **Section 7-309(a)(4)**.
- (iv) An up-to-date list of names, addresses, and office and home phone numbers of all persons qualified to act as emergency coordinator. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
- (v) An up-to-date list of all emergency equipment at the facility, including location, physical description of each item listed and a brief outline of its capabilities.
- (vi) An evacuation plan including signals to be used to begin evacuation, evacuation routes and alternate evacuation routes.

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- (B) Copies of the contingency plan and all revisions must be maintained at the facility and submitted to all local police and fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.
- (C) The contingency plan must be reviewed and immediately amended whenever:
 - (i) Applicable regulations are revised;
 - (ii) The plan fails in an emergency;
 - (iii) The facility changes in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
 - (iv) The list of emergency coordinators changes; or
 - (v) The list of emergency equipment changes.
- (D) At all times there must be at least one employee either at the facility or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the locations and characteristics of waste handled, the location of all records within the facility and the facility layout. This person must have the authority to commit the resources needed to carry out the contingency plan.
- (E) Emergency Procedures

Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his or her designee when the emergency coordinator is on call) must do the following immediately:

 - (i) Activate internal facility alarms or communication systems;
 - (ii) Notify appropriate state or local agencies with designated response roles if their help is needed;
 - (iii) If a release has occurred, identify the source, character, amount and

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extent of any released materials by record review or chemical analysis;

- (iv) Assess hazards to human health and the environment, considering all direct and indirect effects;
- (v) If the emergency coordinator determines that the facility has had a fire, explosion or release which could threaten human health or the environment outside the facility, the coordinator must:
 - (aa) Determine if local evacuation may be necessary, and, if so, notify appropriate local authorities and be available to assist local authorities in evacuation measures; and
 - (bb) Notify the National Response Center (800-424-8802) and indicate his or her name and telephone number; name and address of the facility; time and type of incident; quantity of material(s) involved to the extent known; the extent of any injuries; and the possible hazards to human health or the environment outside the facility.
- (vi) Take all reasonable measures necessary to ensure that fires, explosions and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers;
- (vii) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation or ruptures in valves, pipes or other equipment, wherever this is appropriate;
- (viii) Immediately after an emergency, the emergency coordinator must provide for treating, storing or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire or explosion at the facility; and
- (ix) Ensure that in the affected areas of the facility, no waste that may be incompatible with the released material is stored until cleanup procedures are completed and all emergency equipment is cleaned and restored to a useable condition.

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- (F) Whenever there is an imminent or actual emergency situation, the owner or operator shall:
 - (i) Notify the Secretary that the facility is in compliance with **Section 7-308(b)(9)(E)(ix)** before operations are resumed in the affected areas of the facility;
 - (ii) Maintain on file with the contingency plan a record of the time, date and details of any incident that requires implementing the contingency plan; and
 - (iii) Within 15 days after the incident, submit a written report on the incident to the Secretary. The report must include:
 - (aa) Name, address and telephone number of the owner or operator;
 - (bb) Name address and telephone number of the facility;
 - (cc) Date, time and type of incident (e.g., fire, explosion);
 - (dd) Name and quantity of material(s) involved;
 - (ee) The extent of injuries, if any;
 - (ff) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
 - (gg) Estimated quantity and disposition of recovered material that resulted from the incident.
- (10) Maintain a personnel training program for the facility as described below:
 - (A) Facility personnel must successfully complete a program of classroom or on the job instruction that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of these regulations.
 - (B) This program must be directed by a person trained in hazardous waste management procedures and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they

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are employed.

- (C) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment and emergency systems, including, where applicable:
 - (i) Waste handling procedures;
 - (ii) Procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment;
 - (iii) Key parameters for automatic waste feed cutoff systems;
 - (iv) Communications or alarm systems;
 - (v) Response to fires or explosions;
 - (vi) Response to groundwater contamination incidents; and
 - (vii) Shutdown of operations.
- (D) Facility personnel must successfully complete the program required in **Section 7-308(b)(10)(A) through (C)** within six months after the date of their employment or assignment to a facility or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements of **Section 7-308(b)(10)(A) through (C)**.
- (E) At least once each calendar year, facility personnel must take part in a review of the initial training required under **Section 7-308(b)(10)(A) through (C)**.
- (F) The owner or operator must maintain the following documents and records at the facility:
 - (i) The job title for each position at the facility related to hazardous waste management and the name of the employee filling each job;
 - (ii) A written job description for each position under **Section 7-308(b)(10)(F)(i)** which includes the requisite skill, education or

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other qualifications and duties of personnel assigned to each position;

- (iii) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under **Section 7-308(b)(10)(F)(i)**;
- (iv) Records that document that the training or job experience required has been given to and completed by facility personnel in accordance with **Section 7-308(b)(10)(A) through (E)**; and

Note: Documentation of training is required for at least one employee per satellite accumulation area.

- (v) Training records must be kept on current personnel until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility.

7-309 GENERAL MANAGEMENT STANDARDS FOR SMALL AND LARGE QUANTITY GENERATORS

(a) Preparedness and Prevention

Small and large quantity generator facilities must be maintained and operated to minimize the possibility of fire, explosion or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, groundwater, or surface water which could threaten human health or the environment.

(1) Required equipment

All facilities must be equipped with the following, unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

- (A) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;
- (B) A device, such as a telephone, immediately available at the scene of operations, or a hand held two-way radio, capable of summoning emergency assistance from local police departments, fire departments or state or local emergency response teams;

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- (C) Portable fire extinguishers, fire control equipment (including special extinguishing equipment such as that using foam, inert gas or dry chemicals), spill control equipment and decontamination equipment; and
 - (D) Water at adequate volume and pressure to supply water hose streams or foam producing equipment, or automatic sprinklers or water spray systems.
- (2) Testing and maintenance of equipment

All communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.
- (3) Access to communications or alarm system
 - (A) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under **Section 7-309(a)(1)**.
 - (B) If there is ever just one employee on the premises while the facility is operating, that employee must have immediate access to a device, such as a telephone(immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required under **Section 7-309(a)(1)**.
- (4) Arrangements with local authorities

The owner or operator must attempt to make the following arrangements as appropriate for the type of waste handled at their facility and the potential need for the services of these organizations. Refusal of any authorities to enter into such arrangements must be documented.

 - (A) Arrangements to familiarize police departments, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where the facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;
 - (B) Agreements designating primary emergency authority to a specific police

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department and a specific fire department and agreements with any others to provide support to the primary emergency authority;

- (C) Agreements with emergency response teams, emergency response contractors and equipment suppliers; and
- (D) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(b) Offering Hazardous Waste for Transportation

- (1) Before transporting hazardous waste or offering hazardous waste for transportation off-site, small and large quantity generators shall:
 - (A) Package the waste in accordance with the applicable Department of Transportation regulations under **49 CFR Parts 173, 178, and 179**;
 - (B) Label each package in accordance with the applicable Department of Transportation regulations on hazardous materials under **49 CFR Part 172**.
 - (C) Mark each package in accordance with the applicable Department of Transportation regulations on hazardous materials under **49 CFR Part 172**. For each container of 110 gallons or less used in such transportation, such marking shall include the following words and information displayed in accordance with the requirements of **49 CFR 172.304**: the generator's name, address and EPA identification number; the proper shipping name and identification number (preceded by "UN" or "NA" as appropriate) assigned to the waste material; the manifest document number; the date upon which the period of accumulation begins; and 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."
 - (D) Placard or offer the initial transporter the appropriate placards according to federal Department of Transportation regulations for hazardous materials under **49 CFR Part 172, Subpart F**.
- (2) Small and large quantity generators shall not offer any hazardous waste, as defined in 40 CFR Part 261, to transporters or to treatment, storage, recycling, or

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disposal facilities that have not received an EPA identification number.

- (3) For any hazardous waste not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), a small or large quantity generator shall not offer such waste to a transporter without an EPA identification number unless:
 - (A) The small or large quantity generator is specifically exempted from manifesting requirements under **Section 7-608** (Recycle/Reuse) for a recycled waste; or
 - (B) The Secretary has provided written authorization to do so after determining that the practice will not pose a threat to human health or the environment.
- (4) Small and large quantity generators shall transport or offer for transport hazardous waste, as defined in 40 CFR Part 261, only to a designated facility.
- (5) Small and large quantity generators shall transport or offer for transport hazardous waste that is not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), to either:
 - (A) A designated facility; or
 - (B) A facility that is not a designated facility, located in a state other than Vermont provided the facility can receive such waste under applicable state and local laws, regulations and ordinances.
- (6) Except as provided in **subsection (7)**, below, small and large quantity generators shall not transport or offer for transport a hazardous waste for off-site treatment, storage, recycling, disposal or use without completing the generator's portion of the Hazardous Waste Manifest in accordance with the applicable requirements of **Subchapter 7**, unless exempted from these requirements under **Section 7-608** (Recycle/Reuse).

Note: Outside of Vermont, the Hazardous Waste Manifest may not serve to replace the shipping papers required by the U. S. Department of Transportation under **49 CFR Subpart C**, if the waste being shipped is not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont).
- (7) In lieu of using a manifest, small or large quantity generators shipping hazardous waste, not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), to a facility other than a designated facility, as provided

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for under **subsection 7-309(b)(5)(B)**, shall:

- (A) Maintain a record on-site of each shipment as follows:
 - (i) The record for each shipment must include the following information:
 - (aa) The name, address, and telephone number of the facility to which the waste was sent;
 - (bb) The name, address, and EPA identification number of the transporter that picked up the waste;
 - (cc) The type and quantity of waste shipped; and
 - (dd) The date of shipment.
 - (ii) The record for each shipment must be retained for three years.
- (B) Submit to the Secretary, within 10 days of the date of shipment, a copy of the DOT shipping papers required by the U. S. Department of Transportation under **49 CFR Subpart C** and the following information if it is not already addressed in the shipping papers:
 - (i) The name, address, and EPA identification number of the generator;
 - (ii) The type and quantity of waste shipped;
 - (iii) The Vermont hazardous waste identification number(s) for the waste shipped;
 - (iv) The name, address, and telephone number of the facility to which the waste was sent; and
 - (v) The treatment method to be used by the facility to which the waste was sent.

(c) Closure

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- (1) A generator who no longer generates or manages hazardous waste at a site must close the site in a manner that:
 - (A) Minimizes the need for further maintenance;
 - (B) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the groundwater or surface waters or to the atmosphere; and
 - (C) Complies with the closure requirements of this subchapter including but not limited to the requirements of **40 CFR Sections 265.197, 265.228, 265.258, 265.280, 265.310, 265.351, 265.381, and 265.404.**
- (2) A generator who no longer generates or manages hazardous waste at a site shall remove all hazardous waste to a designated facility. Remaining containers, tanks, liners, bases, materials, equipment, structures, soil and debris contaminated with hazardous waste or hazardous waste residues shall be decontaminated or disposed of at a designated facility.
- (3) A generator shall provide written notice to the Secretary prior to closure and shall submit to the Secretary, within 90 days of completion of closure, certification that closure was completed in accordance with the provisions of **subsections (1) and (2)** above. This certification shall be made by the generator and the Secretary may require certification by an independent professional engineer licensed in Vermont.

7-310 ACCUMULATION OF HAZARDOUS WASTE

(a) Satellite Accumulation of Hazardous Waste

Small and large quantity generators may accumulate as much as one cubic yard of non-liquid hazardous waste not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), one quart of acutely hazardous waste, or 55 gallons of any other hazardous waste in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without obtaining certification as a storage facility provided that:

- (1) The waste and the container are chemically compatible such that no leakage occurs;

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- (2) The container is in good condition;
 - (3) The container is both located within a structure that sheds rain and snow and upon an impervious surface;
 - (4) The container holding the waste remains closed except to add or remove waste;
 - (5) The container is marked with the words "Hazardous Waste" and other words that identify the contents;
 - (6) The container is managed in accordance with the container management requirements of **Section 7-311(b)(3) and Section 7-311(f)(4)**; and
 - (7) When one cubic yard of non-liquid hazardous waste that is not defined as hazardous in 40 CFR Part 261, one quart of acutely hazardous waste, or 55 gallons of any other hazardous waste has been accumulated in a container, the generator shall move the container to a short-term storage area within three days and shall indicate on the container label the date when the waste began to accumulate excess amount. During the three day period the generator must continue to comply with the **Section 7- 311(b)(3) and 7-311(f)(4)** container management requirements. Once placed in a short-term storage area, the container shall be managed in accordance with all applicable requirements of **Section 7-311**.
 - (8) All full containers must be dated and moved to a short-term storage area within three days of becoming full.
- (b) Accumulation of Hazardous Waste in a Short-Term Storage Area

Small and large quantity generators may accumulate as much as one cubic yard of non-liquid hazardous waste that is not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), one quart of acutely hazardous waste, or 55 gallons of any other hazardous waste in containers in a short-term storage area without obtaining certification as a storage facility provided that:

- (1) The waste is brought directly from the point of generation to the short-term storage area by a trained employee, in a shift accumulation container marked or labeled with the words "hazardous waste" and the contents of the container, by the end of each work shift (not to exceed 12 hours). No more than one shift accumulation container for each waste at each point of generation shall be in use at any time;

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- (2) Any container in the short-term storage area is managed in accordance with the short-term storage requirements of **Section 7-311** with the exception that the container need not be marked with the date that the container was first used to accumulate hazardous waste;
 - (3) Any container in the short-term storage area is marked to indicate that it is an accumulation container, and its point of generation; and
 - (4) On the day when one cubic yard of non-liquid hazardous waste that is not defined as hazardous in 40 CFR Part 261, one quart of acutely hazardous waste, or 55 gallons of any other hazardous waste has been accumulated in a container, or when a container of smaller capacity becomes full, the generator shall indicate on the container label the date when the waste began to accumulate the excess amount (e.g., when a container with ≤ 55 -gallons of capacity becomes filled with a liquid, non-acute, hazardous waste, or when a container with > 55 -gallons of capacity contains 55 gallons of that waste).
- (c) Only one accumulation container per process line wastestream may be used under this Section at any one time. That is, a particular process line wastestream may be accumulated under the provisions of either **Section 7-310(a)** or **Section 7-310(b)**, but not both.

7-311 SHORT-TERM STORAGE AREA STANDARDS FOR SMALL AND LARGE QUANTITY GENERATORS

(a) Short-Term Storage Area Design Standards

- (1) Generators must accumulate and store hazardous waste upon an impervious surface except for spill cleanup debris stored in accordance with **subsection (a)(3)** below.
- (2) Except for spill cleanup debris stored in accordance with **subsection (a)(3)** below, hazardous waste containers may be placed out-of-doors only if they are within a structure that sheds rain and snow.
- (3) Hazardous waste which is spill cleanup debris in short-term storage shall be stored in leak-proof containers which are covered so as to prevent contact of the waste with precipitation or run-on from precipitation.
- (4) Only hazardous wastes not subject to freezing and expansion may be stored out-of-doors in containers or above-ground tanks unless mechanical or physical means

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are employed to prevent freezing.

- (5) The spill and fire control equipment required under **Section 7-309(a)(1)(A) and (C)** shall be available in the immediate vicinity of each short-term storage area.

(b) Short-Term Storage Area Operating Standards

- (1) Containers or tanks holding incompatible hazardous wastes must not be stored in the same enclosure, building or structure unless they are segregated in a manner that prevents the wastes from coming into contact with one another under any circumstances (such as spillage or simultaneous leakage).
- (2) Containers of hazardous waste must be stored such that the hazardous waste labeling is visible.
- (3) Aisle space between rows of containers must be sufficient to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment to any area of facility operation. In no circumstance shall the aisle space be less than twenty-four (24) inches wide.

Note: Some local, state, and federal codes and/or regulations require up to 36" of aisle space for the storage of flammable and combustible liquids.

(c) Short-Term Storage Time Limit Extensions

Small and large quantity generators may be granted up to a thirty (30) day extension of the short-term storage limits specified in **Sections 7-307(c)(2) and 7-308(b)(2)** at the discretion of the Secretary due to unforeseen temporary and uncontrollable circumstances.

(d) Inventory and Inspection

- (1) Small and large quantity generators shall maintain, at a location apart from the short-term storage area, a list of all hazardous waste currently in storage. For generators storing hazardous waste in containers, the list shall identify each container being stored and the type of hazardous waste held by each container.

Note: Any waste being accumulated within a short-term storage area must be included on the list of hazardous waste in storage.

- (2) Small and large quantity generators shall conduct daily inspections during regular business days of each short-term storage area. The inspections shall be recorded in a log which shall be kept at the facility for at least three years. The log shall

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contain a checklist of the items to be inspected which shall include:

- (A) Visual inspection of the short-term storage area for rusting, bulging, or leaking containers or tanks;
- (B) Inspection of all safety and emergency equipment required under **Section 7-311(a)(5)**;
- (C) Inspection of adequate aisle space (minimum of 24 inches as specified in **Section 7-311(b)(3)**) between rows of containers;
- (D) Description of discrepancies or problem areas encountered in the inspection and the corrective actions taken; and
- (E) The signature of the inspector and the date of the inspection.

(e) Security

- (1) Small and large quantity generators must post a sign at each short-term hazardous waste storage area, which must be visible from at least 25 feet with the legend, "Danger-Hazardous Waste Storage Area-Authorized Personnel Only". The legend must be written in both English and French in facilities located in counties bordering the Canadian province of Quebec. Existing signs with a similar legend may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the storage area, and that entry into the storage area can be dangerous.
- (2) Small and large quantity generators storing ignitable waste (flash point less than 140°F) must also post a sign at each short-term hazardous waste storage area, which must be visible from 25 feet with the legend, "No Smoking". The legend must be written in both English and French in facilities located in counties bordering the Canadian province of Quebec.

(f) Use and Management of Containers

- (1) With the exception of satellite accumulation containers managed in accordance with **Section 7-310(a)**, containers, and packages used for the storage of hazardous wastes shall be clearly marked at the time they are first used to accumulate or store waste. Such marking shall include: the generator's name, address, and EPA identification number; the name and hazardous waste identification number(s) of the hazardous waste stored therein; the date when the container was first used to accumulate or store hazardous waste and the following language, "Hazardous

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Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency."

Note: Containers used to store waste that is in the process of having a hazardous waste determination made, and for which the hazardous waste identification number(s) are not known, do not need to be marked to include the hazardous waste identification number(s). The hazardous waste identification number(s) must be marked on the container once the hazardous waste determination has been completed for the waste.

(2) Condition of containers

If a container holding hazardous waste is not in good condition, or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition, or manage the waste in some other way that complies with the requirements of this Section.

(3) Compatibility of waste with container

The owner or operator must use a container made of or lined with materials which will not react with and are otherwise compatible with the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

(4) Management of containers

- (A) A container holding hazardous waste must always be closed during storage except when it is necessary to add or remove waste;
- (B) A container holding hazardous waste must not be opened, handled or stored in a manner which may rupture the container or cause it to leak;
- (C) Containers holding ignitable or reactive waste must be located at least fifty (50) feet from the property line; and
- (D) Incompatible wastes
 - (i) Incompatible wastes, or incompatible wastes and materials must not be placed in the same container. Examples of incompatible wastes are provided in **Appendix VII**.
 - (ii) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material; and

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- (iii) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

(5) Emissions from containers

A large quantity generator storing hazardous waste in containers must comply with **40 CFR Part 265 Subparts AA, BB, and CC**.

(g) Use and Management of Tanks

- (1) Tanks used for the storage of hazardous wastes shall be clearly marked with the words "Hazardous Waste" and to identify the name and hazardous waste identification number(s) of the hazardous waste stored therein.
- (2) A large quantity generator storing hazardous wastes in tanks must comply with:
 - (A) All secondary containment, monitoring, tank testing and other requirements in **40 CFR Sections 265.190 through 265.199 except 265.197(c)**; and
 - (B) **40 CFR Part 265 Subparts AA, BB and CC**.
- (3) A small quantity generator storing hazardous wastes in tanks must comply with the standards of **40 CFR Section 265.201**.

(h) Use and Management of Drip Pads and Containment Buildings

Large quantity generators placing hazardous wastes on drip pads or in containment buildings must comply with the requirements of **40 CFR Part 265 Subparts W and DD**, and **Sections 262.34(a)(1)(iii) and (iv)** as applicable.

7-312 ADDITIONAL REQUIREMENTS

On a case by case basis, any person subject to this subchapter may be required to meet additional requirements when the Secretary determines that such actions are necessary to protect human health or the environment.

Subchapter 4: REQUIREMENTS FOR TRANSPORTERS OF HAZARDOUS WASTE

7-401 PURPOSE, SCOPE, APPLICABILITY

- (a) This subchapter establishes requirements for persons transporting hazardous waste within or through Vermont.
- (b) This subchapter also applies to transporters of hazardous waste who accept waste only from conditionally exempt generators when the total amount accepted from all such generators in any shipment exceeds the amounts set forth in **Section 7-306(a)**.
- (c) Transporters of recyclable hazardous wastes shall comply with the requirements of this subchapter unless exempted from some or all of the provisions under **Section 7-608** of these regulations.
- (d) Used oil transporters shall comply with the requirements of this subchapter as specified under **Section 7-811** of these regulations.

7-402 APPLICABILITY OF OTHER SUBCHAPTERS

- (a) A transporter of hazardous waste conducting either of the following activities shall comply with the generator requirements of Subchapter 3:
 - (1) Mixing hazardous waste of different DOT shipping descriptions by placing them into a single container; or
 - (2) Transporting hazardous waste into Vermont from a foreign country.
- (b) A transporter of hazardous waste shall comply with the manifest, reporting, and recordkeeping requirements of **Subchapter 7**.
- (c) In the event of a release or discharge of hazardous waste during transport, a transporter shall comply with the emergency action requirements of **Section 7-105**.

7-403 EXEMPTIONS

This subchapter does not apply to the following:

- (a) Transport of hazardous waste by generators within the site where it is generated;

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- (b) Transport of hazardous waste within the site of a certified treatment, storage or disposal facility if such transport is done by the owner or operator of the facility;
- (c) Transport of hazardous waste by a conditionally exempt generator in accordance with **Section 7-306(c)(3)**; and
- (d) Transport of hazardous waste pursuant to the universal waste management standards of **Subchapter 9**.

7-404 TRANSFER FACILITIES

Any transporter who owns or operates a transfer facility located in Vermont must:

- (a) Maintain an up-to-date Notification of Regulated Waste Activity form for that facility and obtain an identification number in accordance with **Section 7-104**;
- (b) Ensure that all shipments of hazardous waste to the transfer facility are manifested;
- (c) Hold hazardous waste at the transfer facility for a period of ten days or less;
- (d) Ensure that all hazardous waste managed at the transfer facility is packaged, labeled, and marked in accordance with **49 CFR Parts 173, 178, and 179**; and
- (e) Comply with the large quantity generator requirements of **subsections 7-308(b)(7) through (10), and 7-309(a) and (c)**.

7-405 PROHIBITIONS

No transporter subject to this subchapter shall:

- (a) Remove hazardous waste from the container in which it was placed once it has been manifested and moved from the site of generation until it is accepted at the destination facility except:
 - (1) Under the emergency provisions of **Section 7-105**; or
 - (2) At a designated facility or transfer facility with written consent of the generator.
- (b) Transport or accept for transport hazardous wastes which are unlabeled or which are in damaged, bulging, leaking, unsuitable or otherwise unsafe containers; or

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- (c) Transport or accept for transport hazardous wastes which are incompatible with each other such that a danger to public health or safety or the environment could result from their being transported together.
- (d) Accept hazardous waste from a generator unless it is accompanied by a manifest signed in accordance with the provisions of **Section 7-702**. In the case of exports, a transporter may not accept such waste from a primary exporter or other person (1) if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent; and (2) unless, in addition to a manifest signed in accordance with the provisions of **Section 7-702**, such waste is also accompanied by an EPA Acknowledgment of Consent which, except for shipment by rail, is attached to the manifest (or shipping paper for exports by water (bulk shipment)).
- (e) Dilute any hazardous waste subject to the land disposal restrictions of 40 CFR Part 268, as prohibited under **40 CFR Section 268.3** (incorporated by reference through **Section 7-106** of these regulations).
- (f) Release hazardous material into the surface or groundwater, or onto the land of the state in violation of **10 V.S.A. Section 6616**.

7-406 TRANSPORTATION PERMIT

- (a) With the exception of those persons and activities specified under **Section 7-403**, no person shall transport to or accept for transport from any location in Vermont any hazardous waste without first obtaining a permit to do so from the Secretary.
- (b) Any transporter who is required to obtain a permit shall complete, sign, and submit an application to the Secretary on the form provided. The application form shall include, but not be limited to, the following information:
 - (1) The nature of the wastes to be transported;
 - (2) The method of transportation; and
 - (3) Specific information concerning the vehicles to be used.
- (c) Disclosure statement
 - (1) With the exception of those persons exempted under **10 V.S.A. Section 6605f(k)**, any transporter who is required to obtain a permit under this Section shall complete, sign, and submit to the Secretary at the time of application a disclosure

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statement pursuant to the requirements of **10 V.S.A. Section 6605f**. In the event of any change in ownership, a disclosure statement must be submitted pursuant to the requirements of **10 V.S.A. Section 6605f(e)**.

- (2) Any person who has received a transporter permit under this Section shall file a statement annually within 30 days prior to the month and day of issuance of that permit disclosing any changes in facts that would render the disclosure statement filed in connection with that permit inaccurate in any way, or stating that no such changes have occurred in the period of time covered by the annual statement. The annual statement shall be under oath or affirmation.
- (d) Any transporter who is required to obtain a permit under this Section shall:
- (1) Maintain an up-to-date Notification of Regulated Waste Activity form filed with the Secretary as required in **Section 7-104**;
 - (2) Obtain an EPA identification number either from the Secretary by applying on the Notification of Regulated Waste Activity form provided, or from the state in which the transporter's base of operations is located;
 - (3) Maintain liability insurance for sudden accidental occurrences as specified in **Section 7-410**;
 - (4) Conduct a personnel training program for all employees handling hazardous waste as specified in **Section 7-409**; and
 - (5) Report annually on the Hazardous Waste Annual Report (Transporters) form provided by the Secretary.
- (e) A fee, as specified by **3 V.S.A. Section 2822(j)(9)**, shall be submitted with the permit application and each year thereafter for the duration of the permit, at the time of filing of the annual statement required by **subsection (c)(2)**, above.
- (f) A permit shall be issued for a period of time not to exceed five years.

7-407 MODIFICATION, SUSPENSION, REVOCATION, OR DENIAL OF A PERMIT

- (a) The Secretary may modify any transporter permit upon his or her own motion or upon the receipt of a written request for modification which contains facts and reasons supporting the request. If the Secretary determines that modification is appropriate, only the conditions subject to modification are reopened. Cause for modification of a transporter's

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permit is:

- (1) Material alterations to the transporter's activities which occurred after issuance of the permit to the transporter which justify the application of permit conditions that are different or absent from the existing permit;
 - (2) The receipt of information concerning the transporter which was not available when the permit was issued; or
 - (3) A change in the standards or regulations on which the permit was based, by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
- (b) The Secretary may suspend or revoke any transporter permit or deny any application for a transporter permit upon his or her own motion or upon receipt of a written request for suspension, revocation, or denial which contains facts and reasons supporting the request. Cause for suspension, revocation or denial is:
- (1) Non-compliance by the transporter with the requirements of 10 V.S.A., Chapter 159, these regulations, the regulations promulgated by the Vermont Agency of Transportation for the transportation of hazardous wastes, or any term or condition of a permit, order, or assurance;
 - (2) Failure by the transporter to disclose all relevant facts during the permit application process which were known at that time;
 - (3) A determination by the Secretary:
 - (A) that any of the grounds for denial of a permit under **10 V.S.A. Section 6605f(a)** either existed at the time of application or have arisen since that time; or
 - (B) that the holder of the permit, or the applicant for the permit, knowingly omitted or falsified information required to be disclosed under **Section 7-406(c)**.
 - (4) Misrepresentation of any relevant fact at any time;
 - (5) A felony conviction of the transporter in any jurisdiction when the conviction concerns violations of hazardous waste statutes or regulations; or
 - (6) A determination by the Secretary that the transporter's activities constitute a

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serious threat to human health or the environment and that such threat can only be regulated to acceptable levels by suspension, revocation or denial of the permit.

- (c) The Secretary shall provide written notice of modification, suspension, revocation, or denial, including the reasons for such actions, to the transporter involved. Any transporter who receives such notification shall have thirty days from the receipt of the notice to submit a written request for a hearing to the Secretary. If requested, the Secretary shall provide an opportunity for a hearing. The submission of a request for a hearing does not stay the effective date of the Secretary's decision.
- (d) An appeal may be taken from a final decision on the approval or denial of a request for the modification of a permit. Appeals shall be taken to the Waste Facility Panel of the Environmental Board, pursuant to **10 V.S.A. Section 6104**.

7-408 ACCEPTING SHIPMENTS OF HAZARDOUS WASTE

- (a) A transporter may accept hazardous waste only from the following:
 - (1) A generator who has an EPA identification number issued by the Secretary;
 - (2) Another transporter who at the time has a valid transporter permit from the Secretary;
- (b) Any transporter that accepts unmanifested hazardous waste from more than one conditionally exempt generator per shipment shall:
 - (1) Except as provided under **subsection (2)**, below, initiate a manifest for all conditionally exempt generator waste included in the shipment as follows:
 - (A) The transporter shall initiate a manifest when unmanifested waste is first accepted from a conditionally exempt generator; and
 - (B) The transporter shall complete both the generator and transporter portions of the manifest in accordance with the requirements of Subchapter 7, for all hazardous waste in the shipment accepted from conditionally exempt generators.
 - (2) In lieu of initiating a manifest pursuant to **subsection (1)**, above, a transporter that accepts hazardous waste not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont) for shipment to a facility described by **subsection (3)(B)**, below, shall comply with the requirements of **Section 7-**

309(b)(7)(B).

- (3) Within ten days of the first pickup of unmanifested waste, deliver the waste to either:
 - (A) A designated facility; or
 - (B) For waste not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), to a facility, that is not a designated facility, located in a state other than Vermont provided the facility can receive such waste under applicable state and local laws, regulations and ordinances.

7-409 PERSONNEL TRAINING

- (a) Permitted hazardous waste transporters must provide employee training to all persons who in the course of employment directly affect hazardous waste transportation safety. The training program shall be consistent with DOT employee training requirements of **49 CFR 172.700**. Such training, at a minimum, shall include:
 - (1) DOT's labeling, packing, placarding and shipping requirements as set forth in **49 CFR parts 171 through 179** and all other applicable DOT regulations;
 - (2) Safe vehicle operations to avoid creating hazards to public health, safety, or welfare or the environment;
 - (3) Handling of hazardous wastes in a safe manner;
 - (4) Emergency handling procedures in the event of a release or discharge of hazardous waste during transportation; and
 - (5) Familiarity with and use of the most recent edition of the North American Emergency Response Guidebook for hazardous materials published by the DOT.
- (b) For each person required to be trained pursuant to **Section 7-409(a)**, a record of current training inclusive of the preceding three (3) years shall be kept on file by the transporter while these individuals are employed by the transporter, and for 90 days after these individuals cease being employed by the transporter. This period shall be extended automatically for the duration of any unresolved enforcement action, or as ordered by the Secretary. These records shall include the following:

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- (1) Name of employee;
- (2) Date of most recent training;
- (3) Description of training materials;
- (4) Name and address of person providing training; and
- (5) Certification that the employee has been trained and tested.

Note: It is recommended that each person required to be trained pursuant to **Section 7-409(a)** have knowledge of the Vermont Hazardous Waste Management Regulations, in particular: **Subchapter 4** (Requirements for Transporters of Hazardous Waste), **Section 7-105** (Emergency and Corrective Actions), **Section 7-211** (Vermont Listed Hazardous Wastes), and **Subchapter 7** (Manifest, Reporting and Recordkeeping Requirements).

7-410 LIABILITY INSURANCE REQUIREMENTS

- (a) All permitted hazardous waste transporters shall carry liability insurance, as required by U.S. DOT regulations, for sudden and accidental occurrences, exclusive of legal defense costs, for claims arising out of bodily injury and property damage from the hazardous waste transport operations of the transporter. Such insurance policy shall carry an approved DOT endorsement (Form MCS 90 - DOT) covering liability for accidents, including environmental restoration, bodily injury, and property damage.
- (b) The insurance policy shall be maintained in full force at all times during the term of the permit.

7-411 EMERGENCY PREPAREDNESS

No transporter shall transport hazardous waste in Vermont without being in possession of the following on each vehicle:

- (a) Telephone numbers of:
 - (1) The generator of the waste being transported; and
 - (2) The Vermont Agency of Natural Resources and the telephone numbers specified in **Section 7-105**.

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- (b) A copy of the most recent edition of the North American Emergency Response Guidebook for hazardous materials published by DOT.
- (c) All of the following equipment in good operating condition:
 - (1) A first aid kit with eye wash;
 - (2) An Underwriters' Laboratory listed explosion proof flashlight; and
 - (3) A fire extinguisher of appropriate size and type for the vehicle and wastes carried.

Subchapter 5: REQUIREMENTS FOR HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

7-501 PURPOSE, SCOPE, APPLICABILITY

- (a) This subchapter establishes requirements for the design, construction, operation, and maintenance of hazardous waste treatment, storage, and disposal facilities. This subchapter also describes the procedures for certification of hazardous waste facilities.
- (b) The requirements of this subchapter apply to owners and operators of hazardous waste facilities including all facilities which treat, store, or dispose of hazardous wastes referred to in 40 CFR Part 268 (incorporated by reference through **Section 7-106**).

7-502 EXEMPTIONS

The following facilities and activities are exempted from the provisions of this subchapter:

- (a) A resource recovery facility managing municipal solid waste provided:
 - (1) The facility receives and burns only solid waste from commercial or industrial sources which does not contain hazardous wastes and household waste; and
 - (2) The facility does not accept hazardous wastes, and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.
- (b) A totally enclosed treatment facility. A totally enclosed treatment facility is a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of hazardous waste or any constituent thereof into the environment during treatment.
- (c) The owner or operator of an elementary neutralization unit or wastewater treatment unit as defined in **40 CFR Section 260.10** provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 High TOC Subcategory defined in **40 CFR Section 268.40**, Table Treatment Standards for Hazardous Wastes), or reactive (D003) waste, to remove the characteristic before land disposal, the owner/operator must comply with the general requirements for ignitable, reactive, or incompatible wastes set out in **40 CFR Section 264.17(b)**.
- (d) Any person engaged in treatment or containment activities during an immediate response to

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a release of hazardous material or discharge of a hazardous waste and during an imminent and substantial threat of a release of hazardous material or discharge of hazardous waste, provided that the person:

- (1) Complies with **Section 7-105** on emergency actions; and
 - (2) Obtains certification under this subchapter when he or she continues or initiates treatment or containment activities after the immediate response is over.
- (e) The treatment of hazardous waste by mixing absorbent material with containerized hazardous waste provided:
- (1) The mixing occurs when the waste is first placed in the container; and
 - (2) The person treating the waste complies with **40 CFR 264.17(b), 264.171, and 264.172.**
- (f) A solid waste management facility that accepts hazardous waste only from conditionally exempt generators provided the facility is certified by the Secretary to accept such waste.
- (g) Generators who accumulate or place in short-term storage hazardous waste on-site in compliance with the applicable timeframes specified in **Subchapter 3** of these regulations.
- (h) Farmers who dispose of hazardous waste pesticides from their own use as provided in **Section 7-203(r)** of these regulations.
- (i) Transporters storing manifested shipments of hazardous waste at a transfer facility for a period of ten days or less and in accordance with **Section 7-404.**
- (j) Universal waste handlers and universal waste transporters managing the wastes listed below. Universal waste handlers and universal waste transporters are subject to regulation under **Subchapter 9** of these regulations.
- (1) Batteries as described in **Section 7-902;**
 - (2) Pesticides as described in **Section 7-903;**
 - (3) Thermostats as described in **Section 7-904;**
 - (4) Fluorescent light ballasts as described in **Section 7-905;** and
 - (5) Mercury-containing lamps as described in **Section 7-906.**

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- (k) Facilities that recycle hazardous waste in accordance with the standards of **Subchapter 6** and as follows:
 - (1) Facilities that recycle hazardous waste on-site provided:
 - (A) any hazardous waste being recycled is generated on-site; and
 - (B) the hazardous waste to be recycled is not held in short-term storage for longer than the amount of time allowed under **Subchapter 3** of these regulations; or
 - (2) Facilities that recycle hazardous waste received from off-site provided the hazardous waste is not stored prior to being recycled. Hazardous waste that is being staged at a recycling facility is not considered to be in storage.
- Note:** Owners or operators of recycling facilities that store hazardous wastes before they are recycled, or that otherwise treat, store or dispose of hazardous wastes are subject to certification under the requirements of this Subchapter.
- (l) The evaporation of water from hazardous waste that is identified only by the VT02 hazardous waste identification number provided:
 - (1) The water component of the waste is evaporated on-site using evaporation equipment approved in accordance with Vermont's Air Pollution Control Regulations; and
 - (2) The oily residue resulting from the evaporation process is managed either as hazardous waste or in accordance with the Used Oil Management Standards of **Subchapter 8**.
- (m) Oil-water separators provided:
 - (1) The waste oil-water mixture to be separated is identified only by the VT02 hazardous waste number; and
 - (2) Any contaminated water resulting from the separation process is discharged in accordance with **10 V.S.A. Chapters 47** (for indirect injection well, and direct discharges) and **48** (for groundwater protection); and
 - (3) The oily residue resulting from the separation process is managed either as hazardous waste or in accordance with the Used Oil Management Standards of **Subchapter 8**.
- (n) Facilities conducting site investigation and/or corrective action pursuant to **Section 7-105(b)** of these regulations may be exempted by the Secretary from the permitting (but not

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the substantive) requirements of this subchapter, to the extent allowed under federal regulations incorporated by reference in this chapter.

7-503 EMERGENCY CERTIFICATION

- (a) Notwithstanding any other Section of these regulations, in the event the Secretary finds an imminent and substantial endangerment to human health or the environment, the Secretary may issue a temporary emergency certification to an uncertified facility to allow the treatment, storage, or disposal of hazardous waste or to a certified facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective certification.
- (b) This emergency certification:
 - (1) May be oral or written. If oral, it shall be followed in five days by a written emergency certification;
 - (2) Shall not exceed 90 days in duration;
 - (3) Shall clearly specify the hazardous wastes to be received, and the manner and location of their treatment, storage, or disposal;
 - (4) May be terminated by the Secretary at any time without process if he or she determines that termination is appropriate to protect human health and the environment;
 - (5) Shall be accompanied by a public notice published including:
 - (A) Name and address of the office granting the emergency authorization;
 - (B) Name and location of the facility;
 - (C) A brief description of the waste involved;
 - (D) A brief description of the action authorized and reasons for authorizing it; and
 - (E) The duration of the emergency certificate.
 - (6) Shall incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of these regulations.

7-504 GENERAL FACILITY CERTIFICATION STANDARDS

- (a) Except for the facilities and activities excluded under **Section 7-502**, certification from the Secretary is required for the treatment, storage, and disposal of any hazardous waste as identified or listed under **Subchapter 2** of these regulations. The terms “treatment”, “storage”, “disposal”, and “hazardous waste” are defined in **Section 7-103**.
- (b) Certificate of Need
 - (1) Except as provided for in **subsection (2)**, no person shall begin site preparation for or construction of a hazardous waste management facility for the purpose of treatment or disposal of hazardous waste, without first obtaining a certificate of need pursuant to the requirements of **10 V.S.A. Section 6606a**.
 - (2) The certificate of need requirement does not apply to:
 - (A) The replacement of an existing facility at the original site with an equivalent facility in the usual course of business; or
 - (B) A hazardous waste management facility that is operated only by or on behalf of the owner of the facility for the treatment or disposal of hazardous waste generated in Vermont by the owner of the facility. Such facility shall be located on a site of generation.
 - (3) To determine that a proposed facility is needed for the general good of the state, the Secretary must find that:
 - (A) The proposed facility is consistent with any applicable provisions of the state hazardous waste management plan, if such plan has been adopted by the Secretary, or, if such plan has not been adopted by the Secretary, the proposed facility is consistent with the general goals and priorities of **10 V.S.A. Chapter 159** as determined by the Secretary; and
 - (B) The proposed facility location:
 - (i) Is suitable for the type and amount of hazardous waste intended for treatment or disposal at the facility; and
 - (ii) Is accessible by transportation routes that minimize the threat to the public health and safety and to the environment; and
 - (iii) Reasonably accommodates the plans and preferences of the proposed host

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municipality, as expressed by local government entities; and

- (C) The need for the facility is demonstrated by the need to assure the environmentally sound treatment or disposal of hazardous waste generated within Vermont, recognizing the effects of any state hazardous waste plan and:
 - (i) The further need to meet Vermont's obligations under an interstate agreement or regional compact; or
 - (ii) The lack of adequate current or projected treatment or disposal capacity within the region to handle the hazardous waste generated by Vermont generators which is proposed for the facility.

(c) Disclosure Statement

- (1) With the exception of those persons exempted under **10 V.S.A. Section 6605f(k)**, any person who is required to obtain a certification under this subchapter shall complete, sign, and submit to the Secretary at the time of application a disclosure statement pursuant to the requirements of **10 V.S.A. Section 6605f**. In the event of any change in ownership, a disclosure statement must be submitted pursuant to the requirements of **10 V.S.A. Section 6605f(e)**.
 - (2) Any person who has received a certification under this subchapter shall file a statement annually within 30 days prior to the month and day of issuance of that permit disclosing any changes in facts that would render the disclosure statement filed in connection with that permit inaccurate in any way, or stating that no such changes have occurred in the period of time covered by the annual statement. The annual statement shall be under oath or affirmation.
- (d) No person shall initiate construction of a hazardous waste treatment, storage, or disposal facility without first applying for and receiving certification for such facility in accordance with **Sections 7-505 and 7-506** of these regulations. In addition, any hazardous waste treatment, storage or disposal facility that was in existence on November 19, 1980, or any facility that treats, stores or disposes of a material that has been newly defined or listed as a Vermont or federal hazardous waste, must apply for interim certification in accordance with **Section 7-510** of these regulations.
- (e) Every hazardous waste treatment, storage, or disposal facility issued a certification under the provisions of this subchapter shall, at a minimum, be designed, constructed, operated, and maintained in accordance with all applicable requirements of:
- (1) **40 CFR Part 264;**

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- (2) **40 CFR Part 266;**
 - (3) The land disposal restrictions (40 CFR Part 268) incorporated by reference under **Section 7-106;**
 - (4) The large quantity generator standards of **Section 7-308;** and
 - (5) All applicable Sections of the Vermont Environmental Protection Rules, Chapters 1 through 19.
- (f) Certification is required during the active life (including the closure period) of all hazardous waste management units. Owners and operators of landfills, surface impoundments, land treatment units, and waste pile units must have post-closure permits (i.e., certification) as specified in **40 CFR Section 270.1(c).**
- (g) Certification shall be for a period not to exceed five (5) years.
- (h) Continuation of Expiring Certificates
- (1) If the certificate holder has submitted an administratively complete application to renew certification at least 180 calendar days prior to expiration of the effective certification and the Secretary, through no fault of the certificate holder, does not issue a new certificate with an effective date prior to the expiration date of the previous certificate, the conditions of the expired certificate continue in force until the effective date of a new certificate.
- Note:** To be determined “administratively complete”, an application must meet the criteria established in the Department of Environmental Conservation’s Permit Application Procedure (as amended).
- (2) Certificates continued under this Section remain fully effective and enforceable.
 - (3) When the certificate holder is not in compliance with the conditions of the expired or expiring certification, the Secretary may do any or all of the following:
 - (A) Initiate an enforcement action based on the certificate that has been continued;
 - (B) Issue a notice of intent to deny the new request for certification. If the certification is denied, the activities authorized by the continued certificate would have to cease or become subject to an enforcement action;
 - (C) Issue a new certification with appropriate conditions; or
 - (D) Take other actions authorized by these regulations.

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- (i) A certification may be transferred by the permittee to a new owner or operator under the provisions of **40 CFR Section 270.40**.
- (j) For the purposes of construing **40 CFR Parts 260 through 270**, a person who receives certification (i.e., the certificate holder) under this chapter shall also be known as the permittee.

7-505 APPLICATION FOR CERTIFICATION

- (a) Any person who is required to obtain certification under **Section 7-504** shall sign and submit an application for certification to the Secretary. When a facility is owned by one person but is operated by another person, it is the operator's duty to obtain certification except that the owner must also sign any documents submitted for the purpose of applying for certification.
- (b) An application for certification may be submitted in narrative form. Each application for certification must be signed in accordance with **Section 7-108**, and must contain all applicable information required under **40 CFR Sections 270.10(j), 270.13 (Part A) and 270.14 through 270.28 (Part B)**.
- (c) In addition to the requirements of **subsection (b)** above, each application for a hazardous waste land treatment or disposal facility shall include, but not be limited to, the following information:
 - (1) A description of the provisions for hydrogeological studies, monitoring analysis, and protection of groundwater and surface waters;
 - (2) A description of the provisions for post-closure monitoring and maintenance of the facility; and
 - (3) A description of the actions taken by the facility to assure financial responsibility for the post-closure care monitoring period and civil liability arising from non-sudden incidents at the facility.
- (d) Certain technical data, such as design drawings and specifications and engineering studies which are required to be submitted in an application, shall be certified by a professional engineer registered in Vermont.
- (e) The Secretary shall not issue a draft certification until the applicant has fully complied to the Secretary's satisfaction with the specific application requirements for the type of facility involved, unless the only information not submitted is the information required for

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exposure assessments for surface impoundments or landfills.

- (f) Applicants shall keep records of all data used to complete certification applications and any supplemental information submitted to the Secretary for a period of at least three (3) years from the date the application is signed.

7-506 PROCEDURE FOR CERTIFICATION

- (a) Upon completing review of each application for certification under **Section 7-505**, the Secretary shall either issue a draft certificate or deny certification. The Secretary shall prepare a written justification for any certification which has been denied and give public notice of the decision to deny.
- (b) Each draft and final certificate shall contain:
 - (1) All standards, conditions, and requirements that the Secretary has determined to be the best control technology for the specific facility involved. At a minimum, best control technology shall be the design, construction, operation and maintenance requirements referenced in **Section 7-504(e)**;
 - (2) The Uniform Certification Conditions incorporated by reference through **Section 7-109** of these regulations; and
 - (3) When appropriate, a schedule of compliance leading to compliance with the Waste Management Act and these regulations. Any schedule of compliance shall meet the provisions of **40 CFR Section 270.33**.
- (c) The Secretary shall consult with the Commissioner of Health and the Commissioner of Labor and Industry to avoid conflicts of the standards and conditions of any draft certification with requirements which may be imposed under the Vermont Occupational Safety and Health Act or any other applicable state safety or health regulation.
- (d) A fact sheet shall be compiled for every draft certificate prepared by the Secretary. The fact sheet shall briefly set forth the significant factual, legal, methodological, and policy questions considered in preparing the draft certificate. In addition, the fact sheet shall include the information described in **40 CFR Section 124.8(b)**.
- (e) For preparing a draft certificate, the record shall consist of: the application, if required, and any supporting data furnished by the applicant; the draft certificate or notice of intent to deny the application or to revoke the certificate; the fact sheet; all documents cited in the fact sheet; and other documents contained in the supporting file for the draft certificate.

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(f) Public Notice

- (1) The Secretary shall provide notice that a draft certificate has been prepared for a hazardous waste facility, of the opportunity for public comment on such draft certificate, and of the informational public hearing which shall be held for such draft certificate.
 - (2) Notice shall be provided by advertisement in major local newspapers of general circulation, broadcast over local radio station and by mailing a copy of a written notice to those persons listed in **40 CFR Section 124.10**, who shall be included on the facility mailing list.
 - (3) At a minimum, for each draft certificate, the applicable public notice and public comment requirements of **40 CFR Section 124.10** shall be met.
- (g) Copies of the fact sheet, draft certificate and written notice shall be sent to the applicant, the town in which the facility is located or proposed to be located, any other Agency or subdivision thereof which has issued or may be requested to issue a permit or certificate for the facility, the U.S. Environmental Protection Agency, and any other appropriate government authorities. Copies of the fact sheet, draft certificate and notice shall also be made available to any other interested party.
- (h) Prior to the issuance of each final certificate, the Secretary shall consider all comments raised during the public comment period and prepare a response to comments which specifies:
- (1) The content of all significant comments;
 - (2) The Secretary's response to those comments;
 - (3) Any changes that will be made to the draft certificate; and
 - (4) The reasons for those changes.
- (i) An appeal may be taken from a final decision on the issuance or denial of a certificate. Appeals shall be taken to the Waste Facility Panel of the Environmental Board, pursuant to **10 V.S.A. Section 6104**.

7-507 MODIFICATION OF CERTIFICATIONS

- (a) Based upon information received (e.g., findings of a facility inspection, or information

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submitted by the certificate holder), the Secretary may determine whether one or more of the causes listed in **subsection (e)** to modify a certification exist. If cause exists, the Secretary may modify the certification accordingly, and may request an updated application if necessary.

- (b) When a certification is modified, only the conditions subject to modification are reopened.
- (c) Suitability of the facility location shall not be considered at the time of modification unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time when the certification was issued.
- (d) If cause does not exist under this Section, the Secretary shall not modify the certification, unless the modification is at the request of the certificate holder.
- (e) The following are causes for modification of a certification:
 - (1) There are material and substantial alterations or additions to the certified facility or activity which occurred after the certification was issued which justify the application of certification conditions that are different from or absent in the existing certification.
 - (2) Information is received by the Secretary that was not available at the time that the certification was issued (other than revised regulations, guidance, or test methods) and would have justified the application of different certification conditions at the time of issuance.
 - (3) The standards or regulations on which the certification was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision, after the certification was issued.
 - (4) The Secretary determines good cause exists for modification of a certification, such as an act of God, strike, flood, or materials shortage or other events over which the certificate holder has little or no control and for which there is no reasonably available remedy.
 - (5) Cause exists for revocation under **Section 7-509**, and the Secretary determines that modification of the certification is appropriate.
 - (6) The Secretary has received notification (as required in the certification) of a proposed transfer of the certification.

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(f) Modification Procedures

- (1) If a modification is requested by the permittee, the Secretary shall approve or deny the request according to the procedures of **40 CFR Section 270.42**.
 - (2) For all modifications sought on the motion of the Secretary, a draft certification shall be prepared, and the procedures and requirements of **Section 7-506** shall be met.
- (g) An appeal may be taken from a final decision on the approval or denial of a request for the modification of a certificate. Appeals shall be taken to the Waste Facility Panel of the Environmental Board, pursuant to **10 V.S.A. Section 6104**.

7-508 REVOCATION AND REISSUANCE OF CERTIFICATIONS

- (a) Based upon information received (e.g., findings of a facility inspection, or information submitted by the certificate holder), the Secretary may determine whether one or more of the causes listed in **subsection (e)**, below, to revoke and reissue a certification exist. If cause exists, the Secretary may revoke and reissue the certification accordingly, and may request an updated application if necessary.
- (b) If a certification is revoked and reissued, the entire certification is reopened and subject to revision and the certification is reissued for a new term. (**See 40 CFR Section 124.5(c)(2)**)
- (c) Suitability of the facility location shall not be considered at the time of revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown or which did not exist at the time when the certification was issued.
- (d) If cause does not exist under this Section, the Secretary shall not revoke and reissue a certification, except at the request of the certificate holder.
- (e) The following are causes for revocation and reissuance of a certification:
 - (1) Cause exists for revocation under **Section 7-509**, and the Secretary determines that revocation and reissuance of the certification is appropriate.
 - (2) The Secretary has received notification (as required in the certification) of a proposed transfer of the certification.
- (f) The causes for modification listed under **Section 7-507(e)(1) through (4)** may be causes for revocation and reissuance of a certification when the certificate holder requests or agrees.

7-509 REVOCATION OF CERTIFICATIONS

- (a) The following are causes for revoking a certification during its term, or for denying an application to renew certification:
 - (1) Noncompliance by the certificate holder with any condition of the certification;
 - (2) Failure by the certificate holder to disclose fully all relevant facts in the application or during the certification process;
 - (3) Misrepresentation by the certificate holder of any relevant facts at any time; or
 - (4) A determination by the Secretary that the certified activity endangers human health or the environment and can only be regulated to acceptable levels by revocation of the certification.
- (b) The Secretary shall follow the applicable procedures of **40 CFR Section 124.5** and **3 V.S.A. Section 814** when revoking any certification under this Section.
- (c) The Secretary may, pursuant to the procedures of this subchapter, deny an application for renewal of certification either in its entirety or as to the active life of a hazardous waste management facility or unit only.

7-510 INTERIM STATUS CERTIFICATION

- (a) The purpose of this Section is to establish minimum standards that define the acceptable management of hazardous waste during the period of interim status and until certification of final closure or, if the facility is subject to post-closure requirements, until post-closure responsibilities are fulfilled.
- (b) The standards of **40 CFR Part 265, Subpart S of 40 CFR Part 264**, and this Section apply to owners and operators of facilities that treat, store or dispose of hazardous waste who have fully complied with the requirements for interim status under **Section 3005(e) of RCRA** and **40 CFR Section 270.10** until either certification is made under this subchapter or until applicable Part 265 closure and post-closure responsibilities are fulfilled, and to those owners and operators of facilities in existence on November 19, 1980 who have failed to provide timely notification as required by Section 3010(a) of RCRA and/or failed to file an application for certification as required by **subsections (g) and (h)** of this Section. These standards apply to all treatment, storage and disposal of hazardous waste at these facilities after the effective date of these regulations, except as specifically provided for in this subchapter or Subchapter 2.

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- (c) All hazardous waste facilities which were in operation or under construction as of November 19, 1980, which have been in operation or under construction since that date, or which are currently operating or under construction without certification shall, at a minimum, be designed, constructed, operated and maintained in accordance with all applicable requirements of:
 - (1) **40 CFR Part 265;**
 - (2) **40 CFR Part 266;**
 - (3) The land disposal restrictions (40 CFR Part 268) incorporated by reference under **Section 7-106;** and
 - (4) All applicable Sections of the Vermont Environmental Protection Rules, **Chapters 1 through 19.**
- (d) In order for a facility to qualify for interim status, the owner or operator must submit a Notification of Regulated Waste Activity form, an application for interim certification that meets the requirements of **subsection (g)**, and must otherwise meet the requirements of **40 CFR Sections 270.70 through 270.73.**
- (e) The following hazardous wastes must not be managed at facilities subject to regulation under this Section: EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.
- (f) The requirements of this Section apply to owners and operators of all facilities which treat, store or dispose of hazardous waste subject to the land disposal restrictions of 40 CFR Part 268 incorporated by reference under **Section 7-106.**
- (g) Owners and operators of hazardous waste management facilities in existence on November 19, 1980 must submit an application for certification or interim certification as required by **40 CFR Section 270.10(e)**. Any person applying for interim certification under this Section shall submit a document, signed in accordance with **Section 7-108**, that provides the information required by **40 CFR Section 270.13**. This document shall be submitted in accordance with the requirements of **40 CFR Section 270.10(e)**.
- (h)
 - (1) If any owner or operator of a hazardous waste management facility has filed for interim status certification and has not yet filed for certification, the owner or operator shall file an amended interim status application:
 - (A) With the Secretary no later than the effective date of regulatory provisions listing or designating wastes as hazardous in the state in addition to those already listed or designated hazardous by the Agency, if the facility is treating, storing or disposing of any of those newly listed or designated wastes; or
 - (B) As necessary to comply with provisions of **40 CFR Section 270.72** for changes

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during interim status.

- (2) The owner or operator of a facility who fails to comply with the updating requirements of this Section does not receive interim status as to the wastes not covered by a duly filed interim status application.

7-511 SPECIAL CERTIFICATION

- (a) The Secretary may issue a certificate for a hazardous waste incinerator in accordance with **40 CFR Section 270.62**.
- (b) The Secretary may issue a certificate for using field tests or laboratory analyses for a land treatment demonstration in accordance with **40 CFR Section 270.63**.
- (c) The Secretary may issue a research, development, and demonstration certificate for any hazardous waste treatment facility which proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which certification standards for such experimental activity have not been promulgated under 40 CFR Part 264 or 266. Any such certificate shall include such terms and conditions as will assure protection of human health and the environment. Such certificates shall meet the requirements of **40 CFR Section 270.65**.
- (d) The Secretary may issue a certificate for hazardous waste boilers and industrial furnaces in accordance with **40 CFR Section 270.66**.

7-512 HAZARDOUS WASTES BURNED IN BOILERS AND INDUSTRIAL FURNACES

- (a) Hazardous waste that is burned or processed in a boiler or industrial furnace (as defined in **Section 7-103**) shall be managed in accordance with **40 CFR Sections 266.100 through 266.112 (Subpart H)**.
- (b) The person in control of any hazardous waste subject to this Section shall comply with all applicable provisions of the Vermont Air Pollution Control Regulations.

Subchapter 6: STANDARDS FOR HAZARDOUS WASTES THAT ARE RECYCLED

7-601 PURPOSE, SCOPE, APPLICABILITY

This subchapter defines “hazardous waste recycling”, establishes management standards for facilities that recycle hazardous waste, and provides a mechanism for the Secretary to, on a case-by-case basis, exempt a waste that is recycled or reused from part or all of these regulations.

7-602 DEFINITION OF HAZARDOUS WASTE RECYCLING

(a) Hazardous waste is recycled if it is used, reused, or reclaimed as follows:

(1) A hazardous waste is used or reused if it is either:

- (A) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a hazardous waste will not satisfy this condition if distinct components of the waste are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or
- (B) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

Note: The Secretary does not consider burning of hazardous waste for energy recovery to be recycling, unless the hazardous component of the waste was intended to be a fuel prior to its becoming a hazardous waste or a component of a hazardous waste.

(2) A hazardous waste is reclaimed if it is processed to recover the hazardous component of the waste as a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

7-603 OTHER SECTIONS OF THESE REGULATIONS APPLICABLE TO HAZARDOUS WASTE RECYCLING:

(a) **Section 7-103** includes definitions for the terms: designated facility, reclaimed, staging, and used or reused.

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- (b) **Section 7-204** provides exemptions for certain hazardous wastes that are recycled.
- (c) **Subsections (3) and (4) of Section 7-305(b)** specify how on-site recycled waste is counted toward generator status.
- (d) **Section 7-502(k)** exempts certain recycling activities from Subchapter 5 certification requirements.

7-604 GENERAL STANDARDS APPLICABLE TO ALL HAZARDOUS WASTE RECYCLING ACTIVITIES:

- (a) Any residual material resulting from a recycling process must be evaluated in accordance with **Section 7-303** to determine whether it is subject to regulation as hazardous waste.
- (b) Any facility that treats hazardous waste without recycling it, or that treats hazardous waste prior to recycling it, is subject to regulation under Subchapter 5.
- (c) Owners or operators of facilities otherwise subject to Subchapter 5 certification requirements are subject to the requirements of **Subparts AA, BB and CC of 40 CFR Part 264 or 265** for hazardous waste management units that recycle hazardous wastes.

7-605 HAZARDOUS WASTE RECYCLING BY GENERATORS

- (a) Hazardous waste that is recycled on-site by the generator of the waste, and not exempt under **Section 7-204(a)**, must be managed in accordance with:
 - (1) The requirements of **Section 7-604**, above; and
 - (2) All applicable standards of **Subchapter 3** (i.e., standards applicable to conditionally exempt, small quantity, or large quantity generators) until such time that the recycling process is complete.
- (b) Generators that recycle their own hazardous waste on-site according to **subsection (a)**, above, are not subject to certification under **Subchapter 5** (refer to **Section 7-502(k)**) for the recycling process.
- (c) Generators shipping hazardous waste off-site for recycling shall ship such waste to:
 - (1) A designated facility;
 - (2) A facility approved by the Secretary under a Recycle/Reuse Exemption issued

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according to the requirements of **Section 7-608** of this Subchapter; or

- (3) For hazardous waste that is not defined as hazardous in 40 CFR Part 261 (i.e., waste regulated as hazardous by Vermont), to a facility that is not a designated facility, located in a state other than Vermont provided the facility can receive such waste under applicable state and local laws, regulations and ordinances.

7-606 HAZARDOUS WASTE RECYCLING AT OFF-SITE FACILITIES

- (a) Owners or operators of facilities that receive recyclable materials, stage such materials for no more than three days, and recycle them without storing them before they are recycled are subject to:

- (1) The requirements of **Section 7-604**, above; and
- (2) The large quantity generator requirements of **Section 7-308**.
- (3) Financial Assurance

Prior to staging any material, demonstrate financial assurance for closure of the facility by:

- (A) Maintaining a closure cost estimate that meets the requirements of **40 CFR Section 265.142**, and that has been approved by the Secretary; and
- (B) Establishing financial assurance in accordance **40 CFR Section 265.143**.

- (b) Owners or operators of facilities that store recyclable materials before they are recycled are subject to **Section 7-604** and all applicable provisions of **Subchapters 1, 3, 5 and 7** of these regulations.

7-607 RECYCLABLE MATERIALS USED IN A MANNER CONSTITUTING DISPOSAL

Any recyclable materials that are applied to or placed on the land before or after mixing or combination with any other substance(s) shall be managed in accordance with **40 CFR Sections 266.20 through 266.23**. These materials are referred to as "materials used in a manner that constitutes disposal."

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7-608 RECYCLE/REUSE EXEMPTIONS FOR RECYCLABLE HAZARDOUS WASTES AND/OR RECYCLING ACTIVITIES

- (a) The Secretary may, on a case by case basis, exempt from part or all of the regulations, a waste generated by a particular generator, transported by a particular transporter, or treated or stored by a particular facility if the waste is legitimately recycled provided that:
 - (1) The recycled material is either:
 - (A) a Vermont regulated waste listed under **Section 7-211** of these regulations; or
 - (B) a recycled material described by **40 CFR Section 260.30**.
 - (2) The procedural and durational requirements and the criteria and standards used by the Secretary in exempting waste under this Section shall be no less stringent than those specified in **40 CFR Sections 260.30, 260.31, and 260.33**;
 - (3) The standards and requirements which apply to these wastes can be no less stringent than those outlined in **40 Section CFR 261.6(a) and Part 266**, if the waste in question is one addressed by these Sections of 40 CFR; and
 - (4) The recycling, reclamation, or reuse of the waste does not present an actual or potential threat to human health or the environment.
- (b) The Secretary may, on a case-by-case basis, grant a variance from classification as a boiler. The standards and criteria used for this variance and the procedures followed can be no less stringent than those specified in **40 CFR Sections 260.32 and 260.33**.
- (c) Any person seeking an exemption under this Section shall apply pursuant to the form (provided by the Secretary) titled: "Exemption Procedures for the Recycle and Reuse or Hazardous Waste".
- (d) Any generator or facility whose waste is exempted under this Section shall comply with those additional management standards and requirements that the Secretary, after an examination of the factors listed in **Section 7-216(c)**, deems to be necessary to protect human health and the environment.

Subchapter 7: MANIFEST, REPORTING AND RECORDKEEPING REQUIREMENTS

7-701 PURPOSE, SCOPE, APPLICABILITY

This subchapter establishes requirements for the use of manifests by hazardous waste generators, transporters, and treatment, storage and disposal facilities to track the movement of hazardous waste from the point of generation to any intermediate points and finally to its ultimate point of disposition. This subchapter also establishes requirements for persons exporting or importing hazardous waste, and for reporting and recordkeeping by generators and transporters. Reporting requirements for treatment, storage, and disposal facilities are specified in Subchapter 5.

7-702 MANIFEST REQUIREMENTS FOR GENERATORS

- (a) Unless otherwise specified in these regulations, small and large quantity generators must utilize the Vermont Uniform Hazardous Waste Manifest and comply with the instructions contained on the forms for all shipments of hazardous waste made.

Note: Continuation sheets may only be used to identify additional transporters; they may not be used to identify additional waste streams.

- (b) Each generator who is not a conditionally exempt generator who transports or offers for transport hazardous waste for treatment, storage or disposal off-site shall:
 - (1) Use the Vermont Uniform Hazardous Waste Manifest for each shipment of waste, except for those shipments of waste made to facilities located in states which require the use of that state's manifest for shipment of waste to facilities located in that state.
 - (2) Designate on the manifest one facility which is permitted to handle the waste described on the manifest. If the waste is not hazardous waste in the state in which the receiving facility is located and the facility is not a designated facility, the small or large quantity generator shall specify on the manifest that the facility can receive such waste under applicable state and local laws, regulations and ordinances as specified by **Sections 7-309(b)(5) and (7)**. A generator may also designate on the manifest one alternate facility which is permitted to handle his or her waste in the event an emergency prevents delivery of the waste to the primary designated facility.
 - (3) Obtain the initial transporter's name, signature, and date of acceptance on the manifest. Give the manifest to the transporter after retaining and mailing copies as described below.
 - (4) Sign and otherwise complete each manifest as required under **Section 7-702(a)**.

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- (5) Retain a signed copy for at least three (3) years from the date of initial shipment or until receipt of a completed copy. A completed copy of the manifest must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.
- (6) Immediately send a copy to the Secretary.
- (7) Immediately send a copy to the appropriate state or federal authority for the state where the designated facility is located.
- (8) For shipments of hazardous waste within the United States solely by water (bulk shipments only), send three copies of the manifest dated and signed in accordance with this Section to:
 - (A) The owner or operator of the designated facility; or
 - (B) The last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.
- (9) For rail shipments of hazardous waste within the United States which originate at the site of generation, send at least three copies of the manifest dated and signed in accordance with this Section to:
 - (A) The next non-rail transporter; if any; or
 - (B) The designated facility if transported solely by rail; or
 - (C) The last rail transporter to handle the waste in the United States if exported by rail.
- (10) If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, immediately either designate another facility or instruct the transporter to return the waste.
- (11) Wait for confirmation of the shipment by the return of a completed copy of the manifest from the designated facility. All completed copies not returned by the facility within 35 days, or not returned by the foreign consignee within 60 days of the initial shipment, must be investigated and reported as provided in **Section 7-707**.
- (12) For each manifested shipment of hazardous waste made to a facility located in a state other than Vermont, confirm delivery of each shipment by assuring that the facility

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returns a completed copy of each manifest to the Secretary.

- (13) For shipments of hazardous waste to a designated facility in an EPA-authorized State which has not yet obtained authorization to regulate that particular waste as hazardous, assure that the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility.
- (c) The requirements of this Section do not apply to hazardous waste produced by generators of greater than 220 pounds (100 kilograms) but less than 2,200 pounds (1,000 kilograms) in a calendar month where:
 - (1) The waste is reclaimed under a contractual agreement pursuant to which:
 - (A) The type of waste and frequency of shipments are specified in the agreement; and
 - (B) The vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste; and
 - (2) The generator maintains a copy of the reclamation agreement in his or her files for a period of at least three (3) years after termination or expiration of the agreement; and
 - (3) A recycle/reuse exemption under **Section 7-608** has been issued by the Secretary, and all conditions of this exemption are complied with.

7-703 MANIFEST REQUIREMENTS FOR TRANSPORTERS

- (a) Unless otherwise specified in these regulations, transporters must utilize the Vermont Uniform Hazardous Waste Manifest and comply with the instructions contained on or with the forms for all shipments of hazardous waste.
- (b) Each transporter of a shipment of hazardous waste for which a manifest is required is prohibited from accepting hazardous waste for shipment unless the transporter does the following:
 - (1) Prior to accepting the shipment, check for any discrepancies between the manifest and the wastes actually offered for shipment. A transporter shall not accept a shipment if discrepancies exist.

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- (2) Ensure that the manifest has been signed and completed by the generator as required by **Section 7-702(b)(4)**;
 - (3) Sign and date the manifest and return a signed copy to the generator before leaving the site with the hazardous waste shipment;
 - (4) Ensure that the manifest accompanies the waste shipment at all times;
 - (5) Deliver the entire quantity of waste accepted for transport and the manifest to the next designated transporter, designated facility or foreign consignee; or to the alternate designated facility if the hazardous waste cannot be delivered to the designated facility because an emergency prevents delivery. If the hazardous waste cannot be delivered, the shipment must be returned to the generator immediately or the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions before resuming transport of the hazardous waste. If no instructions are received from the generator, the transporter shall return all the hazardous waste to the generator;
 - (6) Obtain the date of delivery and the signature of the continuing transporter or the owner or operator of the designated facility after such person has had an opportunity to inspect the shipment for discrepancies; and
 - (7) Retain one copy of the manifest in accordance with **Section 7-710** and give the remaining copies of the manifest to the accepting transporter or designated facility.
- (c) A transporter transporting hazardous waste from a generator who generates greater than 220 pounds (100 kilograms) but less than 2,200 pounds (1,000 kilograms) of hazardous waste in a calendar month need not comply with the requirements of **Section 7-703** when:
- (1) The waste is being transported pursuant to a reclamation agreement as provided in **Section 7-702(c)**; and
 - (2) The transporter records on a log or shipping paper, the following information for each shipment:
 - (A) The name, address and EPA identification number of the generator of the waste;
 - (B) The quantity of waste accepted;
 - (C) All DOT-required shipping information;
 - (D) The date the waste is accepted; and

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- (3) The transporter carries this record when transporting this waste to the reclamation facility; and
 - (4) The transporter retains these records for a period of at least three (3) years after termination or expiration of the agreement; and
 - (5) A recycle/reuse exemption, under **Section 7-608**, has been issued by the Secretary, and all conditions of this exemption are complied with.
- (d) A water (bulk shipment) transporter need not comply with **Section 7-703(b)(4), (6) and (7)** provided the transporter complies with **40 CFR Section 263.20(e)**. Any person utilizing this exemption need not comply with **Section 7-710(b), (c) and (e)**.
- (e) For shipments involving rail transportation, the requirements of **Section 7-703(b)(4), (6) and (7)** do not apply provided the shipment complies with **40 CFR Section 263.20(f)**. Any person utilizing this exemption need not comply with **Section 7-710(b), (c) and (e)**.

7-704 MANIFEST REQUIREMENTS FOR HAZARDOUS WASTE FACILITIES

- (a) Unless otherwise specified in these regulations, a certified hazardous waste treatment, storage or disposal facility or any facility recycling hazardous waste who accepts a shipment of hazardous waste must utilize the Vermont Uniform Hazardous Waste Manifest and comply with the instructions contained on or with the forms for all shipments of hazardous waste made or received.
- (b) Each owner or operator of a certified hazardous waste treatment, storage or disposal facility or any facility recycling hazardous waste who accepts a shipment of hazardous waste for which a manifest is required shall comply with the following:
- (1) Perform an inspection upon receipt of each shipment of hazardous waste, comparing the description appearing on the manifest and the waste actually received, noting any significant discrepancies, as defined in **subsection (8)** below, on the manifest in the space provided. Any significant discrepancies shall be immediately reported to the Secretary as provided by **Section 7-704(b)(8)(B)**;
 - (2) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received and give a completed copy to the transporter;
 - (3) Immediately send the manifest original to the appropriate state or federal authority for the state where the waste was generated;

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- (4) Immediately send the appropriate completed copy to the appropriate state or federal authority for the state where the facility is located;
- (5) Send the appropriate completed copy of the manifest to the generator of the waste within thirty (30) days of the date of initial shipment;
- (6) Retain a copy of the manifest at the facility as required in **Section 7-710(b)**;
- (7) A facility which receives a hazardous waste from a rail or water (bulk shipment) transporter shall also comply with **40 CFR Section 264.71(b)**;
- (8) Manifest discrepancies
 - (A) Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are: (1) For bulk waste, variations greater than 10 percent in weight, and (2) for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.
 - (B) Upon discovering a significant discrepancy, in addition to notifying the Secretary, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (e. g., with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator must immediately submit to the Secretary a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

7-705 EXPORTS OF HAZARDOUS WASTE

- (a) The export of any waste defined as hazardous under 40 CFR Part 261 is prohibited unless:
 - (1) The primary exporter submits a notification in accordance with this Section;
 - (2) The receiving country has consented to accept the hazardous waste;
 - (3) A copy of the EPA “Acknowledgment of Consent” (defined in **Section 7-103** of these regulations) accompanies the shipment in accordance with this Section; and

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- (4) The hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgement of Consent.

(b) Primary exporters

Each primary exporter of a waste, which is defined as hazardous under 40 CFR Part 261, shall comply with the following requirements:

- (1) A primary exporter of hazardous waste shall notify EPA of an intended export before such waste is scheduled to leave the United States. A complete notification shall be submitted sixty (60) days before the initial shipment is intended to be shipped off-site. This notification may cover export activities extending over a twelve (12) month or lesser period. The notification must be in writing, signed by the primary exporter and include the following information:
 - (A) Name, mailing address, telephone number and EPA identification number of the primary exporter;
 - (B) By consignee, for each hazardous waste type:
 - (i) A description of the hazardous waste and the EPA Hazardous Waste Number, U.S. DOT proper shipping name, hazard class and identification number (UN/NA) for each hazardous waste as identified in **49 CFR Parts 171 through 177**;
 - (ii) The estimated frequency or rate at which such waste is to be exported and the period of time over which such waste is to be exported;
 - (iii) The estimated total quantity of the hazardous waste in units as specified in the instructions to the Uniform Hazardous Waste Manifest;
 - (iv) All points of entry to and departure from each foreign country through which the hazardous waste will pass;
 - (v) A description of the means by which each shipment of the hazardous waste will be transported (e.g., mode of transportation vehicle, type(s) of container);
 - (vi) A description of the manner in which the hazardous waste will be treated, stored or disposed of in the receiving country;
 - (vii) The name and site address of the consignee and any alternate consignee;

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and

(viii) The name of any transit countries through which the hazardous waste will be sent and a description of the approximate length of time the hazardous waste will remain in such country and the nature of its handling while there.

- (2) Notification shall be sent to the Office of Enforcement and Compliance Assurance; Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A); Environmental Protection Agency; 401 M St., S.W.; Washington, D.C. 20460 with "Attention: Notification to Export" prominently displayed on the front of the envelope.
- (3) Except for changes to the telephone number in **paragraph (b)(1)(A)** of this Section, changes to **paragraph (b)(1)(B)(v)** of this Section, and decreases in the quantity indicated pursuant to **paragraph (b)(1)(B)(iii)** of this Section, when the conditions are specified on the original notification change (including any exceedance of the estimate of the quantity of hazardous waste specified in the original notification), the primary exporter must provide EPA with a written renotification of the change. The shipment cannot take place until consent of the receiving country to the changes (except for changes to **paragraph (b)(1)(B)(viii)** of this Section and in the ports of entry to and departure from transit countries pursuant to **paragraph (b)(1)(B)(iv)** of this Section) has been obtained and the primary exporter receives an EPA Acknowledgement of Consent reflecting the receiving country's consent to the changes.
- (4) Upon request by EPA, a primary exporter shall furnish to EPA any additional information which a receiving country requests in order to respond to a notification.
- (5) In conjunction with the Department of State, EPA will provide a complete notification to the receiving country and any transit countries. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of **paragraph (b)(1)** of this Section. Where a claim of confidentiality is asserted with respect to any notification information required by **paragraph (b)(1)** of this Section, EPA may find the notification not complete until any such claim is resolved in accordance with **40 CFR Section 260.2**.
- (6) Where the receiving country consents to the receipt of the hazardous waste, EPA will forward an EPA Acknowledgement of Consent to the primary exporter for purposes of **Section 7-705(b)(7)(H)**. Where the receiving country objects to receipt of the hazardous waste or withdraws a prior consent, EPA will notify the primary exporter in writing. EPA will also notify the primary exporter of any responses from transit

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countries.

- (7) The manifest requirements of **Section 7-702** must be complied with except that:
- (A) In lieu of the name, site address and EPA identification number of the designated permitted facility, the primary exporter must enter the name and site address of the consignee;
 - (B) In lieu of the name, site address, and EPA identification number of a permitted alternate facility, the primary exporter may enter the name and site address of any alternate consignee;
 - (C) In Special Handling Instructions and Additional Information, the primary exporter must identify the point of departure from the United States;
 - (D) The following statement must be added to the end of the first sentence of the certification set forth in item 16 of the Uniform Hazardous Waste Manifest Form: "and conforms to the terms of the attached EPA Acknowledgement of Consent";
 - (E) The primary exporter from Vermont must use the Vermont Uniform Hazardous Waste Manifest;
 - (F) The primary exporter must require the consignee to confirm in writing the delivery of the hazardous waste to that facility and to describe any significant discrepancies (as defined in **40 CFR Section 264.72(a)**), between the manifest and the shipment. A copy of the manifest signed by such facility may be used to confirm delivery of the hazardous waste.
 - (G) In lieu of the requirements of **Section 7-702(b)(10)**, where a shipment cannot be delivered for any reason to the designated or alternate consignee, the primary exporter must:
 - (i) Renotify EPA of a change in the conditions of the original notification to allow shipment to a new consignee in accordance with **Section 7-705(b)(3)** and obtain an EPA Acknowledgement of Consent prior to delivery; or
 - (ii) Instruct the transporter to return the waste to the primary exporter in the United States or designate another facility within the United States; and
 - (iii) Instruct the transporter to revise the manifest in accordance with the

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primary exporter's instructions.

- (H) The primary exporter must attach a copy of the EPA Acknowledgement of Consent to the shipment to the manifest which must accompany the hazardous waste shipment. The primary exporter must assure that the hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgement of Consent. For exports by rail or water (bulk shipment), the primary exporter must provide the transporter with an EPA Acknowledgement of Consent which must accompany the hazardous waste but which need not be attached to the manifest except that for exports by water (bulk shipment) the primary exporter must attach the copy of the EPA Acknowledgement of Consent to the shipping paper.
- (I) The primary exporter shall provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste leaves the United States in accordance with **Section 7-705(c)(3)(D)**.

(c) Transporters

In addition to the requirements of **Section 7-703**, a transporter transporting hazardous waste for export shall:

- (1) Not accept such waste from a primary exporter or other person:
 - (A) If the transporter knows the shipment does not conform to the EPA Acknowledgement of Consent; and
 - (B) Unless, in addition to a manifest signed in accordance with the provisions of **Section 7-702**, such waste is also accompanied by an EPA Acknowledgement of Consent which, except for shipment by rail, is attached to the manifest (or shipping paper for exports by water (bulk shipment)).
- (2) Ensure that a copy of the EPA Acknowledgement of Consent accompanies the hazardous waste.
- (3) Do the following if transporting the hazardous waste out of the country:
 - (A) Indicate on the manifest the date the hazardous waste left the United States;
 - (B) Sign the manifest and retain one copy in accordance with **Section 7-710(c)**;
 - (C) Return a signed copy of the manifest to the generator; and

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- (D) Give a copy of the manifest to a U.S. Customs official at the point of departure from the United States.

7-706 IMPORTS OF HAZARDOUS WASTE

- (a) Any person who imports hazardous waste from a foreign country into Vermont must comply with the generator requirements of **subchapter 3** and the special requirements of this Section.
- (b) When importing hazardous waste a person must meet all the requirements of **Section 7-702(b)(1)** for the manifest except that:
 - (1) In place of the generator's name, address and EPA identification number, the name and address of the foreign generator and the importer's name, address and EPA identification number must be used.
 - (2) In place of the generator's signature on the certification statement, the U.S. importer or his or her agent must sign and date the certification and obtain the signature of the initial transporter.
 - (3) A person who imports hazardous waste into Vermont must use the Vermont Uniform Hazardous Waste Manifest.

7-707 EXCEPTION REPORTING

- (a) Each generator who does not receive a completed copy of the manifest
 - (1) from the designated facility within 35 days, or
 - (2) from the foreign consignee within 60 days,of the initial shipment must take all actions necessary to locate the shipment and manifest, including contacting the designated transporter and designated facility.
- (b) Each generator who does not receive a completed copy of the manifest from the designated facility within 45 days of the initial shipment must immediately submit an exception report to the Secretary. The report must include a legible copy of the manifest and a cover letter signed by the generator or his or her authorized representative explaining the efforts taken to locate the waste and results of those efforts.

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- (c) A primary exporter must file an exception report with the Secretary and the EPA Regional Administrator if:
- (1) He or she has not received a copy of the manifest signed by the transporter stating the date and place of departure from the United States within forty-five (45) days from the date it was accepted by the initial transporter;
 - (2) Within ninety (90) days from the date the waste was accepted by the initial transporter, the primary exporter has not received written confirmation from the consignee that the hazardous waste was received;
 - (3) The waste is returned to the United States.

7-708 ANNUAL & BIENNIAL REPORTS

- (a) Every person subject to these regulations who generates hazardous waste and is not a conditionally exempt generator or small quantity generator shall submit a biennial report, on **USEPA Form 8700-13A** provided by the Secretary. The report shall be submitted on or before March 1 of each even numbered year and shall describe all hazardous waste activity in the previous calendar year. The report shall accurately describe the composition, quantity, and destination of each hazardous waste stream generated and shall include a compilation of the data contained in all manifests prepared in such year.
- (b) Every person subject to these regulations who treats, stores, recycles, or disposes of hazardous waste shall submit a biennial report on **USEPA Form 8700-13B** provided by the Secretary. The report shall be submitted on or before March 1 of each even numbered year and shall describe all hazardous waste activity in the previous calendar year. The report shall accurately describe the composition, quantity, and management of each hazardous waste stream treated, stored, recycled, or disposed of, and shall include a compilation of the data contained in all manifests prepared in such year.
- (c) Exports of hazardous waste shall be reported by the primary exporter to EPA annually in accordance with **40 CFR Section 262.56**.
- (d) A transporter of hazardous waste shall report to the Secretary as required in **Section 7-406(d)(5)**.

7-709 ADDITIONAL REPORTING

The Secretary may require any generator, transporter or facility to submit such additional

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information as he or she deems necessary to implement and manage a hazardous waste program under these regulations.

7-710 RECORDKEEPING

- (a) All generators shall keep the following records for the specified time periods:
 - (1) A copy of each biennial report and manifest exception report for at least three (3) years from the due date of the report; and
 - (2) A copy of any test result, waste analysis or other determination made under **Section 7-303** for at least three (3) years from the date the waste was last sent to an on-site or off-site treatment, storage or disposal facility.
- (b) All generators and transporters shall keep a copy of each manifest signed by the generator, transporter and designated facility for at least three (3) years from the date that the waste involved was accepted by the transporter except for:
 - (1) Water (bulk shipment) transporters who shall comply with **40 CFR Section 263.22(b)**;
 - (2) Rail transporters who shall comply with **40 CFR Section 263.22(c)**; and
 - (3) Initial transporters that deliver waste to a next designated transporter that shall retain a copy of the manifest which has been signed by the generator and next designated transporter.
- (c) A transporter who transports hazardous waste out of the United States must keep a copy of the manifest, indicating that the hazardous waste left the United States for a period of three (3) years from the date the hazardous waste was accepted by the initial transporter.
- (d) For all exports a primary exporter must:
 - (1) Keep a copy of each notification of intent to export for a period of at least three (3) years from the date the hazardous waste was accepted by the initial transporter;
 - (2) Keep a copy of each EPA Acknowledgement of Consent for a period of at least three (3) years from the date the hazardous waste was accepted by the initial transporter;
 - (3) Keep a copy of each confirmation of delivery of the hazardous waste from the consignee for at least three (3) years from the date the hazardous waste was accepted

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- by the initial transporter; and
- (4) Keep a copy of each annual report for a period of at least three years from the due date of the report.
- (e) All record retention periods specified in this Section shall be automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Secretary, or as requested by the EPA Administrator in the case of records required for hazardous waste exports.

Subchapter 8: USED OIL MANAGEMENT STANDARDS

7-801 PURPOSE AND APPLICABILITY

This subchapter provides an alternative to managing used oil as hazardous waste; it identifies those materials that may (and some that may not) be managed as used oil, and establishes standards for their handling, storage, transport, aggregation, collection, and burning as fuel. This subchapter presumes that used oil is reused, processed or burned for energy recovery. Used oil that is to be disposed of cannot be managed under this subchapter and must be evaluated to determine if it is subject to regulation as hazardous waste. Unless being managed as a hazardous waste, all used oil is subject to regulation under this subchapter.

The following rules incorporate provisions and exemptions from other environmental protection rules promulgated under the authority of 10 V.S.A. Chapters 59 and 159.

7-802 DEFINITIONS

Terms defined in **Section 7-103** of these regulations or in 40 CFR Parts 260 through 270 and Part 279 have the same meaning when used in this subchapter. For the purposes of this subchapter, the terms listed below are defined as follows:

"Do-it-yourselfer used oil" means used oil that is derived from households, such as used oil generated by individuals through the maintenance of their personal vehicles.

"Do-it-yourselfer used oil generator" or **"do-it-yourselfer"** means an individual who generates "do-it-yourselfer used oil".

"Marketer" means any person, with the exception of do-it-yourselfers, who conducts either of the following activities:

- (a) Directs a shipment of used oil fuel from their facility to a used oil burner; or
- (b) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in **Table 1** of **Section 7-812(c)**.

"Off-specification used oil" is used oil that exceeds any maximum allowable level or that does not meet any minimum allowable level listed in **Table 1** of **Section 7-812(c)**.

"Processing" means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived product. Processing includes, but is not limited to: blending used oil with virgin petroleum

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products, blending used oils to meet the **used oil fuel** specification, filtration, simple distillation, chemical or physical separation and re-refining.

"Small fuel burning equipment" means fuel burning equipment with a maximum operating heat input equal to or less than 500,000 BTU per hour.

"Specification used oil" is any used oil that does not exceed any maximum allowable level, and meets the minimum allowable levels listed in **Table 1** of **Section 7-812(c)**.

"Used Oil" means any petroleum product that has been refined from crude oil (in whole or in part), or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Used oil is a free-flowing liquid at standard temperature and pressure and has a flash point of greater than 140 degrees (F).

"Used Oil Aggregation Point" means any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons. Used oil aggregation points may also accept do-it-yourselfer generated used oil.

"Used Oil Collection Facility" means any facility or site that accepts/aggregates and stores used oil collected from do-it-yourselfers, or used oil generators who bring used oil to the collection facility in shipments of no more than 55 gallons.

"Used Oil Fuel" means used oil that meets the **Table 1** specifications and is burned for energy recovery.

"Used Oil Generator" means any person, by site, whose act or process produces used oil that is not "do-it-yourselfer used oil" or whose act first causes used oil to become subject to regulation.

"Used Oil Handler" means any person subject to **Sections 7-807 through 7-813** of this Subchapter.

"Used Oil Processor" means a facility that processes used oil.

"Used Oil Transfer Facility" means any transportation related facility including loading docks, parking areas, storage areas and other areas where shipments of used oil are held for more than 24 hours and not longer than 35 days during the normal course of transportation. Transfer facilities that store used oil for more than 35 days are subject to the used oil processor requirements of **Section 7-813**.

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"Used Oil Transporter" means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities.

"Vaporizing Used-Oil Burning Equipment" means any equipment which generates heat by the introduction of fuel onto a heated device to produce vapors which are then burned for heat recovery.

7-803 PROHIBITIONS

The following uses or activities are prohibited:

- (a) The mixing of hazardous wastes with used oil, with the exception that used oil may be mixed with waste that is hazardous solely because it exhibits the characteristic of ignitability (e.g., ignitable-only mineral spirits), provided that the resultant mixture does not exhibit the characteristic of ignitability;
- (b) The use of any used oil for road oiling or dust suppression;
- (c) Burning off-specification used oil in small fuel burning equipment;
- (d) Burning used oil for firefighter training;
- (e) Burning used oil for energy recovery in any food product processing unless approved by the Secretary in writing;
- (f) The sale or use of vaporizing used-oil burning equipment;
- (g) Management of used oil in anything other than containers or tanks as specified under **Section 7-806** unless the units are subject to regulation under Subchapter 5 of these regulations; and
- (h) Pursuant to **10 V.S.A. Section 6621a**, the knowing disposal of used oil in a solid waste landfill.

7-804 EXEMPTIONS

- (a) Do-it-yourselfers who produce used oil (specification or off-specification) are exempt from the provisions of this subchapter. Once do-it-yourselfer used oil is accepted by a used oil

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aggregation point, collection facility, marketer, burner, or processor, the used oil is subject to regulation under this subchapter.

- (b) Small fuel burning equipment, in use prior to January 1, 1994, is exempt from **Section 5-261 of the Air Pollution Control Regulations**.
- (c) Used oil generated from normal shipboard operations, aboard vessels at sea, lake, or river or at port, is considered to be generated at the time it is transported ashore and is not subject to the requirements of this subchapter until the time it is transported ashore. The owner or operator of the vessel and the person(s) removing or accepting used oil from the vessel are co-generators of the used oil and are both responsible for managing the oil in compliance with the requirements of this subchapter once the used oil is transported ashore. The co-generators may decide among them which party will fulfill the requirements of this subchapter.
- (d) Farmers who, in a calendar year, generate an average of 25 gallons per month or less of used oil from vehicles or machinery used on the farm are not subject to the requirements of this subchapter.
- (e) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to the requirements of this subchapter.
- (f) Wastewater, the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil is not subject to the requirements of this subchapter. For purposes of this paragraph, "de minimis" quantities of used oils are defined as small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment, during normal operations, or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills, or other releases, and will not apply to used oil recovered from wastewaters.

7-805 USED OIL DETERMINATION

This Section identifies those materials which may be managed as used oil or used oil fuel under this subchapter. It also identifies certain materials which cannot be managed as used oil and indicates whether they may be subject to regulation as hazardous waste.

- (a) Used oil drained, separated, or removed from materials containing or otherwise contaminated with used oil may be managed as used oil under this subchapter.

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- (b) Materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material are not used oil, and are subject to the hazardous waste determination requirement of **Section 7-303**.

Note: These materials may be subject to regulation as hazardous waste if the criteria for the VT02 hazardous waste number listed under **Section 7-211** are met and/or they exhibit a hazardous characteristic.

- (c) Mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under this subchapter.
- (d) Used oil that contains PCBs in a concentration less than 50 ppm may be managed as used oil under this subchapter. Used oil with a concentration of PCBs equal to or greater than 50 ppm is subject to regulation both as hazardous waste under **Section 7-211/VT01** (unless it is exempt pursuant to **Section 7-203(t)**), and under **40 CFR Part 761**. Marketers and burners of used oil who market used oil containing any quantifiable level of PCBs are also subject to the requirements of **40 CFR Part 761, including Sections 761.20(d) and (e)**.
- (e) Materials derived from used oil.
 - (1) Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used in a manner constituting disposal (e.g., re-refined lubricants) are:
 - (A) Not used oil and thus are not subject to this subchapter, and
 - (B) Not hazardous wastes and thus are not subject to the remainder of these regulations.
 - (2) Materials produced from used oil that are burned for energy recovery (e.g., used oil fuels) are subject to regulation as used oil under this subchapter.
 - (3) Except as provided in **Section 7-804(e)**, materials derived from used oil that are disposed of or used in a manner constituting disposal are not used oil, and are subject to the hazardous waste determination requirement of **Section 7-303** and to management as a hazardous waste when applicable.
- (f) Rebuttable presumption

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Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in **Sections 7-210 through 7-215** of these regulations. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III (described in Section 7-219(b)), to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in **Appendix II** of these regulations). The rebuttable presumption does not apply to:

- (1) Metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in **Section 7-807(d)(2)**, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.
- (2) Used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

7-806 GENERAL USED OIL MANAGEMENT STANDARDS

With the exception of do-it-yourselfers, the following requirements and standards apply to all used oil handlers:

- (a) Used oil shall be stored only in containers or tanks as specified by **subsections (b) through (d)**, below.
- (b) Containers holding used oil shall be managed as follows:
 - (1) Containers shall be kept closed at all times, except when adding or removing used oil;
 - (2) A container holding used oil must not be opened, handled or stored in a manner which may rupture the container or cause a release. If a container begins to leak, the used oil must immediately be transferred from the leaking container to a container that is in good condition, or the used oil shall be managed in some other way that complies with the requirements of this Section;
 - (3) A container holding used oil must be made of or lined with materials which will not react with and are otherwise compatible with used oil;
 - (4) Containers holding used oil must be in good condition (no severe rusting, apparent

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structural defects or deterioration);

- (5) Containers holding used oil must be labeled or marked with the words "Used Oil" such that the label or marking is visible;
 - (6) Containers holding used oil must be stored on an impervious surface;
 - (7) A container holding used oil may be stored out-of-doors only if the container is placed within a structure that sheds rain and snow; and
 - (8) A container holding a mixture of used oil and water shall be placed within a structure that protects the container from freezing.
- (c) Underground Storage Tanks (USTs) holding used oil shall be managed as follows:
- (1) An UST holding used oil must be permitted, operated, and maintained in accordance with the Vermont Underground Storage Tank Regulations;
 - (2) Fill pipes used to transfer used oil into an UST must be marked or labeled to clearly indicate used oil storage; and
 - (3) Any residue removed from within an UST system being used (or that was last used) to hold used oil, that is generated as a result of normal operation, maintenance or closure of the UST and that cannot be managed as used oil under this subchapter, must be evaluated to determine if it is a hazardous waste and managed as a hazardous waste when applicable.
- (d) Above-Ground Storage Tanks (including unregistered tank trailers) holding used oil must be handled and managed according to the following:
- (1) Above-ground storage tanks holding used oil shall be installed and operated in accordance with Vermont Department of Labor and Industry Standards.
 - (2) Above-ground storage tanks holding used oil shall be clearly marked with the words "Used Oil" at the time they are first used to collect used oil.
 - (3) Above-ground storage tanks holding used oil shall be managed in such a manner as to prevent rupture of the tank and to ensure that no release occurs. If a tank begins to leak, the owner or operator must immediately either transfer the used oil from that tank to another tank or to containers that are in good condition, or manage the used oil in some other way that complies with the requirements of this Section.

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- (4) Above-ground storage tanks holding used oil that are located out-of-doors must be equipped with secondary containment as specified in **40 CFR Sections 279.45(e) and (f)**.

(e) Response to a Release of Used Oil

- (1) Upon detection of a release of used oil to the environment that is not subject to the requirements of **Subpart F of 40 CFR Part 280** (Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances), a used oil handler must perform the following cleanup steps:

- (A) Stop the release;
- (B) Contain the released used oil;
- (C) Clean up and manage properly the released used oil and other materials so that they no longer present a hazard to human health or the environment; and
- (D) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

Note: Clean-up materials may be subject to regulation as hazardous waste if the criteria for the VT02 hazardous waste number listed under **Section 7-211** are met and/or they exhibit a hazardous characteristic.

- (2) A release of two (2) gallons or more of used oil to the lands or surface waters of the state shall be immediately reported to the Secretary by the person or persons exercising control of such oil by calling the Waste Management Division at (802) 241-3888, Monday through Friday, 7:45 a.m. to 4:30 p.m. or the Department of Public Safety, Emergency Management Division at (800) 641-5005, 24 hours/day.
- (3) A written report shall be submitted to the Secretary within ten (10) days following any release subject to **subsection (2)**, above. The report should be sent to: The Vermont Department of Environmental Conservation, Waste Management Division, 103 South Main Street, Waterbury, VT 05671-0404.

Note: Under the Federal Water Pollution Control Act, certain discharges of “oil” are prohibited and must be reported pursuant to the requirements of **40 CFR Part 110 / Discharge of Oil**.

- (f) Used oil handlers are subject to all applicable Spill Prevention, Control and

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Countermeasure requirements of **40 CFR Part 112**.

Note: **40 CFR Part 112** does not apply to facilities that meet both the following criteria:

- (1) The underground buried storage capacity of the facility is 42,000 gallons or less of oil, and
- (2) The storage capacity, which is not buried, of the facility is 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(g) Disposal of Used Oil

The following requirements apply to used oils that cannot be processed or burned for energy recovery and therefore must be disposed of:

- (1) Used oils that cannot be processed or burned for energy recovery under this subchapter must be evaluated in accordance with the hazardous waste determination requirement of **Section 7-303** and managed as a hazardous waste when applicable.
- (2) Used oils that cannot be processed or burned for energy recovery under this subchapter and that are not hazardous wastes must be disposed in accordance with Vermont's Solid Waste Management Regulations.

7-807 STANDARDS FOR USED OIL GENERATORS

- (a) This Section applies to all used oil generators as defined under **Section 7-802** of this subchapter.
- (b) Used oil generators shall comply with the general standards set forth under **Section 7-806**, and the following, as applicable:
 - (1) the marketer standards set forth under **Section 7-809**; and
 - (2) the standards for burning used oil for energy recovery set forth under **Section 7-812**.
- (c) The amount of used oil that may be stored on-site is limited to:
 - (1) no more than 1,320 gallons (an amount equivalent to twenty-four 55 gallon drums) if the used oil is stored aboveground. No single container may have a capacity in excess of 660 gallons; or

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- (2) no more than 42,000 gallons if the used oil is stored in underground storage tanks; or
- (3) an amount greater than that listed under **subsection (1)**, above, provided:
 - (A) all applicable Spill Prevention, Control and Countermeasure requirements of **40 CFR Part 112** are met;
 - (B) used oil is not stored on-site longer than 180 days; and
 - (C) each container used to store used oil is marked to identify the date the container became full.
- (d) Except as provided in **subsections (1) and (2)**, below, used oil generators must ensure that their used oil is transported only by transporters who are permitted according to the requirements of **Section 7-811(b)(2)**.
 - (1) A used oil generator may transport used oil that is either generated at the used oil generator's site or collected from household do-it-yourselfers to a used oil collection facility or an aggregation point without complying with the transporter requirements of **Section 7-811**, provided that:
 - (A) The used oil is transported in a vehicle owned by the used oil generator or a vehicle owned by an employee of the used oil generator;
 - (B) Containers used to transport used oil must be DOT approved and meet the standards set forth under **Section 7-806(b)**;
 - (C) No more than 55 gallons of used oil is transported at any time; and
 - (D) The used oil is transported to either a used oil collection facility or to an aggregation point as defined under **Section 7-802**.
 - (2) Tolling arrangements

A used oil generator may arrange for used oil to be transported by a transporter without an EPA identification number if the used oil is reclaimed under a contractual agreement pursuant to which reclaimed oil is returned by the processor to the generator for use as a lubricant, cutting oil, or coolant. The contract (known as a "tolling arrangement") must indicate:

 - (A) The type of used oil and the frequency of shipments;

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- (B) That the vehicle used to transport the used oil to the processing/re-refining facility and to deliver recycled used oil back to the generator is owned and operated by the used oil processor/re-refiner; and
 - (C) That reclaimed oil will be returned to the generator.
- (e) Used oil generators who transport more than 55 gallons of used oil at one time must comply with the transporter requirements of **Section 7-811**.
- (f) Except as provided in **subsections (1)(A) through (1)(E)**, below, used oil generators who process used oil shall comply with the requirements of **Section 7-813**.
 - (1) Used oil generators who perform the following activities are not processors provided that the used oil is generated on-site and is not being sent off-site to a burner of on- or off-specification used oil fuel:
 - (A) Filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the used oil generator;
 - (B) Separating used oil from wastewater generated on-site, to make the wastewater acceptable for discharge or reuse pursuant to **Section 402 or Section 307(b) of the Clean Water Act** or other applicable Federal or state regulations governing the management or discharge of wastewaters;
 - (C) Using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation;
 - (D) Draining or otherwise removing used oil from materials containing or otherwise contaminated with used oil, in order to remove excessive oil to the extent possible pursuant to **Section 7-805**; or
 - (E) Filtering, separating or otherwise reconditioning used oil before burning it in small fuel burning equipment pursuant to **Section 7-812**.

7-808 STANDARDS FOR USED OIL AGGREGATION POINTS

- (a) This Section applies to owners or operators of used oil aggregation points as defined under **Section 7-802** of this subchapter.
- (b) Owners or operators of used oil aggregation points shall comply with the generator

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standards set forth under **Section 7-807** of this subchapter.

7-809 STANDARDS FOR USED OIL MARKETERS

- (a) This Section applies to marketers as defined under **Section 7-802** of this subchapter.
- (b) Persons who market used oil fuel shall notify the Secretary of such activity and obtain an EPA identification number using a Notification of Regulated Waste Activity form provided by the Secretary pursuant to the requirements of **Section 7-104**.
- (c) Marketers initiating or accepting a shipment of used oil fuel must maintain the following records for a minimum of three years:
 - (1) Copies of all analytical and test results applicable to the shipment of used oil fuel, and/or documentation of total halogen field screening results as required under **Section 7-812(c)**; and
 - (2) An operating log for all shipments of used oil fuel that includes the following information:
 - (A) the name, EPA identification number, and address of the facility to which used oil fuel is sent or from which used oil fuel is received;
 - (B) the quantity of used oil fuel shipped or received;
 - (C) the date of shipment or delivery; and
 - (D) name, EPA identification number, and address of the transporter.
 - (3) The certification required by **subsection (f)(2)**, below.
- (d) A marketer that stores used oil shall manage his or her facility in accordance with the general standards set forth under **Section 7-806**.
- (e) Marketers shall comply with the following, as applicable:
 - (1) the used oil generator standards set forth under **Section 7-807**;
 - (2) the used oil collection facility standards set forth under **Section 7-810**;

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- (3) the used oil transporter standards set forth under **Section 7-811**;
 - (4) the standards for burning used oil for energy recovery set forth under **Section 7-812**;
and
 - (5) the used oil processor standards set forth under **Section 7-813**.
- (f) Off-specification used oil
- (1) A marketer may initiate a shipment of off-specification used oil only to a used oil burner that meets the requirements of **Section 7-812(f)**.
 - (2) Before a marketer directs the first shipment of off-specification used oil fuel to a burner, the marketer must obtain a one-time written and signed notice from the burner certifying that:
 - (A) The burner has notified EPA stating the location and general description of used oil management activities; and
 - (B) The burner will burn the off-specification used oil only in an industrial furnace or boiler identified in **40 CFR Section 279.61(a)**.

7-810 STANDARDS FOR USED OIL COLLECTION FACILITIES

- (a) This Section applies to owners or operators of used oil collection facilities as defined under **Section 7-802** of this subchapter.
- (b) Persons who own or operate a used oil collection facility shall notify the Secretary of such activity and obtain an EPA identification number using a Notification of Regulated Waste Activity form provided by the Secretary pursuant to the requirements of **Section 7-104** of these regulations.
- (c) The owner or operator of a used oil collection facility shall manage such facility in accordance with the general standards set forth under **Section 7-806**, and the following, as applicable:
 - (1) the generator standards set forth under **Section 7-807**;
 - (2) the marketer standards set forth under **Section 7-809**;

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- (3) the standards for burning used oil for energy recovery set forth under **Section 7-812**; and
- (4) the processor standards set forth under **Section 7-813**.
- (d) Used oil collection facilities shall be equipped with a fire extinguisher or other fire-control equipment, and spill control equipment to assure containment of used oil in the event of a release.

7-811 STANDARDS FOR USED OIL TRANSPORTERS

- (a) This Section applies to used oil transporters as defined under **Section 7-802** of this subchapter.
- (b) With the exception of persons transporting used oil on-site, do-it-yourselfers, and used oil generators self-transporting up to 55 gallons of used oil according to the provisions of **Section 7-807(d)(1)**, persons transporting used oil must comply with the following:
 - (1) Used oil transporters shall notify the Secretary of such activity and obtain an EPA identification number using a Notification of Regulated Waste Activity form provided by the Secretary pursuant to the requirements of **Sections 7-104 and 7-406(d)(1) and (2)**.
 - (2) Used oil transporters shall obtain a permit from the Secretary according to the requirements of **Subchapter 4** of these regulations.
 - (3) Used oil transporters who operate transfer facilities shall comply with the requirements of **40 CFR Section 279.45** (Used Oil Storage at Transfer Facilities).
 - (4) Used oil transporters must comply with all applicable requirements under the U.S. Department of Transportation regulations in **49 CFR parts 171 through 180**. Persons transporting used oil that meets the definition of a hazardous material in **49 CFR Section 171.8** must comply with all applicable regulations in **49 CFR parts 171 through 180**.
 - (5) Rebuttable presumption for used oil
 - (A) To ensure that used oil is not a hazardous waste under the rebuttable presumption of **Section 7-805(f)**, the used oil transporter must determine whether the total halogen content of used oil being transported or stored at a

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transfer facility is above or below 1,000 ppm. The transporter must make this determination by:

- (i) Testing the used oil; or
 - (ii) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.
- (B) Records of analyses conducted or information used to comply with **subsection (b)(5)(A)** of this section must be maintained by the transporter for at least 3 years.
- (6) In addition to the above, used oil transporters are subject to the following, as applicable:
- (A) the general standards set forth under **Section 7-806**;
 - (B) the generator standards set forth under **Section 7-807**;
 - (C) the marketer standards set forth under **Section 7-809**;
 - (D) the standards for burning used oil for energy recovery set forth under **Section 7-812**; and
 - (E) the processor standards set forth under **Section 7-813**.

Note: Subsection 7-811(b) applies to the transportation of collected do-it-yourselfer used oil from regulated used oil generators, collection facilities, aggregation points, or other facilities where do-it-yourselfer used oil is collected.

- (c) Used oil transporters may consolidate or aggregate loads of used oil for the purposes of transportation but, with the following exceptions, may not process used oil unless the processor standards set forth under **Section 7-813** are met.
- (1) Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products or used oil fuel.
 - (2) Transporters may remove used oil from oil bearing electrical transformers and turbines and filter that used oil prior to returning it to its original use.

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- (d) Transporters who generate residues from the storage or transport of used oil must manage the residues as specified in **Section 7-805**.
- (e) Transporters who import used oil from abroad or export used oil outside of the United States are subject to the requirements of this Section from the time the used oil enters and until the time it exits Vermont.
- (f) Unless trucks previously used to transport hazardous waste are emptied as described in **Section 7-203(j)** of these regulations prior to transporting used oil, the used oil is considered to have been mixed with the hazardous waste and must be managed as hazardous waste.
- (g) A used oil transporter shall deliver used oil to:
 - (1) another used oil transporter, provided that the transporter is permitted as specified by **Section 7-811(b)(2)**, above, and has obtained an EPA identification number; or
 - (2) a used oil collection facility that has obtained an EPA identification number, in shipments of no more than 55 gallons; or
 - (3) A used oil burner or processing facility which has been assigned an EPA identification number.
- (h) Used oil transporters shall maintain, for a period of three years, an operating log that documents the following information for each used oil shipment made:
 - (1) the name, address, and EPA identification number (if one is required) of the used oil generator, collection facility, transporter, or processor who provided the used oil for transport;
 - (2) the quantity of used oil accepted;
 - (3) the date that the transporter accepts a shipment of used oil for transport, and the name and signature of the person representing the used oil generator, transporter, or processor who offered the used oil for transport;
 - (4) the name, address, and EPA identification number (if one is required) of the used oil collection facility, transporter, burner, or processor to which the used oil was delivered;
 - (5) the quantity of used oil delivered; and

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- (6) the date of delivery and the name and signature of the person representing the used oil collection facility, transporter, burner, or processor who received the used oil.
- (i) Response to Releases of Used Oil During Transport
 - (1) In the event of a release of used oil during transport, a used oil transporter shall comply with the release response requirements of **Section 7-806(e)**.
 - (2) If a discharge of used oil occurs during transportation and an official (State or local government or a Federal Agency) acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have EPA identification numbers.
 - (3) An air, rail, highway, or water transporter who has discharged used oil must:
 - (A) Give notice, if required by **49 CFR 171.15** to the National Response Center (800-424-8802 or 202-426-2675); and
 - (B) Report in writing as required by **49 CFR 171.16** to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, DC 20590.
 - (4) A water transporter who has discharged used oil must give notice as required by **33 CFR 153.203**.
- (j) A used oil transporter shall report to the Secretary as required by **Section 7-406(d)(5)**.

7-812 STANDARDS FOR BURNING USED OIL FOR ENERGY RECOVERY

- (a) Persons burning used oil for energy recovery in small fuel burning equipment are subject to the following:
 - (1) The types of used oil which may be burned in small fuel burning equipment is limited to:
 - (A) used motor vehicle crankcase or machine gearbox oil that meets the specifications listed in **Table 1**, below;
 - (B) mixtures of virgin fuel oil and specification used motor vehicle crankcase or

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machine gearbox oil; and

- (C) types of specification used oil other than those listed in **subsections (A) and (B)** that have been approved by the Secretary. Approval shall be granted on a case-by-case basis following the review by the Secretary of relevant Material Safety Data information, if available, and a narrative description of the process generating the used oil.
- (2) Specification used oil from the following sources may be burned in small fuel burning equipment:
- (A) On-site generated used oil;
 - (B) Do-it-yourselfer generated used oil;
 - (C) Off-site generated used oil from facilities owned or operated by the burner (i.e., the facility accepting and burning the used oil meets the definition of a used oil aggregation point);
 - (D) Off-site generated used oil from facilities not owned by the used-oil burner provided:
 - (i) the marketer of the used oil demonstrates that the used oil to be burned meets the **Table 1** specifications;
 - (ii) the facility accepting the used oil retains records which document the amount of used oil accepted, specification testing results, and the name, address, and telephone number of the marketer for a period of three years; and
 - (iii) the facility accepting the used oil has provided notification to the Secretary as a used oil collection facility according to the requirements of **Section 7-810(b)**.
- Note:** owners and/or operators of facilities that burn used oil are responsible for ensuring that used oil which is burned has been evaluated for the **Table 1** specifications in accordance with **Section 7-812(c)**, below.
- (3) The combustion gases from burning used oil in small fuel burning equipment must be vented to ambient air.

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- (b) Any person burning or proposing to burn used oil in fuel burning equipment other than small fuel burning equipment is subject to the provisions of **Sections 5-221(2) and 5-261 of the Vermont Air Pollution Control Regulations**.
- (c) Used Oil Fuel Specifications
- (1) Used oil that is marketed or burned for energy recovery must be evaluated to determine if it meets the specifications listed in **Table 1** as follows:
 - (A) Used oil generators that burn their own used oil on-site, or that burn off-site generated used oil received in shipments less than or equal to 55 gallons in volume, in small fuel burning equipment, must initially test the used oil from each source for total halogens. If there is reason to believe that any of the remaining Table 1 specifications would not be met by a volume of used oil, the used oil generator must test or analyze the used oil for any suspected constituents or properties.
 - (B) Used oil marketers offering used oil fuel to burners in shipments greater than 55 gallons, must initially analyze / test the used oil and maintain copies of analytical and testing results to establish that each of the Table 1 specifications are met.
 - (2) Field screening test kits may be used to determine if the allowable level for total halogens specified in **Table 1** is met .
 - (3) Used oil fuel from a specific source must be re-tested/analyzed if there is reason to believe that the quality of the used oil, or the process that generates the used oil has changed such that the **Table 1** specifications would not be met.

Note: “ppm” means “parts per million”, by weight on a water free basis.

TABLE 1 - USED OIL FUEL SPECIFICATIONS

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Chlorine	500 ppm maximum

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Lead	100 ppm maximum
Flash Point	140° F minimum
Total Halogens	1000 ppm maximum ¹
Polychlorinated biphenyls (PCBs)	< 2 ppm maximum
Net Heat of Combustion	8000 BTU/lb minimum

- (4) Used oil that does not meet the specifications identified by **Table 1** (i.e., off-specification used oil) must be managed as follows:
- (A) as hazardous waste (identified by at least the VT02 hazardous waste number listed under **Section 7-211**); or
 - (B) as used oil processed in a manner other than being burned for energy recovery; or
 - (C) in accordance with **subsection 7-812(f)**, below.
- (d) A facility burning used oil fuel shall maintain records documenting the amount of used oil fuel burned on-site. These records shall be retained for a period of three years.
- (e) A facility that burns used oil fuel may only store an amount of used oil on-site that does not exceed the storage limits specified under **Section 7-807(c)**.
- (f) Any person burning off-specification used oil must comply with **40 CFR 279, Subpart G** (Standards for Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery), and **Sections 5-221(2) and 5-261 of the Vermont Air Pollution Control Regulations**.

7-813 STANDARDS FOR USED OIL PROCESSORS

- (a) A used oil processor (as defined in **Section 7-802**) must comply with **40 CFR 279 Subpart F** (Standards for Used Oil Processors and Re-Refiners).

¹ Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste as specified under **Section 7-805(f)**.

Subchapter 9: UNIVERSAL WASTE MANAGEMENT STANDARDS

7-901 PURPOSE, SCOPE AND APPLICABILITY

This subchapter establishes alternative management standards for certain batteries, pesticides, thermostats, fluorescent light ballasts and mercury-containing lamps that would otherwise have to be managed as hazardous waste. As allowed by **Section 7-203(s)**, these “universal” hazardous wastes can be managed under the streamlined provisions of this subchapter in lieu of the hazardous waste management requirements set forth under **Subchapters 1 through 7**. Specifically, this subchapter establishes standards for small and large quantity handlers, universal waste transporters, and destination facilities; it also provides a petition mechanism for amending these regulations to add a hazardous waste to the category of universal wastes.

7-902 APPLICABILITY TO BATTERIES

With the exception of spent lead-acid batteries exempted under **Section 7-204(f)** of these regulations, persons managing batteries, as defined in **Section 7-911**, that are hazardous waste (due to exhibiting one or more of the hazardous waste characteristics identified by **Sections 7-205 through 7-208**), including spent lead acid batteries that are not managed according to the provisions of **Section 7-204(f)**, may comply with the requirements of **40 CFR Part 273** in lieu of managing those batteries as hazardous wastes under Subchapters 1 through 7 of these regulations.

7-903 APPLICABILITY TO PESTICIDES

- (a) With the exception of the pesticides listed in **subsection (b)**, the requirements of this subchapter apply to persons managing pesticides, as defined in **Section 7-911**, that are hazardous waste, and that meet one or more of the following conditions:
 - (1) Recalled pesticides that are stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under FIFRA **Section 19(b)**, including, but not limited to those owned by the registrant responsible for conducting the recall.
 - (2) Recalled pesticides that are stocks of a suspended or canceled pesticide, or a pesticide that is not in compliance with FIFRA, that are part of a voluntary recall by the registrant.
 - (3) Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

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- (b) The requirements of this subchapter do not apply to persons managing the following pesticides:
 - (1) Pesticides described in **subsection (a)** that are managed by farmers in compliance with **Section 7-203(r)** of these regulations.
 - (2) Pesticides not meeting one or more of the conditions of **subsection (a)**. These pesticides must be managed in compliance with the hazardous waste regulations set forth under **Subchapters 1 through 7**.
 - (3) Pesticides that do not meet the criteria for waste generation in **subsection (c)**.
- (c) Generation of waste pesticides
 - (1) A recalled pesticide described in **subsections (a)(1) and (2)** of this Section becomes a waste on the first date on which both the generator of the recalled pesticide agrees to participate in the recall, and the person conducting the recall decides to discard the pesticide (e.g., burn the pesticide for energy recovery).

Note: A recalled pesticide is not waste if the person conducting the recall has made a decision to use a management option that causes the pesticide to be exempt from regulation under **Section 7-204(a)**. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of FIFRA.

 - (2) An unused pesticide product described in **paragraph (a)(3)** of this Section becomes a waste on the date the generator decides to discard it.

7-904 APPLICABILITY TO MERCURY THERMOSTATS

- (a) The requirements of this subchapter apply to persons managing thermostats, as defined in **Section 7-911**, that are hazardous waste (due to exhibiting one or more of the hazardous waste characteristics identified by **Sections 7-205 through 7-208**).
- (b) Both used and unused thermostats become waste on the date the handler decides to discard them.

7-905 APPLICABILITY TO FLUORESCENT LIGHT BALLASTS

- (a) The requirements of this subchapter apply to persons managing intact and non-leaking

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fluorescent light ballasts with small capacitors that contain PCBs (the terms “fluorescent light ballast”, “PCB”, and “small capacitor” are defined in **Section 7-911**), and that are hazardous waste due to meeting the criteria of only the VT01 hazardous waste number identified in **Section 7-211** of these regulations.

- (b) Both used and unused fluorescent light ballasts become waste on the date the handler decides to discard them.

Note: Various PCB-containing devices (including leaking waste fluorescent light ballasts of any size) and the disposal of the potting material in ballasts with a concentration of PCBs over 50 ppm are subject to federal regulation under TSCA (**40 CFR Part 761**).

7-906 APPLICABILITY TO MERCURY-CONTAINING LAMPS

- (a) The requirements of this subchapter apply to persons managing mercury-containing lamps, as defined in **Section 7-911**, that are hazardous waste (due to exhibiting one or more of the hazardous waste characteristics identified by **Sections 7-205 through 7-208**).
- (b) Both used and unused mercury-containing lamps become waste on the date the handler decides to discard them.

SECTIONS **7-907** THROUGH **7-909** ARE RESERVED

7-910 HOUSEHOLD AND CONDITIONALLY EXEMPT GENERATOR WASTE

- (a) Persons managing the wastes listed below may, at their option, manage them under the requirements of this subchapter:
 - (1) Household wastes that are exempt under **Section 7-203(a)** and are also of the same type as the universal wastes described by **Sections 7-902 through 7-906**; and/or
 - (2) Conditionally exempt generator wastes of the same type as the universal wastes described by **Sections 7-902 through 7-906** (as allowed under **Section 7-306(c)(2)(F)**).
- (b) Persons who commingle the wastes described in **subsections (a)(1) and (2)** of this Section together with universal waste regulated under this subchapter must manage the commingled waste under the requirements of this subchapter.

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7-911 DEFINITIONS

Terms defined in **Section 7-103** of these regulations or in 40 CFR Parts 260 through 270 have the same meaning when used in this subchapter.

"Battery" means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

"Destination facility" means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in **subsections 7-912(d)(3)**. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

"Electric lamp" means the bulb or tube portion of a lighting device specifically designed to produce radiant energy, most often in the ultraviolet (UV), visible, and infra-red (IR) regions of the electromagnetic spectrum. Examples of common electric lamps include, but are not limited to, incandescent, fluorescent, high intensity discharge, and neon lamps.

"FIFRA" means the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).

"Fluorescent light ballast" means a device that electrically controls fluorescent light fixtures (i.e., provides starting voltage and stabilizes electrical current) and that includes a capacitor containing 0.1 kg or less of dielectric material.

"Large quantity handler" means a universal waste handler (as defined in this Section) who accumulates 5,000 kilograms (11,000 pounds) or more total of universal waste (batteries, pesticides, thermostats, ballasts, or lamps, calculated collectively) at any time. This designation as a large quantity handler is retained through the end of the calendar year in which 5,000 kilograms (11,000 pounds) or more total of universal waste is accumulated.

"Mercury-containing lamp" means an electric lamp in which mercury is purposely introduced by the manufacturer for the operation of the lamp.

"PCB" or **"polychlorinated biphenyl"** means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance.

"Pesticide" means an "economic poison" as defined under **6 V.S.A § 911**, **10 V.S.A § 6602**, and

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Section 7-103 of these regulations. The term pesticide does not include substances that are new animal drugs in accordance with Section 201 of the Food, Drug and Cosmetic Act (FFDCA) or animal drugs regulated by the Secretary of Health and Human Services.

"Small quantity handler" means a universal waste handler (as defined in this Section) who does not accumulate 5,000 kilograms (11,000 pounds) or more total of universal waste (batteries, pesticides, thermostats, ballasts, or lamps, calculated collectively) at any time.

"Thermostat" means a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements of **Section 7-912(d)(3)(B)**.

"TSCA" means the Toxic Substances Control Act, 15 U.S.C. 2601 et seq.

"Universal waste" means any of the following hazardous wastes that are subject to the universal waste requirements of this subchapter:

- (a) Batteries as described in **Section 7-902**;
- (b) Pesticides as described in **Section 7-903**;
- (c) Thermostats as described in **Section 7-904**;
- (d) Fluorescent light ballasts as described in **Section 7-905**; and
- (e) Mercury-containing lamps as described in **Section 7-906**.

"Universal waste handler":

- (a) Means:
 - (1) A generator (as defined in **Section 7-103**) of universal waste; or
 - (2) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
- (b) Does not mean:

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- (1) A person who treats (except under the provisions of **subsections 7-912(d)(3)**), disposes of, or recycles universal waste; or
- (2) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

"Universal waste transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

"Universal waste transporter" means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

7-912 STANDARDS FOR SMALL AND LARGE QUANTITY HANDLERS OF UNIVERSAL WASTE

(a) Applicability

This Section applies to small and large quantity handlers of universal waste as defined above.

(b) Prohibitions

Small and large quantity handlers of universal waste are:

- (1) Prohibited from disposing of universal waste; and
- (2) Prohibited from diluting or treating universal waste, except by responding to releases as provided in **Section 7-912(h)**; or by managing specific wastes as provided in **Section 7-912(d)**.

(c) Notification

- (1) A small quantity handler is not required to notify the Secretary of universal waste handling activities.
- (2) A large quantity handler must notify the Secretary as follows:
 - (A) Except as provided in **subsection (B)** of this Section, a large quantity handler must have sent written notification of universal waste management to the Secretary, and received an EPA Identification Number, before meeting or

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exceeding the 5,000 kilogram storage limit.

- (B) A large quantity handler who manages recalled universal waste pesticides as described in **subsections 7-903(a)(1) and (2)** and who has sent notification to EPA as required by **40 CFR part 165** is not required to notify for those recalled universal waste pesticides under this Section.

Note: A large quantity handler of universal waste who has already notified EPA of his or her hazardous waste management activities and has received an EPA Identification Number is not required to renotify under this Section.

- (3) A notification submitted by a large quantity handler must include:
 - (A) The large quantity handler's name and mailing address;
 - (B) The name and business telephone number of the person at the large quantity handler's site who should be contacted regarding universal waste management activities;
 - (C) The address or physical location of the universal waste management activities;
 - (D) A list of all of the types of universal waste managed by the large quantity handler;
 - (E) A statement indicating that the large quantity handler is accumulating more than 5,000 kilograms of universal waste at one time and the types of universal waste the handler is accumulating above this quantity.

Note: The Notification of Regulated Waste Activity Form specified under **Section 7-104** may be used to provide notification of universal waste management to the Secretary.

(d) Waste Management

- (1) [Reserved]
- (2) Universal Waste Pesticides

Both small and large quantity handlers must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more

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of the following:

- (A) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or
- (B) A container that does not meet the requirements of **subsection (2)(A)** of this Section, provided that the unacceptable container is overpacked in a container that does meet the **subsection (2)(A)** requirements; or
- (C) A tank that meets the requirements of **40 CFR part 265 subpart J, except for 40 CFR 265.197(c), 265.200, and 265.201**; or
- (D) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(3) Universal Waste Thermostats

Both small and large quantity handlers must manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- (A) Small and large quantity handlers must contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- (B) A small or large quantity handler may remove mercury-containing ampules from universal waste thermostats, provided the handler:
 - (i) Removes the ampules in a manner designed to prevent breakage of the ampules;
 - (ii) Removes ampules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage);
 - (iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules,

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from the containment device to a container in accordance with the applicable requirements of **Subchapter 3**;

- (iv) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container in accordance with the applicable requirements of **Subchapter 3**;
 - (v) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
 - (vi) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
 - (vii) Stores removed ampules in closed, non-leaking containers that are in good condition; and
 - (viii) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.
- (C) A small or large quantity handler who removes mercury-containing ampules from thermostats must determine whether the following exhibit a characteristic of hazardous waste identified in **Sections 7-205 through 7-208** of these regulations:
- (i) Mercury or clean-up residues resulting from spills or leaks; and/or
 - (ii) Other waste generated as a result of the removal of mercury-containing ampules (e.g., remaining thermostat units).
- (D) Any mercury, residue, and/or other waste listed in **subsection (C)** that exhibits a characteristic of hazardous waste must be managed in compliance with all applicable requirements of **Subchapters 1 through 7** of these regulations. The handler is considered the generator of the mercury, residues, and/or other waste and must comply with the applicable requirements of **Subchapter 3**.

(4) Universal Waste Fluorescent Light Ballasts

Both small and large quantity handlers must manage universal waste fluorescent light ballasts in a way that prevents releases of any universal waste or component of a

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universal waste to the environment. Small and large quantity handlers must:

- (A) Immediately contain and transfer any universal waste fluorescent light ballasts that show evidence of leakage or damage to a container that meets the requirements of **Section 7-311(f)(2) through (4)**.

Note: Fluorescent light ballasts which contain PCBs and that are not intact or that are leaking are subject to regulation under TSCA (i.e., **40 CFR Part 761**).

(5) Universal Waste Mercury-Containing Lamps

- (A) Both small and large quantity handlers must manage universal waste mercury-containing lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment. Small and large quantity handlers must:
 - (i) Place universal waste mercury-containing lamps in packaging functionally equivalent to that used for transportation of new, unused lamps.
 - (ii) Store packages of waste mercury-containing lamps in a designated storage area that is identified with a sign that is visible from at least 25 feet and that has a legend that includes the words: "Waste Mercury-Containing Lamps".
 - (iii) Seal full packages with tape.
 - (iv) Stack packages of lamps no higher than five (5) feet.
 - (v) Immediately contain and transfer any universal waste mercury-containing lamps that show evidence of damage, and all residue and other waste from broken lamps to a container that meets the requirements of **Section 7-311(f)(2) through (4)**.
- (B) A small or large quantity handler must determine whether residue and/or other waste from broken lamps collected pursuant to **subsection (5)(A)(v)** above, exhibits a characteristic of hazardous waste identified in **Sections 7-205 through 7-208** of these regulations.
- (C) Any residue and/or other waste that exhibits a characteristic of hazardous waste must be managed in compliance with all applicable requirements of **Subchapters 1 through 7** of these regulations. The handler is considered the

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generator of the residues, and/or other waste and must comply with the applicable requirements of **Subchapter 3**.

(e) Labeling and marking.

Small and large quantity handlers must label and mark universal waste to identify its type as specified below:

- (1) [Reserved]
- (2) A container, (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in **subsections 7-903(a)(1) and (2)** are contained must be labeled and marked clearly with:
 - (A) The label that was on or accompanied the product as sold or distributed; and
 - (B) The words "Universal Waste-Pesticide(s)" or "Waste-Pesticide(s);"
- (3) A container, tank, or transport vehicle or vessel in which unused pesticide products as described in **subsection 7-903(a)(3)** are contained must be labeled and marked clearly with:
 - (A) A label as follows:
 - (i) The label that was on the product when purchased, if still legible;
 - (ii) If using the labels described in **subsection (i)** is not feasible, the appropriate label as required under the Department of Transportation regulation **49 CFR part 172**;
 - (iii) If using the labels described in **subsections (i) and (ii)** is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by a state; and
 - (B) The words "Universal Waste-Pesticide(s)" or "Waste-Pesticide(s)."
- (4) Universal waste thermostats (i.e., each thermostat), or a container in which the thermostats are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste-Mercury Thermostat(s)," or "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)".

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- (5) Universal waste fluorescent light ballasts (i.e., each ballast), or a container in which the ballasts are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste-PCB Ballast(s)," or "Waste PCB Ballast(s)," or "Used PCB Ballast(s)".
 - (6) Containers in which universal waste mercury-containing lamps are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste-Mercury-Containing Lamp(s)," or "Waste Mercury-Containing Lamp(s)," or "Used Mercury-Containing Lamp(s)".
- (f) Accumulation Time Limits
- (1) A small or large quantity handler may not accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of **subsection (2)**, below, are met.
 - (2) A small or large quantity handler may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.
 - (3) A small or large quantity handler who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
 - (A) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
 - (B) Marking or labeling each individual item of universal waste (e.g., each thermostat, ballast or lamp) with the date it became a waste or was received;
 - (C) Maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received;
 - (D) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

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- (E) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
- (F) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

(g) Employee Training

Both small and large quantity handlers must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

(h) Response to Releases

- (1) Both small and large quantity handlers must respond to and manage a discharge or release of a universal waste in accordance with the requirements and procedures of **Section 7-105** of these regulations.
- (2) Both small and large quantity handlers must determine whether any material resulting from the discharge or release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of **Subchapters 1 through 7** of these regulations. The handler is considered the generator of the material resulting from the discharge or release, and must comply with the applicable requirements of **Subchapter 3**.

(i) Off-Site Shipments

- (1) Both small and large quantity handlers of universal waste are prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
- (2) If a small or large quantity handler self-transportes universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of **Section 7-913** while transporting the universal waste.
- (3) If a universal waste being offered for off-site transportation meets the definition of a hazardous material under **49 CFR parts 171 through 180**, the small or large quantity handler must package, label, mark and placard the shipment, and prepare the proper

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shipping papers in accordance with the applicable Department of Transportation regulations under **49 CFR parts 172 through 180**;

- (4) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.
 - (5) If a small or large quantity handler sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:
 - (A) Receive the waste back when notified that the shipment has been rejected, or
 - (B) Agree with the receiving handler on a destination facility to which the shipment will be sent.
 - (6) Small and large quantity handlers may reject a shipment containing universal waste, or a portion of a shipment containing universal waste received from another handler. If a handler rejects a shipment or a portion of a shipment, the handler must contact the originating handler to provide notification of the rejection and to discuss reshipment of the load. The handler must:
 - (A) Send the shipment back to the originating handler, or
 - (B) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.
 - (7) If a small or large quantity handler receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the Secretary of that shipment, and provide the name, address, and phone number of the originating shipper.
- (j) Tracking Universal Waste Shipments
- (1) A small quantity handler is not required to keep records of shipments of universal waste.
 - (2) A large quantity handler is subject to the following tracking requirements:
 - (A) Receipt of shipments

A large quantity handler must keep a record of each shipment of universal waste

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received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:

- (i) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
- (ii) The quantity of each type of universal waste received;
- (iii) The date of receipt of the shipment of universal waste.

(B) Shipments off-site

A large quantity handler must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste sent must include the following information:

- (i) The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;
- (ii) The quantity of each type of universal waste sent;
- (iii) The date the shipment of universal waste left the facility.

(C) Record retention

- (i) A large quantity handler must retain the records described in **subsection (2)(A)** for at least three years from the date of receipt of a shipment of universal waste.
- (ii) A large quantity handler must retain the records described in **subsection (2)(B)** for at least three years from the date a shipment of universal waste left the facility.

(k) Exports

Both small and large quantity handlers who send universal waste to a foreign destination must:

- (1) Comply with the requirements applicable to a primary exporter in **Sections 7-**

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705(b)(1) through (6), 7-710(d) and (e), and 40 CFR 262.56(a)(1) through (4), (6), and (b);

- (2) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in **Section 7-103**; and
- (3) Provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

7-913 STANDARDS FOR UNIVERSAL WASTE TRANSPORTERS

(a) Applicability

This Section applies to universal waste transporters (as defined in **Section 7-911**).

(b) Prohibitions

A universal waste transporter is:

- (1) Prohibited from disposing of universal waste; and
- (2) Prohibited from diluting or treating universal waste, except by responding to releases as provided in **Section 7-913(e)**.

(c) Waste Management

- (1) A universal waste transporter must comply with all applicable U.S. Department of Transportation regulations in **49 CFR part 171 through 180** for transport of any universal waste that meets the definition of hazardous material in **49 CFR 171.8**. For purposes of the Department of Transportation regulations, a material is considered a hazardous waste if it is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in **40 CFR part 262**. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the Department of Transportation regulations.
- (2) Some universal waste materials are regulated by the Department of Transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in **49 CFR 173.2**. As universal waste shipments do not require a manifest under **40 CFR 262**, they may not be described by the DOT proper shipping name

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"hazardous waste, (l) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".

- (3) Universal waste transporters are subject to the permit requirements of **10 V.S.A Section 6607a**.

(d) Storage Time Limits

- (1) A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.
- (2) If a universal waste transporter stores universal waste for more than ten days, the transporter becomes a universal waste handler and must comply with the applicable requirements of **Section 7-912** of this subchapter while storing the universal waste.

(e) Response to Releases

- (1) A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.
- (2) A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, it is subject to all applicable requirements of **Subchapters 1 through 7** of these regulations. If the waste is determined to be a hazardous waste, the transporter must manage such waste in accordance with the applicable generator requirements of **Subchapter 3**.

(f) Off-site shipments

- (1) A universal waste transporter is prohibited from transporting universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.
- (2) If the universal waste being shipped off-site meets the Department of Transportation's definition of a hazardous material under **49 CFR 171.8**, the shipment must be properly described on a shipping paper in accordance with the applicable Department of Transportation regulations under **49 CFR part 172**.

(g) Exports

A universal waste transporter transporting a shipment of universal waste to a foreign

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destination may not accept a shipment if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent. In addition the transporter must ensure that:

- (1) A copy of the EPA Acknowledgment of Consent accompanies the shipment; and
- (2) The shipment is delivered to the facility designated by the person initiating the shipment.

7-914 STANDARDS FOR DESTINATION FACILITIES

(a) Applicability

- (1) The owner or operator of a destination facility (**as defined in Section 7-911**) is subject to all applicable requirements of **Subchapters 1, 2, 3, 5, 6 and 7 of these regulations**.
- (2) The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with the applicable requirements of **Subchapter 6** of these regulations.

(b) Off-site shipments.

- (1) The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility or a foreign destination.
- (2) The owner or operator of a destination facility may reject a shipment containing universal waste, or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, the owner must contact the shipper to provide notification of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility must:
 - (A) Send the shipment back to the original shipper, or
 - (B) If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.
- (3) If the owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination

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facility must immediately notify the Secretary of that shipment, and provide the name, address, and phone number of the shipper.

(c) Tracking Universal Waste Shipments

- (1) The owner or operator of a destination facility must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:
 - (A) The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;
 - (B) The quantity of each type of universal waste received; and
 - (C) The date of receipt of the shipment of universal waste.
- (2) The owner or operator of a destination facility must retain the records described in **subsection (1)**, above, for at least three years from the date of receipt of a shipment of universal waste.

7-915 IMPORT REQUIREMENTS

Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of this Section, immediately after the waste enters the United States, as indicated below:

- (a) A universal waste transporter is subject to the universal waste transporter requirements of **Section 7-913**.
- (b) A universal waste handler is subject to the small or large quantity handler requirements of **Section 7-912**, as applicable.
- (c) An owner or operator of a destination facility is subject to the destination facility requirements of **Section 7-914**.

7-916 PETITIONS TO INCLUDE OTHER WASTES AS UNIVERSAL WASTES UNDER THIS SUBCHAPTER

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(a) General

- (1) Any person seeking to add a hazardous waste or a category of hazardous waste to this subchapter may petition the Secretary for a regulatory amendment under this Section.
- (2) To be successful, the petitioner must demonstrate to the satisfaction of the Secretary that regulation of the waste or category of waste under the provisions of this subchapter is: appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition must address as many of the factors listed in **Section 7-916(b)** as are appropriate for the waste or waste category addressed in the petition.
- (3) The Secretary will evaluate petitions using the factors listed in **Section 7-916(b)**. The decision of whether or not to amend this subchapter will be based on the weight of evidence showing that regulation under this subchapter is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

(b) Factors for Petitions to Include Other Wastes as Universal Wastes

- (1) The waste or category of waste, as generated by a wide variety of generators, is listed in **Sections 7-210 through 7-215 of these regulations**, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in **Sections 7-205 through 7-208 of these regulations**. (When a characteristic waste is added to the universal waste regulations of this subchapter by using a generic name to identify the waste category, the definition of universal waste in **Sections 7-103 and 7-911** will be amended to include only the hazardous waste portion of the waste category.) Thus, only the portion of the waste stream that does exhibit one or more characteristics (i.e., is hazardous waste) is subject to the universal waste regulations of this subchapter;
- (2) The waste or category of waste is not exclusive to a specific industry or group of industries, and is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt generators, small businesses, government organizations, as well as large industrial facilities);
- (3) The waste or category of waste is generated by a large number of generators (e.g., more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator;

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- (4) Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste;
- (5) The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (e.g., waste management requirements appropriate to be added to **Section 7-912(d), and Section 7-913(c)**; and/or applicable U.S. Department of Transportation requirements) would be protective of human health and the environment during accumulation and transport;
- (6) Regulation of the waste or category of waste under this subchapter will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (e.g., the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems) to recycling, treatment, or disposal in compliance with **Subchapters 1 through 7 of these regulations**.
- (7) Regulation of the waste or category of waste under this subchapter will improve implementation of and compliance with the hazardous waste regulatory program; and/or
- (8) Such other factors as may be appropriate.

APPENDIX I **Hazardous Wastes from Specific Sources**

The following wastes are referred to in **Section 7-212** and are hazardous wastes from specific sources.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Wood preservation: K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
Inorganic pigments: K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments.	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments.	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments.	(T)
K008	Oven residue from the production of chrome oxide green pigments.	(T)
Organic chemicals: K009	Distillation bottoms from the production of acetaldehyde from ethylene.	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	(R, T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	(T)
K015	Still bottoms from the distillation of benzyl chloride.	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	(T)

K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production.	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene.	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	(T)
K026	Stripping still tails from the production of methy ethyl pyridines.	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production.	(R, T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	(T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	(T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	(T)
K083	Distillation bottoms from aniline production.	(T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	(T)
K103	Process residues from aniline extraction from the production of aniline.	(T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production.	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	(T)

K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(C,T)
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(I,T)
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.	(C,T)
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	(T)
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	(T)
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups, (This waste does not include still bottoms from the distillation of benzyl chloride.).	(T)
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
Inorganic chemicals:		

K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	(T)
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	(T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production.	(T)
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Pesticides:		
K031	By-product salts generated in the production of MSMA and cacodylic acid.	(T)
K032	Wastewater treatment sludge from the production of chlordane.	(T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	(T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.	(T)
K035	Wastewater treatment sludges generated in the production of creosote.	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.	(T)
K037	Wastewater treatment sludges from the production of disulfoton.	(T)
K038	Wastewater from the washing and stripping of phorate production.	(T)
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	(T)
K040	Wastewater treatment sludge from the production of phorate.	(T)
K041	Wastewater treatment sludge from the production of toxaphene.	(T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	(T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D.	(T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	(T)
K098	Untreated process wastewater from the production of toxaphene.	(T)
K099	Untreated wastewater from the production of 2,4-D.	(T)
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt.	(T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	(C, T)
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	(T)
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	(T)

K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	(C,T)
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.	(T)
Explosives:		
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.	(R)
K045	Spent carbon from the treatment of wastewater containing explosives.	(R)
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	(T)
K047	Pink/red water from TNT operations.	(R)
Petroleum refining:		
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.	(T)
K049	Slop oil emulsion solids from the petroleum refining industry.	(T)
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	(T)
K051	API separator sludge from the petroleum refining industry.	(T)
K052	Tank bottoms (leaded) from the petroleum refining industry.	(T)
Iron and steel:		
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.	(T)
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).	(C,T)
Primary copper:		
K064	Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.	(T)
Primary lead:		
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.	(T)
Primary zinc:		
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.	(T)
Primary aluminum:		
K088	Spent potliners from primary aluminum reduction.	(T)

Ferroalloys:		
K090	Emission control dust or sludge from ferrochromiumsilicon production.	(T)
K091	Emission control dust or sludge from ferrochromium production	(T)
Secondary lead:		
K069	Emission control dust/sludge from secondary lead smelting. (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting this stay, EPA will publish a notice of the action in the Federal Register).	(T)
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	(T)
Veterinary pharmaceuticals:		
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
Ink formulation:		
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.	(T)
Coking:		
K060	Ammonia still lime sludge from coking operations.	(T)
K087	Decanter tank tar sludge from coking operations.	(T)
K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).	(T)
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	(T)
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	(T)

K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	(T)
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	(T)
K147	Tar storage tank residues from coal tar refining.	(T)
K148	Residues from coal tar distillation, including but not limited to, still bottoms.	(T)

APPENDIX II

Hazardous Constituents

Common name	Chemical abstracts name	Chemical abstracts No.	Hazardous waste No.
Acetonitrile	Same	75-05-8	U003
Acetophenone	Ethanone, 1-phenyl-	98-86-2	U004
2-Acetylaminefluorone	Acetamide, N-9H-fluoren-2-yl-	53-96-3	U005
Acetyl chloride	Same	75-36-5	U006
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxomethyl)-	591-08-2	P002
Acrolein	2-Propenal	107-02-8	P003
Acrylamide	2-Propenamide	79-06-1	U007
Acrylonitrile	2-Propenenitrile	107-13-1	U009
Aflatoxins	Same	1402-68-2	
Aldicarb	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime	116-06-3	P070
Aldrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha, 8abeta)-	309-00-2	P004
Allyl alcohol	2-Propen-1-ol	107-18-6	P005
Allyl chloride	1-Propane, 3-chloro	107-18-6	
Aluminum phosphide	Same	20859-73-8	P006
4-Aminobiphenyl	[1,1'-Biphenyl]-4-amine	92-67-1	
5-(Aminomethyl)-3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	2763-96-4	P007
4-Aminopyridine	4-Pyridinamine	504-24-5	P008
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5	U011
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6	P119
Aniline	Benzenamine	62-53-3	U012
Antimony	Same	7440-36-0	
Antimony compounds, N.O.S. ¹			
Aramite	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	

Arsenic	Same	7440-38-2	
Arsenic compounds, N.O.S. ¹			
Arsenic acid	Arsenic acid H ₃ AsO ₄	7778-39-4	P010
Arsenic pentoxide	Arsenic oxide As ₂ O ₅	1303-28-2	P011
Arsenic trioxide	Arsenic oxide As ₂ O ₃	1327-53-3	P012
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492-80-8	U014
Azaserine	L-Serine, diazoacetate (ester)	115-02-6	U015
Barium	Same	7440-39-3	
Barium compounds, N.O.S. ¹			
Barium cyanide	Same	542-62-1	P013
Benz[c]acridine	Same	225-51-4	U016
Benz[a]anthracene	Same	56-55-3	U018
Benzal chloride	Benzene, (dichloromethyl)-	98-87-3	U017
Benzene	Same	71-43-2	U019
Benzeneearsonic acid	Arsonic acid, phenyl-	98-05-5	
Benzidine	[1,1'-Biphenyl]-4,4'-diamine	92-87-5	U021
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2	
Benzo[j]fluoranthene	Same	205-82-3	
Benzo(k)fluoranthene	Same	207-08-9	
Benzo[a]pyrene	Same	50-32-8	U022
p-Benzoquinone	2,5-Cyclohexadiene-1,4-dione	106-51-4	U197
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7	U023
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7	P028
Beryllium powder	Same	7440-41-7	P015
Beryllium compounds, N.O.S. ¹			
Bromoacetone	2-Propanone, 1-bromo-	598-31-2	P017
Bromoform	Methane, tribromo-	75-25-2	U225
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	101-55-3	U030
Brucine	Strychnidin-10-one, 2,3-dimethoxy-	357-57-3	P018

Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7	
Cacodylic acid	Arsinic acid, dimethyl-	75-60-5	U136
Cadmium	Same	7440-43-9	
Cadmium compounds, N.O.S. ¹			
Calcium chromate	Chromic acid H ₂ CrO ₄ , calcium salt	13765-19-0	U032
Calcium cyanide	Calcium cyanide Ca(CN) ₂	592-01-8	P021
Carbon disulfide	Same	75-15-0	P022
Carbon oxyfluoride	Carbonic difluoride	353-50-4	U033
Carbon tetrachloride	Methane, tetrachloro-	56-23-5	U211
Chloral	Acetaldehyde, trichloro-	75-87-6	U034
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305-03-3	U035
Chlordane	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	57-74-9	U036
Chlordane (alpha and gamma isomers)			U036
Chlorinated benzenes, N.O.S. ¹			
Chlorinated ethane, N.O.S. ¹			
Chlorinated fluorocarbons, N.O.S. ¹			
Chlorinated naphthalene, N.O.S. ¹			
Chlorinated phenol, N.O.S. ¹			
Chlornaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)-	494-03-1	U026
Chloroacetaldehyde	Acetaldehyde, chloro-	107-20-0	P023
Chloroalkyl ethers, N.O.S. ¹			
p-Chloroaniline	Benzenamine, 4-chloro-	106-47-8	P024
Chlorobenzene	Benzene, chloro-	108-90-7	U037
Chlorobenzilate	Benzenecetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6	U038
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7	U039
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8	U042

Chloroform	Methane, trichloro-	67-66-3	U044
Chloromethyl methyl ether	Methane, chloromethoxy-	107-30-2	U046
beta-Chloronaphthalene	Naphthalene, 2-chloro-	91-58-7	U047
o-Chlorophenol	Phenol, 2-chloro-	95-57-8	U048
1-(o-Chlorophenyl)thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1	P026
Chloroprene	1,3-Butadiene, 2-chloro-	126-99-8	
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542-76-7	P027
Chromium	Same	7440-47-3	
Chromium compounds, N.O.S. ¹			
Chrysene	Same	218-01-9	U050
Citrus red No. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-	6358-53-8	
Coal tar creosote	Same	8007-45-2	
Copper cyanide	Copper cyanide CuCN	544-92-3	P029
Creosote	Same		U051
Cresol (Cresylic acid)	Phenol, methyl-	1319-77-3	U052
Crotonaldehyde	2-Butenal	4170-30-3	U053
Cyanides (soluble salts and complexes) N.O.S. ¹			P030
Cyanogen	Ethanedinitrile	460-19-5	P031
Cyanogen bromide	Cyanogen bromide (CN)Br	506-68-3	U246
Cyanogen chloride	Cyanogen chloride (CN)Cl	506-77-4	P033
Cycasin	beta-D-Glucopyranoside, (methyl-ONN- azoxy)methyl	14901-08-7	
2-Cyclohexyl-4,6- dinitrophenol	Phenol, 2-cyclohexyl-4,6-dinitro-	131-89-5	P034
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2- chloroethyl)tetrahydro-, 2-oxide	50-18-0	U058
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-75-7	U240
2,4-D, salts, esters			U240
Daunomycin	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino- 2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]- 7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	20830-81-3	U059

DDD	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72-54-8	U060
DDE	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	72-55-9	
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	50-29-3	U061
Diallate	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester	2303-16-4	U062
Dibenz[a,h]acridine	Same	226-36-8	
Dibenz[a,j]acridine	Same	224-42-0	
Dibenz[a,h]anthracene	Same	53-70-3	U063
7H-Dibenzo[c,g]carbazole	Same	194-59-2	
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4	
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0	
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189-55-9	U064
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro-	96-12-8	U066
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2	U069
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1	U070
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1	U071
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7	U072
Dichlorobenzene, N.O.S. ¹	Benzene, dichloro-	25321-22-6	
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1	U073
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0	U074
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-8	U075
Dichloroethylene, N.O.S. ¹	Dichloroethylene	25323-30-2	
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4	U078
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)-	156-60-5	U079
Dichloroethyl ether	Ethane, 1,1'-oxybis[2-chloro-	111-44-4	U025
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1	U027
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	111-91-1	U024
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1	P016
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2	U081
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0	U082
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6	P036

Dichloropropane, N.O.S. ¹	Propane, dichloro-	26638-19-7	
Dichloropropanol, N.O.S. ¹	Propanol, dichloro-	26545-73-3	
Dichloropropene, N.O.S. ¹	1-Propene, dichloro-	26952-23-8	
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6	U084
Dieldrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta, 6aalpha,7beta,7aalpha)-	60-57-1	P037
1,2:3,4-Diepoxybutane	2,2'-Bioxirane	1464-53-5	U085
Diethylarsine	Arsine, diethyl-	692-42-2	P038
1,4-Diethyleneoxide	1,4-Dioxane	123-91-1	U108
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7	U028
N,N'-Diethylhydrazine	Hydrazine, 1,2-diethyl-	1615-80-1	U086
O,O-Diethyl S-methyl dithiophosphate	Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2	U087
Diethyl-p-nitrophenyl phosphate	Phosphoric acid, diethyl 4-nitrophenyl ester	311-45-5	P041
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2	U088
O,O-Diethyl O-pyrazinyl phosphoro- thioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2	P040
Diethylstilbestrol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-	56-53-1	U089
Dihydrosafrole	1,3-Benzodioxole, 5-propyl-	94-58-6	U090
Diisopropylfluorophosphate (DFP)	Phosphorofluoridic acid, bis(1-methylethyl) ester	55-91-4	P043
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2- (methylamino)-2-oxoethyl] ester	60-51-5	P044
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4	U091
p- Dimethylaminoazobenzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-11-7	U093
7,12- Dimethylbenz[a]anthracene	Benz[a]anthracene, 7,12-dimethyl-	57-97-6	U094
3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	119-93-7	U095
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-44-7	U097
1,1-Dimethylhydrazine	Hydrazine, 1,1-dimethyl-	57-14-7	U098
1,2-Dimethylhydrazine	Hydrazine, 1,2-dimethyl-	540-73-8	U099

alpha,alpha-Dimethylphenethylamine	Benzeneethanamine, alpha,alpha-dimethyl-	122-09-8	P046
2,4-Dimethylphenol	Phenol, 2,4-dimethyl-	105-67-9	U101
Dimethyl phthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3	U102
Dimethyl sulfate	Sulfuric acid, dimethyl ester	77-78-1	U103
Dinitrobenzene, N.O.S. ¹	Benzene, dinitro-	25154-54-5	
4,6-Dinitro-o-cresol	Phenol, 2-methyl-4,6-dinitro-	534-52-1	P047
4,6-Dinitro-o-cresol salts			P047
2,4-Dinitrophenol	Phenol, 2,4-dinitro-	51-28-5	P048
2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro-	121-14-2	U105
2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	606-20-2	U106
Dinoseb	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	88-85-7	P020
Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0	U017
Diphenylamine	Benzenamine, N-phenyl-	122-39-4	
1,2-Diphenylhydrazine	Hydrazine, 1,2-diphenyl-	122-66-7	U109
Di-n-propylnitrosamine	1-Propanamine, N-nitroso-N-propyl-	621-64-7	U111
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4	P039
Dithiobiuret	Thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH	541-53-7	P049
Endosulfan	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	115-29-7	P050
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3	P088
Endrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-	72-20-8	P051
Endrin metabolites			P051
Epichlorohydrin	Oxirane, (chloromethyl)-	106-89-8	U041
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-	51-43-4	P042
Ethyl carbamate (urethane)	Carbamic acid, ethyl ester	51-79-6	U238
Ethyl cyanide	Propanenitrile	107-12-0	P101
Ethylenebisdithiocarbamic acid	Carbamodithioic acid, 1,2-ethanediylbis-	111-54-6	U114

Ethylenebisdithiocarbamic acid, salts and esters			U114
Ethylene dibromide	Ethane, 1,2-dibromo-	106-93-4	U067
Ethylene dichloride	Ethane, 1,2-dichloro-	107-06-2	U077
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy-	110-80-5	U359
Ethyleneimine	Aziridine	151-56-4	P054
Ethylene oxide	Oxirane	75-21-8	U115
Ethylenethiourea	2-Imidazolidinethione	96-45-7	U116
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-34-3	U076
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2	U118
Ethyl methanesulfonate	Methanesulfonic acid, ethyl ester	62-50-0	U119
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester	52-85-7	P097
Fluoranthene	Same	206-44-0	U120
Fluorine	Same	7782-41-4	P056
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7	P057
Fluoroacetic acid, sodium salt	Acetic acid, fluoro-, sodium salt	62-74-8	P058
Formaldehyde	Same	50-00-0	U122
Formic acid	Same	64-18-6	U123
Glycidylaldehyde	Oxiranecarboxyaldehyde	765-34-4	U126
Halomethanes, N.O.S. ¹			
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8	P059
Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)-	1024-57-3	
Heptachlor epoxide (alpha, beta, and gamma isomers)			
Heptachlorodibenzofurans			
Heptachlorodibenzo-p-dioxins			
Hexachlorobenzene	Benzene, hexachloro-	118-74-1	U127

Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3	U128
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4	U130
Hexachlorodibenzo-p-dioxins			
Hexachlorodibenzofurans			
Hexachloroethane	Ethane, hexachloro-	67-72-1	U131
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4	U132
Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7	U243
Hexaethyl tetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4	P062
Hydrazine	Same	302-01-2	U133
Hydrogen cyanide	Hydrocyanic acid	74-90-8	P063
Hydrogen fluoride	Hydrofluoric acid	7664-39-3	U134
Hydrogen sulfide	Hydrogen sulfide H ₂ S	7783-06-4	U135
Indeno[1,2,3-cd]pyrene	Same	193-39-5	U137
Isobutyl alcohol	1-Propanol, 2-methyl-	78-83-1	U140
Isodrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro,(1alpha,4alpha,4abeta,5beta,8beta,-8abeta) -	465-73-6	P060
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	U141
Kepone	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	143-50-0	U142
Lasiocarpine	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-	303-34-4	U143
Lead	Same	7439-92-1	
Lead compounds, N.O.S. ¹			
Lead acetate	Acetic acid, lead(2+) salt	301-04-2	U144
Lead phosphate	Phosphoric acid, lead(2+) salt (2:3)	7446-27-7	U145
Lead subacetate	Lead, bis(acetato-O)tetrahydroxytri-	1335-32-6	U146
Lindane	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58-89-9	U129
Maleic anhydride	2,5-Furandione	108-31-6	U147
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro-	123-33-1	U148

Malononitrile	Propanedinitrile	109-77-3	U149
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]-	148-82-3	U150
Mercury	Same	7439-97-6	U151
Mercury compounds, N.O.S. ¹			
Mercury fulminate	Fulminic acid, mercury(2+) salt	628-86-4	P065
Methacrylonitrile	2-Propenenitrile, 2-methyl-	126-98-7	U152
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91-80-5	U155
Methomyl	Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester	16752-77-5	P066
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-	72-43-5	U247
Methyl bromide	Methane, bromo-	74-83-9	U029
Methyl chloride	Methane, chloro-	74-87-3	U045
Methyl chlorocarbonate	Carbonochloridic acid, methyl ester	79-22-1	U156
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6	U226
3-Methylcholanthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5	U157
4,4'-Methylenebis (2-chloroaniline)	Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4	U158
Methylene bromide	Methane, dibromo-	74-95-3	U068
Methylene chloride	Methane, dichloro-	75-09-2	U080
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3	U159
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4	U160
Methyl hydrazine	Hydrazine, methyl-	60-34-4	P068
Methyl iodide	Methane, iodo-	74-88-4	U138
Methyl isocyanate	Methane, isocyanato-	624-83-9	P064
2-Methylactonitrile	Propanenitrile, 2-hydroxy-2-methyl-	75-86-5	P069
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	U162
Methyl methanesulfonate	Methanesulfonic acid, methyl ester	66-27-3	
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298-00-0	P071
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-04-2	U164

Mitomycin C	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5- methyl-, [1aS-(1aalpha,8beta,8aalpha,8balpha)]-.	50-07-7	U010
MNNG	Guanidine, N-methyl-N'-nitro-N-nitroso-	70-25-7	U163
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2	
Naphthalene	Same	91-20-3	U165
1,4-Naphthoquinone	1,4-Naphthalenedione	130-15-4	U166
alpha-Naphthylamine	1-Naphthalenamine	134-32-7	U167
beta-Naphthylamine	2-Naphthalenamine	91-59-8	U168
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-88-4	P072
Nickel	Same	7440-02-0	
Nickel compounds, N.O.S. ¹			
Nickel carbonyl	Nickel carbonyl Ni(CO) ₄ , (T-4)-	13463-39-3	P073
Nickel cyanide	Nickel cyanide Ni(CN) ₂	557-19-7	P074
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-	54-11-5	P075
Nicotine salts			P075
Nitric oxide	Nitrogen oxide NO	10102-43-9	P076
p-Nitroaniline	Benzenamine, 4-nitro-	100-01-6	P077
Nitrobenzene	Benzene, nitro-	98-95-3	U169
Nitrogen dioxide	Nitrogen oxide NO ₂	10102-44-0	P078
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-	51-75-2	
Nitrogen mustard, hydrochloride salt			
Nitrogen mustard N-oxide	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide	126-85-2	
Nitrogen mustard, N-oxide, hydrochloride salt			
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0	P081
p-Nitrophenol	Phenol, 4-nitro-	100-02-7	U170
2-Nitropropane	Propane, 2-nitro-	79-46-9	U171
Nitrosamines, N.O.S. ¹		35576-91-1D	
N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	924-16-3	U172

N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7	U173
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-18-5	U174
N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	62-75-9	P082
N-Nitroso-N-ethylurea	Urea, N-ethyl-N-nitroso-	759-73-9	U176
N-Nitrosomethylethylamine	Ethanamine, N-methyl-N-nitroso-	10595-95-6	
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684-93-5	U177
N-Nitroso-N-methylurethane	Carbamic acid, methylnitroso-, ethyl ester	615-53-2	U178
N-Nitrosomethylvinylamine	Vinylamine, N-methyl-N-nitroso-	4549-40-0	P084
N-Nitrosomorpholine	Morpholine, 4-nitroso-	59-89-2	
N-Nitrososornicotine	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)-	16543-55-8	
N-Nitrosopiperidine	Piperidine, 1-nitroso-	100-75-4	U179
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930-55-2	U180
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	13256-22-9	
5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro-	99-55-8	U181
Octamethylpyrophosphoramide	Diphosphoramidate, octamethyl-	152-16-9	P085
Osmium tetroxide	Osmium oxide OsO ₄ , (T-4)-	20816-12-0	P087
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7	U182
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2	P089
Pentachlorobenzene	Benzene, pentachloro-	608-93-5	U183
Pentachlorodibenzo-p-dioxins			
Pentachlorodibenzofurans			
Pentachloroethane	Ethane, pentachloro-	76-01-7	U184
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro-	82-68-8	U185
Pentachlorophenol	Phenol, pentachloro-	87-86-5	See F027
Phenacetin	Acetamide, N-(4-ethoxyphenyl)-	62-44-2	U187
Phenol	Same	108-95-2	U188
Phenylenediamine	Benzenediamine	25265-76-3	
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-38-4	P092
Phenylthiourea	Thiourea, phenyl-	103-85-5	P093

Phosgene	Carbonic dichloride	75-44-5	P095
Phosphine	Same	7803-51-2	P096
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	298-02-2	P094
Phthalic acid esters, N.O.S. ¹			
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9	U190
2-Picoline	Pyridine, 2-methyl-	109-06-8	U191
Polychlorinated biphenyls, N.O.S. ¹			
Potassium cyanide	Potassium cyanide K(CN)	151-50-8	P098
Potassium pentachlorophenate	Pentachlorophenol, potassium salt	7778736	None
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506-61-6	P099
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5	U192
1,3-Propane sultone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4	U193
n-Propylamine	1-Propanamine	107-10-8	U194
Propargyl alcohol	2-Propyn-1-ol	107-19-7	P102
Propylene dichloride	Propane, 1,2-dichloro-	78-87-5	U083
1,2-Propylenimine	Aziridine, 2-methyl-	75-55-8	P067
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo-	51-52-5	
Pyridine	Same	110-86-1	U196
Reserpine	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-smethyl ester, (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5	U200
Resorcinol	1,3-Benzenediol	108-46-3	U201
Saccharin	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81-07-2	U202
Saccharin salts			U202
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	U203
Selenium	Same	7782-49-2	
Selenium compounds, N.O.S. ¹			
Selenium dioxide	Selenious acid	7783-00-8	U204
Selenium sulfide	Selenium sulfide SeS ₂	7488-56-4	U205

Selenourea	Same	630-10-4	P103
Silver	Same	7440-22-4	
Silver compounds, N.O.S. ¹			
Silver cyanide	Silver cyanide Ag(CN)	506-64-9	P104
Silvex (2,4,5-TP)	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93-72-1	See F027
Sodium cyanide	Sodium cyanide Na(CN)	143-33-9	P106
Sodium pentachlorophenate	Pentachlorophenol, sodium salt	131522	None
Streptozotocin	D-Glucose, 2-deoxy-2- [[[(methylnitrosoamino)carbonyl]amino]-	18883-66-4	U206
Strychnine	Strychnidin-10-one	57-24-9	P108
Strychnine salts			P108
TCDD	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	1746-01-6	
1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-94-3	U207
Tetrachlorodibenzo-p-dioxins			
Tetrachlorodibenzofurans			
Tetrachloroethane, N.O.S. ¹	Ethane, tetrachloro-, N.O.S.	25322-20-7	
1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	630-20-6	U208
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-tetrachloro-	79-34-5	U209
Tetrachloroethylene	Ethene, tetrachloro-	127-18-4	U210
2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-90-2	See F027
2,3,4,6-tetrachlorophenol, potassium salt	same	53535276	None
2,3,4,6-tetrachlorophenol, sodium salt	same	25567559	None
Tetraethyldithiopyrophosphate	Thiodiphosphoric acid, tetraethyl ester	3689-24-5	P109
Tetraethyl lead	Plumbane, tetraethyl-	78-00-2	P110
Tetraethyl pyrophosphate	Diphosphoric acid, tetraethyl ester	107-49-3	P111
Tetranitromethane	Methane, tetranitro-	509-14-8	P112
Thallium	Same	7440-28-0	
Thallium compounds, N.O.S. ¹			
Thallic oxide	Thallium oxide Tl ₂ O ₃	1314-32-5	P113

Thallium(I) acetate	Acetic acid, thallium(1+) salt	563-68-8	U214
Thallium(I) carbonate	Carbonic acid, dithallium(1+) salt	6533-73-9	U215
Thallium(I) chloride	Thallium chloride TlCl	7791-12-0	U216
Thallium(I) nitrate	Nitric acid, thallium(1+) salt	10102-45-1	U217
Thallium selenite	Selenious acid, dithallium(1+) salt	12039-52-0	P114
Thallium(I) sulfate	Sulfuric acid, dithallium(1+) salt	7446-18-6	P115
Thioacetamide	Ethanethioamide	62-55-5	U218
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, 0-[(methylamino)carbonyl] oxime	39196-18-4	P045
Thiomethanol	Methanethiol	74-93-1	U153
Thiophenol	Benzenethiol	108-98-5	P014
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6	P116
Thiourea	Same	62-56-6	U219
Thiram	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-	137-26-8	U244
Toluene	Benzene, methyl-	108-88-3	U220
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8	U221
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-80-7	
Toluene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823-40-5	
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496-72-0	
Toluene diisocyanate	Benzene, 1,3-diisocyanatomethyl-	26471-62-5	U223
o-Toluidine	Benzenamine, 2-methyl-	95-53-4	U328
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636-21-5	U222
p-Toluidine	Benzenamine, 4-methyl-	106-49-0	U353
Toxaphene	Same	8001-35-2	P123
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1	
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5	U227
Trichloroethylene	Ethene, trichloro-	79-01-6	U228
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7	P118
Trichloromonofluoromethane	Methane, trichlorofluoro-	75-69-4	U121
2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	95-95-4	See F027
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2	See F027

2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5	See F027
Trichloropropane, N.O.S. ¹		25735-29-9	
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro-	96-18-4	
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1	
1,3,5-Trinitrobenzene	Benzene, 1,3,5-trinitro-	99-35-4	U234
Tris(1-aziridinyl)phosphine sulfide	Aziridine, 1,1',1''-phosphinothioylidynetris-	52-24-4	
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2,3-dibromo-, phosphate (3:1)	126-72-7	U235
Trypan blue	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'diyl)bis(azo)]- bis[5-amino-4-hydroxy-, tetrasodium salt	72-57-1	U236
Uracil mustard	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66-75-1	U237
Vanadium pentoxide	Vanadium oxide V ₂ O ₅	1314-62-1	P120
Vinyl chloride	Ethene, chloro-	75-01-4	U043
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3%	81-81-2	U248
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3%	81-81-2	P001
Warfarin salts, when present at concentrations less than 0.3%			U248
Warfarin salts, when present at concentrations greater than 0.3%			P001
Zinc cyanide	Zinc cyanide Zn(CN) ₂	557-21-1	P121
Zinc phosphide	Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10%	1314-84-7	P122
Zinc phosphide	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10% or less	1314-84-7	U249

FOOTNOTE: ¹The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

APPENDIX III

Hazardous wastes which are Discarded Commercial Chemical Products or Off-Specification Batches of Commercial Chemical Products or Spill Residues of Either.

The following hazardous wastes are referred to in **Section 7-214**.

Note: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity.

Hazardous waste No.	Chemical abstracts No.	Substance
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U240	¹ 94-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U112	141-78-6	Acetic acid ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium(1+) salt
see F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)
U136	75-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine

U010	50-07-7	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8- [[aminocarbonyl]oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpha,8balpha)]-
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenediamine, ar-methyl-
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-

U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U239	1330-20-7	Benzene, dimethyl- (I,T)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	¹ 81-07-2	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U064	189-55-9	Benzo[<i>rst</i>]pentaphene
U248	¹ 81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less
U022	50-32-8	Benzo[<i>a</i>]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane

U021	92-87-5	[1,1'-Biphenyl]-4,4'-diamine
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy- 2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]- 2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-
U031	71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate
U238	51-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U097	79-44-7	Carbamic chloride, dimethyl-
U114	¹ 111-54-6	Carbamodithioic acid, 1,2-ethanediybis-, salts & esters
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U033	353-50-4	Carbon oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha & gamma isomers
U026	494-03-1	Chlornaphazin

U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid H ₂ CrO ₄ , calcium salt
U050	218-01-9	Chrysene
U051		Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (CN)Br
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	¹ 94-75-7	2,4-D, salts & esters
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate

U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U086	1615-80-1	N,N'-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol
U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol

U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U218	62-55-5	Ethanethioamide
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, (2-chloroethoxy)-
U078	75-35-4	Ethene, 1,1-dichloro-

U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl ether (I)
U114	¹ 111-54-6	Ethylenebisdithiocarbamic acid, salts & esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethyl methanesulfonate
U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	2,5-Furandione
U213	109-99-9	Furan, tetrahydro-(I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)- carbonyl]amino]-
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene

U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R,T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine, 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H ₂ S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U190	85-44-9	1,3-Isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I,T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I, T)

U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I, T)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-
U153	74-93-1	Methanethiol (I, T)
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)

U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'- dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1+) salt
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide

U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U170	100-02-7	Phenol, 4-nitro-
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U189	1314-80-3	Phosphorus sulfide (R)
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline

U179	100-75-4	Piperidine, 1-nitroso-
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile
U171	79-46-9	Propane, 2-nitro- (I,T)
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propenenitrile, 2-methyl- (I,T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U194	107-10-8	n-Propylamine (I,T)
U083	78-87-5	Propylene dichloride
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180	930-55-2	Pyrrolidine, 1-nitroso-

U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U202	¹ 81-07-2	Saccharin, & salts
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS ₂ (R,T)
U015	115-02-6	L-Serine, diazoacetate (ester)
See F027	93-72-1	Silvex (2,4,5-TP)
U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester
U189	1314-80-3	Sulfur phosphide (R)
See F027	93-76-5	2,4,5-T
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride TICl
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Thioacetamide
U153	74-93-1	Thiomethanol (I,T)
U244	137-26-8	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-
U219	62-56-6	Thiourea
U244	137-26-8	Thiram
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine

U223	26471-62-5	Toluene diisocyanate (R,T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride
U248	¹ 81-81-2	Warfarin, & salts, when present at concentrations of 0.3% or less
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10% or less

FOOTNOTE: ¹CAS Number given for parent compound only.

APPENDIX IV

Acutely Hazardous Wastes

The following list of acutely hazardous wastes is referred to in **Section 7-215**.

Note: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.

Hazardous waste No.	Chemical abstracts No.	Substance
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium
P010	7778-39-4	Arsenic acid H_3AsO_4
P012	1327-53-3	Arsenic oxide As_2O_3
P011	1303-28-2	Arsenic oxide As_2O_5
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-

P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108-98-5	Benzenethiol
P001	¹ 81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino]carbonyl oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide Ca(CN) ₂
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P030		Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin

P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-
P051	¹ 72-20-8	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, & metabolites
P044	60-51-5	Dimethoate
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P047	¹ 534-52-1	4,6-Dinitro-o-cresol, & salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramidate, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin, & metabolites
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile
P066	16752-77-5	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine

P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P118	75-70-7	Methanethiol, trichloro-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10- hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro-
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methylactonitrile
P071	298-00-0	Methyl parathion
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO) ₄ , (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cynaide Ni(CN) ₂

P075	¹ 54-11-5	Nicotine, & salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO ₂
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide OsO ₄ , (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	51-28-5	Phenol, 2,4-dinitro-
P047	¹ 534-52-1	Phenol, 2-methyl-4,6-dinitro-, & salts
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester

P071	298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	¹ 54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	¹ 57-24-9	Strychnidin-10-one, & salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	¹ 57-24-9	Strychnine, & salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate

P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl_2O_3
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V_2O_5
P120	1314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P001	¹ 81-81-2	Warfarin, & salts, when present at concentrations greater than 0.3%
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide $Zn(CN)_2$
P122	1314-84-7	Zinc phosphide Zn_3P_2 , when present at concentrations greater than 10% (R,T)

FOOTNOTE: ¹CAS Number given for parent compound only.

APPENDIX V

Representative Sampling Methods

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

(a) Extremely viscous liquid:

ASTM Standard D140-70 Crushed or powdered material -- ASTM Standard D346-75
Soil or rock-like material -- ASTM Standard D420-69 Soil-like material -- ASTM
Standard D1452-65

(b) Fly Ash-like material:

ASTM Standard D2234-76 [ASTM Standards are available from ASTM, 1916 Race St.,
Philadelphia, PA 19103]

(c) Containerized liquid wastes:

"COLIWASA" described in "Test Methods for the Evaluation of Solid Waste,
Physical/Chemical Methods,"¹ U.S. Environmental Protection Agency, Office of Solid
Waste, Washington, D.C. 20460. [Copies may be obtained from Solid Waste Information,
U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268]

(d) Liquid waste in pits, ponds, lagoons, and similar reservoirs:

"Pond Sampler" described in "Test Methods for the Evaluation of Solid Waste,
Physical/Chemical Methods."¹

¹ These methods are also described in "Samplers and Sampling Procedures for Hazardous Waste Streams,"
EPA 600/2-80-018, January 1980.

APPENDIX VI

*The following table is from the “Final Project Agreement” signed on September 28, 1999 for the Project XL Site-specific Rulemaking for University Laboratories, adopted September 28, 1999, at 64 Fed. Reg. 52379 et seq., and incorporated by reference under **Section 7-109(c)**.*

The following specific regulatory relief for laboratories is sought as a result of the temporary conditional deferral of waste determination as described in the text of the FPA. The following fundamental regulatory relief is proposed:

Regulatory Relief Requested	Federal Citation	State Citation	Operative Effect of Relief Requested
<p>Add the following new paragraph (j) to § 262.10 :</p> <p>“(j)Universities that are participating in the Laboratory XL project are the University of Massachusetts Boston in Boston, Massachusetts, Boston College in Boston, Massachusetts, and the University of Vermont in Burlington, Vermont (“Universities”). The Universities generate laboratory wastes (as defined in 40 CFR 262.102) some of which will be hazardous wastes. As long as the Universities comply with all the requirements of 40 CFR part 262, subpart J, the Universities’ laboratories which are participating in the University Laboratories XL Project are not subject to the provisions of 40 CFR 262.11, 262.34(c), 40 CFR Part 264, 40 CFR part 265 or the permit requirements of 40 CFR part 270 with respect to said laboratory wastes.</p>	<p>40 CFR § 262.10 “Purpose, Applicability and Scope”</p>	<p>VT “Purpose, Scope and Applicability” in 7-301. (A comparable addition to the general language in 7-301 would be required in the form of a rulemaking or consent order or agreement)</p> <p>MA “Purpose, Scope and Applicability” in 30.301 (The state will address the applicability of 30.301 through an appropriate legal mechanism)</p>	<p>Allows the Universities to manage hazardous waste under the well defined scheme outlined in Subpart J as an alternative to managing the wastes under satellite storage requirements of 262.34(c).</p> <p>Management of laboratory wastes would be effectively managed and adequately regulated in accordance with the institutional EMP and be subject to specific minimum performance standards for the handling and management of laboratory wastes.</p>

Regulatory Relief Requested	Federal Citation	State Citation	Operative Effect of Relief Requested
Hazardous Waste Determination	262.11 Hazardous Waste Determination	VT “Hazardous Waste Determination ” listed in 7- 202, 7-303 and 7-305(b) MA “When a Waste Becomes a Hazardous Waste” 30.302	Explicitly identifies the point where Universities will be responsible for making hazardous waste determination. Once laboratory wastes are received at the hazardous waste accumulation area University staff would determine, in accordance with §262.11, whether any solid waste is hazardous waste. This approach would be conditioned on the laboratory waste being managed in conformance with the EMP and minimum performance criteria up until the point it is received at the hazardous waste accumulation area (or at laboratory if sent to TSDF).
Satellite Accumulation	262.34(c)(1)	VT 7-310 MA30.340(4) (c)(1-2) and SQG at 30.351(4)	Same or lower quantity thresholds maintained. Laboratory wastes are adequately regulated managed in accordance with the enforceable minimum performance criteria in this XL Project.

Regulatory Requirement	Federal Citation	State Citation	Operative Effect of Relief Requested
Satellite Accumulation	262.34(c)(2)	VT 7- 310(a)(7) MA 30.340(4)(c)(2)) and SQG at 30.351(4)(d)	Minimum performance criteria that laboratories have 30 days, once threshold is reached, to remove laboratory wastes to hazardous waste accumulation areas or TSD.
Satellite Accumulation		VT 7-310(c) MA	Each institution’s EMP defines the procedure(s) for management of containers of laboratory waste,

		30.340(4)(c) and SQG at 30.351(4)(c)	but there is a 55 gallon limit <i>per laboratory</i> and a <i>110 gallon limitation on the total amount of waste</i> .
Closed container	265.173(a) as referenced by 262.34(c)(1)(i)	VT 7- 310(a)(4) MA30.685(1) referenced from 30.340	Containers must be closed except when adding and removing waste and minimum performance criteria additionally define in-line waste collection containers for laboratory scale experimentation as adding waste.

APPENDIX VII

Examples of Potentially Incompatible Waste

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his or her wastes so that he or she can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a **Group A** material with a **Group B** material may have the potential consequence as noted.

Group 1-A	Group 1-B
Acetylene sludge	Acid sludge
Akaline caustic liquids	Acid and water
Alkaline cleaner	Battery acid
Alkaline corrosive liquids	Chemical cleaners
Alkaline corrosive battery fluid	Electrolyte, acid
Caustic wastewater	Etching acid liquid or solvent
Lime sludge and other corrosive alkalies	
Lime wastewater	Pickling liquor and other corrosive acids
Lime and water	Spent acid

Spent caustic	Spent mixed acid Spent sulfuric acid
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Potential consequences: Heat generation; violent reaction.

Group 2-A	Group 2-B
Aluminum Beryllium Calcium Lithium Magnesium Potassium Sodium Zinc powder Other reactive metals and metal hydrides	Any waste in Group 1-A or 1-B

Potential consequences: Fire or explosion; generation of flammable hydrogen gas.

Group 3-A	Group 3-B
Alcohols Water	Any concentrated waste in Groups 1-A or 1-B Calcium Lithium Metal hydrides Potassium SO ₂ Cl ₂ , SOCl ₂ , PCl ₃ , CH ₃ SiCl ₃ Other water-reactive waste

Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.

Group 4-A	Group 4-B
Alcohols	Concentrated Group 1-A or 1-B wastes

Aldehydes Halogenated hydrocarbons Nitrated hydrocarbons Unsaturated hydrocarbons Other reactive organic compounds and solvents	Group 2-A wastes
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Potential consequences: Fire, explosion, or violent reaction.

Group 5-A	Group 5-B
Spent cyanide and sulfide solutions	Group 1-B wastes

Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.

Group 6-A	Group 6-B
Chlorates	Acetic acid and other organic acids
Chlorine	Concentrated mineral acids
Chlorites	Group 2-A wastes
Chromic acid	Group 4-A wastes
Hyphochlorites	Other flammable and combustible wastes
Nitrates	
Nitric acid, fuming	
Perchlorates	
Permanganates	
Peroxides	
Other strong oxidizers	

Potential consequences: Fire, explosion, or violent reaction.

Source: "Law, Regulations, and Guidelines for Handling of Hazardous Waste." California Department of Health, February 1975.

APPENDIX IX
Basis for Listing Hazardous Waste

EPA hazardous waste No.	Hazardous constituents for which listed
F001	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trichloroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane.
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007	Cyanide (salts).
F008	Cyanide (salts).
F009	Cyanide (salts).
F010	Cyanide (salts).
F011	Cyanide (salts).
F012	Cyanide (complexed).
F019	Hexavalent chromium, cyanide (complexed).
F020	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021	Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.
F022	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F023	Tetra-, and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.

F024	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, trans-1-2-dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetra-chloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorobenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene.
F025	Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrachloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butadiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene.
F026	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F027	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F032	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans.
F034	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium.
F035	Arsenic, chromium, lead.
F037	Benzene, benzo(a)pyrene, chrysene, lead, chromium.
F038	Benzene, benzo(a)pyrene, chrysene, lead, chromium.
F039	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under 40 CFR 268.43(a), Table CCW.
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, cresosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002	Hexavalent chromium, lead
K003	Hexavalent chromium, lead.
K004	Hexavalent chromium.
K005	Hexavalent chromium, lead.
K006	Hexavalent chromium.

K007	Cyanide (complexed), hexavalent chromium.
K008	Hexavalent chromium.
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.
K010	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.
K011	Acrylonitrile, acetonitrile, hydrocyanic acid.
K013	Hydrocyanic acid, acrylonitrile, acetonitrile.
K014	Acetonitrile, acrylamide.
K015	Benzyl chloride, chlorobenzene, toluene, benzotrichloride.
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.
K017	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols.
K018	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.
K019	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K020	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K021	Antimony, carbon tetrachloride, chloroform.
K022	Phenol, tars (polycyclic aromatic hydrocarbons).
K023	Phthalic anhydride, maleic anhydride.
K024	Phthalic anhydride, 1,4-naphthoquinone.
K025	Meta-dinitrobenzene, 2,4-dinitrotoluene.
K026	Paraldehyde, pyridines, 2-picoline.
K027	Toluene diisocyanate, toluene-2, 4-diamine.
K028	1,1,1-trichloroethane, vinyl chloride.
K029	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.
K030	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.
K031	Arsenic.
K032	Hexachlorocyclopentadiene.
K033	Hexachlorocyclopentadiene.
K034	Hexachlorocyclopentadiene.

K035	Creosote, chrysene, naphthalene, fluoranthene benzo(b) fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene.
K036	Toluene, phosphorodithioic and phosphorothioic acid esters.
K037	Toluene, phosphorodithioic and phosphorothioic acid esters.
K038	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K039	Phosphorodithioic and phosphorothioic acid esters.
K040	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K041	Toxaphene.
K042	Hexachlorobenzene, ortho-dichlorobenzene.
K043	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K044	N.A.
K045	N.A.
K046	Lead.
K047	N.A.
K048	Hexavalent chromium, lead.
K049	Hexavalent chromium, lead.
K050	Hexavalent chromium.
K051	Hexavalent chromium, lead.
K052	Lead.
K060	Cyanide, naphthalene, phenolic compounds, arsenic.
K061	Hexavalent chromium, lead, cadmium.
K062	Hexavalent chromium, lead.
K064	Lead, cadmium.
K065	Do.
K066	Do.
K069	Hexavalent chromium, lead, cadmium.
K071	Mercury.
K073	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.
K083	Aniline, diphenylamine, nitrobenzene, phenylenediamine.
K084	Arsenic.
K085	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride.

K086	Lead, hexavalent chromium.
K087	Phenol, naphthalene.
K088	Cyanide (complexes).
K090	Chromium.
K091	Do.
K093	Phthalic anhydride, maleic anhydride.
K094	Phthalic anhydride.
K095	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane.
K096	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.
K097	Chlordane, heptachlor.
K098	Toxaphene.
K099	2,4-dichlorophenol, 2,4,6-trichlorophenol.
K100	Hexavalent chromium, lead, cadmium.
K101	Arsenic.
K102	Arsenic.
K103	Aniline, nitrobenzene, phenylenediamine.
K104	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.
K105	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.
K106	Mercury.
K107	1,1-Dimethylhydrazine (UDMH).
K108	1,1-Dimethylhydrazine (UDMH).
K109	1,1-Dimethylhydrazine (UDMH).
K110	1,1-Dimethylhydrazine (UDMH).
K111	2,4-Dinitrotoluene.
K112	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K113	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K114	2,4-Toluenediamine, o-toluidine, p-toluidine.
K115	2,4-Toluenediamine.
K116	Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene.
K117	Ethylene dibromide.
K118	Ethylene dibromide.
K123	Ethylene thiourea.

K124	Ethylene thiourea.
K125	Ethylene thiourea.
K126	Ethylene thiourea.
K131	Dimethyl sulfate, methyl bromide.
K132	Methyl bromide.
K136	Ethylene dibromide.
K141	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K142	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K143	Benzene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene.
K144	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene.
K145	Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, naphthalene.
K147	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K148	Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K149	Benzotrichloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toluene.
K150	Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,2,4-trichlorobenzene.
K151	Benzene, carbon tetrachloride, chloroform, hexachlorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene.

FOOTNOTE: N.A. -- Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.