### TITLE NINETEEN

# **HEALTH**

CHAPTER 56

# SOLID AND HAZARDOUS WASTE MANAGEMENT

APPROVED:

June 26, 2000

CHARLES W. TURNBULL
Governor

# VIRGIN ISLANDS RULES AND REGULATIONS SOLID AND HAZARDOUS WASTE MANAGEMENT ACT TITLE 19, CHAPTER 56

Consistent with the mandate of the Federal Resource Conservation and Recovery Act, 42 U.S.C. \$6901 et seq, as amended, 40 CFR Part 239, and 19 V.I.C., Chapter 56, § 1560, the Virgin Islands Solid and Hazardous Management Act, these Rules and Regulations are promulgated in compliance with the requirements of federal law as cited above, for the administration and implementation of the Virgin Islands Solid and Hazardous Waste Management Act as These rules and regulations incorporate by cited above. reference, the provisions governing disposal of conditionally exempt small quantity generator (CESQG) wastes, as set forth in the July 1, 1996 edition of the Federal Register.



# THE UNITED STATES VIRGIN ISLANDS DEPARTMENT OF JUSTICE OFFICE OF THE ATTORNEY GENERAL

IVER A. STRIDIRON, ESQUIRE ATTORNEY GENERAL

June 26, 2000

Confidential Attorney-Cffent Communication

Dean C. Plaskett, Esq.
Commissioner
Department of Planning and Natural Resources
Cyril E. King Airport Terminal, 2<sup>nd</sup> Floor
Charlotte Amalie, St. Thomas USVI 00802

Re: Legal review - Hazardous and Solid Waste Regulations.

Dear Commissioner Plaskett:

The attached Hazardous and Solid Waste Rules and Regulations have been reviewed by this office and are found to be legally sufficient for promulgation.

In order to complete the promulgation of these regulations, an original and two duplicates must be filed with the Office of the Lt. Governor for publication. In addition, in order to conform to the requirements of Title 3 V.I.C. § 912, the attached page must be included with the regulations.

If necessary, in order to make these rules effective without the delay of prior publication, the following language, which includes a certification from the Governor, must be added:

By his signature hereon, the Governor of the Virgin Islands certifies, in accordance with the provisions of Title 3, Chapter 35, Section 938, Virgin Islands Code, that compelling circumstances, which include the immediate need for protection and preservation of the public health in Virgin Islands, and the public interest require the Virgin islands Rules and Regulations contained herein become effective on this & day of \_\_\_\_\_\_, 2000, without the lengthy delay of prior publication, and on which date they have been submitted to the Legislature pursuant to Title 3, Chapter 35, Section 913, Virgin Islands Code. A copy of this certification and these Rules and Regulations has been filled with the Lieutenant Governor pursuant to Title 3.

48B-50C Kronprindsens Gade-CERS Bldg. 2nd Floor-St. Thomas, U.S.Virgin Islands 00802 (340) 774-5666 Fax (340) 774-9710 \$6040 Castle Coartey: Design Center Bldg Christiansted, St. Croix U.S. Virgin Islands 00820 (340) 773-0295 Fax (340) 773-3236 Pursuant to the provisions of Title 19, Chapter 56, Section 1560, Virgin Islands Code, the above Rules and Regulations are hereby promulgated.

Dean C. Plaskett, Esq.

Commissioner

Department of Planning and Natural Resources

Pursuant to the Powers vested in me by Section 11 of the Revised Organic Act of 1954, and by Title 3, Section 913, Virgin Islands Code, the above Amended Rules and Regulations are hereby approved.

Dated: 6/27/00 CHARLES W. TÜRNBÜLL

If you have any questions, please contact Assistant Attorney General Michael Law at 774-5666, ext. 125.

Sincerely,

Attorney General

w/enclosure



#### GOVERNMENT OF THE VIRGIN ISLANDS OF THE UNITED STATES

Department of Planning & Natural Resources
Division of Environmental Protection
WATER GUT HOMES 1118
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Lt. Governor Gerard Luz James II 1131 King Street Suite 101 Christiansted, St. Croix Virgin Islands

June 30, 2000

Re: Submittal of Rules and Regulations

Dear Lt. Governor James:

Pursuant to Title 3, Chapter 35, of the Virgin Islands Code, and under the authority of Title 19, Chapter 56, § 1560 of the Virgin Islands Code, rules and regulations have been promulgated for the implementation of the Solid and Hazardous Waste Management Act, Title 19, Chapter 56, § 1551 et seq. The Environmental Protection Agency mandated that these rules be promulgated prior to the delegation of primacy to the Virgin Islands of the federal Solid and Hazardous Waste Management program.

As a part of the process of legal adoption, Title 3 V.I.C. § 933 requires, among other things, the filing and publication of the promulgated rules and regulations by your office. Therefore, in accordance with § 933, and on behalf of the Commissioner of the Department of Planning and Natural Resources, these rules and regulations are hereby formally submitted for filing and publication Thank you.

Sincerely,

Devin Carrington

Legal Counsel for

Dean C. Plaskett, Esq.

Commissioner

Department of Planning and Natural Resources

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#### TITLE 19 VIRGIN ISLANDS CODE

Part VI: Regulatory Provisions Concerning Public Health

Chapter 56: Solid and Hazardous Waste Management

Rules and Regulations

#### Division 1. General Regulations

#### Section 1560-1 Definitions

The following definitions shall apply unless the context clearly requires another meaning or unless elsewhere expressly stated for specific application:

- (a) "Active life" means the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities in accordance with Section 1560-900 of this subchapter 1560.
- (b) "Active portion" means that part of a facility or unit that has received or is receiving wastes and that has not been closed in accordance with section 1560-900 of this Subchapter.
- (c) "Approved refuse container" means a receptacle approved by the Commissioner for storage of designated types of wastes prior to collection for disposal.
- (d) "Aquifer" means a geological formation, formations, or portion of a formation capable of yielding significant quantities of ground-water to wells or springs.
- (e) "Business, industrial or commercial establishment" means any private enterprise organized or established for profit in the sale, at wholesale or retail, of goods or services, and required to be licensed under the provisions of Title 27, Virgin Islands Code.
- (f) "CFR" means code of Federal Regulations, pertinent copies of which shall be available for public perusal at the departments of Public Works and the Department of Planning and Natural Resources.
- (g) "Commercial solid waste" means all types of solid waste generated by stores, offices, restaurants, hotels, motels, warehouses and other nonmanufacturing activities, excluding residential and industrial wastes.

- (h) "Commissioner" means the Commissioner of the Department of Planning and Natural Resources or his/her designee.
- (i) "Conditionally exempt small quantity generators" means generators who generate no more than 100 kilograms per month of hazardous waste or no more than one kilogram of acutely hazardous waste in a month and who accumulate no more than 1000 kilograms of hazardous waste or no more than one kilogram of acutely hazardous waste at one time. Disposal of conditionally exempt small quantity generator waste is only permitted in a facility that meets 40 CFR Part 258 MSWLF criteria.
- (j) "Director of an Approved State" means the chief administrative officer of a State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval that is deemed to be adequate by the DPNR under these regulations and its predecessor.
- (k) "Disposal site" means all contiguous land and structures, other appurtenances and improvements on the land used for the disposal of solid waste, or any sanitary landfill, incinerator, baling or resource recovery facility or any other site authorized and designated by the Commissioner including those having received a permit for the operation thereof, as the final resting place or solid or hazardous wastes.
- (1) "Environmental Protection Agency" means the U.S. Environmental Protection Agency.
- (m) "Existing municipal solid waste landfill unit" means any municipal solid waste landfill unit that is receiving solid waste as of October 9, 1993.
- (n) "Facility" means all contiguous land, structures, other appurtenances and improvements on the land used for the disposal of solid waste.
- (o) "Garbage" means any putrescible animal, vegetable or fruit material, including waste resulting from handling, preparation, cooking or consumption of food and any body waste or parts of domestics animals.
- (p) "Ground-water" means water below the land surface in a zone of saturation.
- (q) "Handbill" means any printed material, of any size, designed for distribution, without cost, by hand, to another

person, and includes, but is not limited to, business cards, brochures, books, magazines, newspapers and flyers.

- (r) "Hazardous Waste" means a solid waste, or combination of solid wastes which because of its quantity, concentration, or physical, chemical or infectious characteristic may: (1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, sorted, transported, disposed of or managed.
- (s) "Household waste" means any solid waste (including garbage, trash, and sanitary waste 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).
- "Industrial solid waste" means solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under subtitle C or RCRA. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation: fertilizer/agricultural chemicals: food and related products/byproducts; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; chemical; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.
- (u) "Junked motor vehicle" means any vehicle that is wrecked, dismantled, damaged beyond repair, considered totally inoperable or which has been stripped to a shell or to a substantially similar condition such as to render it objectively valuable primarily or only as scrap metal or salvage. For purposes of this chapter any abandoned vehicle may be considered a junk vehicle it is valued at less than \$250.00 regardless of its condition. The Police Commissioner by rule and regulation shall establish a process by which as many officers as he deems necessary should be trained in the assessment and valuation of such vehicles and which shall require that photographs or videos be taken of the vehicle and that an assessment by one such officer made on a standardized form, based both on subjective and objective criteria, be completed prior to said vehicle's classification as a "junk vehicle". Such assessment by an officer shall be presumptive evidence of the value

of the car.

- (v) "Lateral expansion" means a horizontal expansion of the waste boundaries of an existing municipal solid waste landfill unit.
- (w) "Leachate" means a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.
- (x) "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquid Test), as described in "Tests Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).
- (y) "Municipal solid waste landfill unit" means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 CFR Part 257, Section 257.2 . A municipal solid waste landfill (MSWLF) unit also may receive other types of RCRA subtitle D wastes, such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste and industrial solid waste. Such a landfill may be publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion.
- (z) "New municipal solid waste landfill unit" means any municipal solid waste landfill that has not received waste prior to October 9, 1993.
- (aa) "Open burning" means the combustion of solid waste without:
- (1) control of combustion air, to maintain adequate temperature for efficient combustion.
- (2) containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and
- (3) control of the emission of the combustion products. It also means any manner of burning causing rapid oxidation that results in products being discharged into the open air without passing through a properly designed stack, duct, chimney, flue or other device process.
  - (ab) "Operator" means the person(s) responsible for the

overall operation of a facility or part of a facility.

- (ac) "Owner" means the person(s) who owns a facility or part
  of a facility.
- (ad) "Person" means any individual, family, trust, firm, joint stock company, corporation, partnership, association, commission, political subdivision, local or federal government department or agency, including independent instrumentalities thereof.
- (ae) "Private Waste Collector" means a waste collector who engages in the business of collection and transportation of waste to a disposal area by specific hire or contract with another person, and does not mean a public agency responsible by law for the collection of waste.
- (af) "Regulated Hazardous waste" means the solid waste that is a Hazardous waste, as defined in 40 CFR 261.3, that is not excluded from regulation as a hazardous waste under 40 CFR 261.4 b or was not generated by a conditionally exempt small quantity generator as defined in 40 CFR 261.5.
- (ag) "RCRA" means the Federal Resource Conservation and Recovery Act.
- (ah) "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.
- (ai) "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.
- (aj) "Sanitary Landfill" means a facility for the disposal of solid waste which meets the criteria established by the commissioner of the Department of Planning and Natural Resources.
- (ak) "Saturated Zone" means the part of the earth's crust in which all voids are filled with water.
- (al) "Septic waste" means material from a septic system or a mixture consisting of sewage solids combined with water and dissolved.
- (am) "Sludge" means any solid, semi-solid or liquid waste generated from a territorial, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effects exclusive of the treated effluent from

a waste-water treatment plant.

- (an) "Solid waste" means any garbage or refuse, sludge from a wastewater treatment plant or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharge which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended, or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954 as amended (68 Stat. 923)
- (ao) "Solid waste planner" means the position established in the Department of Public Works by the provisions of Title 19, Section 1553 (b), Virgin Islands Code, and also includes the position of Assistant Solid Waste Planner.
- (ap) "State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.
- (aq) "State director" means the chief administrative officer of the State agency responsible for implementing the State municipal solid waste permit program or other system of prior approval.
- (ar) "storage container" means a large container or bin, which includes roll-off boxes, dumpsters, lugger boxes, tanks or any similar appurtenances, except that it shall not include metal fiber or plastic containers with a capacity less than 100 gallons.
- (as) "Storage facility" means a site, facility or transfer station for the storage of wastes, other than storage containers or waste containers, prior to salvage, reuse or recovery, or transportation for salvage.
- (at) "Special waste" is any solid waste which is designated as such and regulated in this subchapter. It includes solid wastes that are difficult to handle, require special precautions because of their properties or the particular nature of the wastes create solid waste management problems.
- (au) "Transportation of Waste" means that portion of the waste disposal procedure which is provided for the hauling of waste in

bulk or in waste containers or storage containers to a designated transfer point or disposal site.

- (av) "Treat" or "Treatment" means any method, technique, or process, including neutralization designed to change the physical, chemical, or biological character or composition of any hazardous waste or special waste so as to (1) neutralize such waste; (2) recover energy or material resources from the waste; (3) render the waste safer to transport, store, or dispose of; or (4) render the waste as amenable for recovery or storage or reduces the volume.
- (aw) "Waste" when unqualified, means solid waste and/or hazardous and/or special waste.
- (ax) "Waste collector" means the person, firm, agency, or public body or employee or agent thereof who is or intends to be engaged in the collection and/or transportation of waste.
- (ay) "Waste collection" means the procedure whereby waste and/or waste containers and/or storage containers containing waste are taken from designated locations and loaded into or onto vehicles for transport to a disposal area, and empty containers are left at or returned to such designated locations.
- (az) "Waste disposal" means the entire procedure required for the disposal of wastes and includes all tools, equipment, treatment space, buildings, structures, appurtenances and materials required to take waste from a waste collector and bury, burn, process, destroy or by other approved means dispose of.
- (aaa) "Underground drinking water" means any aquifer supplying drinking water for human consumption or any aquifer in which the ground-water contains less than 10,000 mg/L total dissolved solids.
- (aab) "Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.
- (aac) "Used oil" destined for recycling, is designated as a special waste and means any oil that has been used and as a result of use, has been contaminated with physical or chemical impurities.
- (aad) "Waste management unit boundary" means a vertical surface located at the hydraulically downgradient limit of the unit. This vertical surface extend down into the uppermost aquifer.

#### Section 1560-2 Prohibited acts

- (a) No person shall accumulate or allow the accumulation of any material which, because of its character, condition or improper storage, may invite the breeding or collection of flies, mosquitoes ferile animals or rodents, which may in any other manner prejudice the public health.
- (b) No person shall throw, cast, deposit, drop scatter, leave, or cause to be thrown, cast, deposited, dropped scattered, or left, in or upon any public place, other than in an approved waste or storage container, any waste of any kind, or any dead animal or decomposable matter of any sort.
- (c) No person engaged in or having charge or control of a real property construction, excavation, repair or maintenance, the site of such a construction, excavation, repair or maintenance project shall spill, track or deposit or cause or permit to be spilled tracked or deposited, in any manner, upon any public place, any concrete, sand, aggregate, mud, earth or other material associated with such project. If any such spillage, tracking or deposit occurs, the person or agent or employee of such person responsible shall promptly remove all of said material. Any such material which is permitted to remain on said roadway for longer than 24 hours shall be considered a violation of this provision.
- (d) Unless otherwise approved in writing by the Commissioner, no earth taken from excavations or waste materials taken from buildings during the course of construction, renovation and repair projects shall be stored upon public places, but shall be taken directly from the excavation or construction site to an approved disposal site or, if the material is to be used as fill, to a site with an approved Earth Change Permit issued under Title 12, Chapter 13, Virgin Islands Code.
- (e) No person shall engage in an activity which causes substantial dispersion or accumulation of dust on other premises.
- (f) No person shall discard, except in a properly designated waste container, any commercial or non-commercial handbill in or upon any public place; and it shall be unlawful for any person to hand out or distribute any commercial handbill to any person on a public street, sidewalk or vehicle parking area.
- (g) No person shall drop, deposit or distribute any commercial or non-commercial handbill in or upon any private

premises without the consent of the owner thereof and except by handing or transmitting the handbill directly to the owner or occupant or by placing or depositing the handbill so as to secure or prevent it from being scattered from the premises to other public or private places.

- (h) No person shall place or deposit any commercial or non-commercial handbill upon any vehicle not his own or in his possession.
- (i) No person shall mix inflammable, radioactive or explosive materials nor any material classed as a hazardous waste under these regulations with other solid wastes for disposal purposes.
- (j) No person shall store or deposit wastes in a manner that will contaminate surrounding air, land or water, or injure the public health or environment, or create offensive conditions. No junked motor vehicle shall be permitted on or alongside any street or road or on private property in plain view from a street or road.
- (k) No business, industrial or commercial establishment shall use public waste or storage containers for any waste generated in the conduct of business or on their premises. Such establishments shall provide and maintain suitable containers as required by Division 2 of these regulations.
- (1) No person shall kindle or in any manner set on fire any public or private waste or storage container nor open burn any portion of a disposal area. No person shall willfully open burn any waste anywhere at anytime except bonfires and outdoor rubbish fires pursuant to Title 23, Section 871, Virgin Islands Code without specific written authorization from the Commissioner of the Department of Planning and Natural Resources.
- (m) No person except authorized collection personnel shall remove, open or otherwise tamper with any public waste or storage container. No person shall deposit waste in any private container not his own.
- (n) No person shall dump along the roadside or deposit into or alongside any waste container or public storage container any appliance furniture, bed springs, mattress or other large household item; or any timber, log, or stump; or any vegetation trimmings greater than 24 inches long; except at specific collection sites designated by the Commissioner or Director of Solid Waste.
  - (o) Persons operating a disposal site shall not contaminate

surface water or an underground drinking water source beyond the solid waste boundary established pursuant to Section 1560-300(f)(4). This prohibition shall be enforced for 30 years after the closure of a waste disposal site as specified in Section 1560-900 and Division 9 of this Subchapter 1560. The length of enforcement may be decreased or increased by the Commissioner of Department of Planning and Natural Resources (DPNR) as pursuant to Division 10 of these regulations.

- (p) No person shall engage in scavenging. For purposes of this subsection "scavenging" means the uncontrolled or unauthorized removal of materials from wastes deposited in any waste or storage container or authorized storage, disposal, salvage or resource recovery facility (as defined in Section 1560-400(b) of this Subchapter 1560). Scavenging does not mean removal of reusable material from such a facility by authorized personnel of such a facility or by individuals with written permission from the Commissioner or Director of Solid Waste.
- (q) No person shall throw or deposit in or upon any open sewer or any trap, basin, inlet, grating, manhole or other appurtenance or any open sewer in the Virgin Islands any wastes; provided, that this section shall not apply to matter discharged through a house sewer into a public sewer. No person shall obstruct, impeded, or cause to be obstructed or impeded, the flow of any public sewer, nor interfere with the free discharge thereof, nor clog up any appurtenances thereof.
- (r) No person shall dispose of a dead animal at an approved waste collection site or in any manner other than as provided for in Section 1560-307 of these regulations.
- (s) No person shall permit any domestic animal owned by him or in his custody to stray onto or be otherwise present at a disposal site.

#### Division 2. Storage

#### Section 1560-100 Acceptable waste containers

(a) Waste containers for any waste other than hazardous waste shall be provided by individual households, business, industrial or commercial establishments, and shall be of plastic or metal, with close fitting covers and handles upon the sides. Such containers shall have a capacity of not less than 10 gallons nor more than 30 gallons, shall be in good repair, leakproof, rodent proof and free from holes. Paperbags, plastic bags (except in subsection (b)

hereof or when authorized by the Commissioner or Director of Solid Waste) and cardboard boxes by themselves are not acceptable waste containers.

- (b) Tree trimmings, bush, weeds, clippings and light wood less than 24 inches long may be stored in plastic bags or disposable wooden boxes, provided these are securely covered, tied or sealed and do not exceed 30 pounds in weight.
- (c) Lightweight, combustible waste and large articles such as packing cases, boxes, light wood, cardboard or other combustible material must be broken up, collapsed or cut and securely tied into bundles not to exceed 2 feet by 2 feet by 4 feet in size nor 30 pounds in weight per bundle.
- (d) Where sufficiently large amounts of waste are generated by an individual household, mobile and dumpable 64 to 203 gallon (1 cubic yard) waste or storage container may be used.
- (e) Owners of apartment buildings, tenement houses and business, industrial and commercial establishments which require more than six 30-gallon containers shall provide a mobile or dumpable 1 to 8 cubic yard storage container instead, unless exempted from this requirement by the Commissioner or Director of Solid Waste, who shall consider such factors as access to and storage space for containers, mode of collection and other specific factors pertaining to the collection site in making his determination.

#### Section 1560-101 Number of waste containers limited

A single-family residence shall be limited to two 30-gallon waste containers or one waste or storage container described in Section 1560-100(d) of this Subchapter 1560 put out for collection at any one time. Apartment buildings, tenement houses and business, industrial and commercial establishments shall be limited to six 30-gallon containers or a mobile or dumpable 1 to 8 cubic yard storage container, unless exempted from this requirement by the Commissioner or Director of Solid Waste under Section 1560-100(e) of the Subchapter.

#### Section 1560-102 Acceptable storage practice

(a) All waste shall be stored in approved waste containers. Waste containers shall be kept securely covered except during filling and emptying. Garbage shall be drained of excess liquid or placed within a leakproof plastic bag prior to placement in the

waste container. Liquid shall not be placed in waste containers. Storage methods shall insure that there is leakage or spillage of any waste during transfer from the waste container to the collection vehicle.

- (b) Business, industrial and commercial establishments and any other persons which generate, store or treat hazardous wastes as defined in Division 1 of these regulations shall provide such special waste or storage containers as are prescribed in 40 CFR, Part 265 (I) and (J) and Section 1560-502 and 503 of this Subchapter 1560. Any person generating hazardous or special waste (except as exempted under Section 1560-501(a)) of this Subchapter 1560 shall register with and in a manner prescribed by the Commissioner of the Department of Planning and Natural Resources, who shall prescribe in writing such special waste or storage containers and practices as may be required.
- (c) All persons shall provide suitable waste or storage containers of a type and quality to contain all wastes which may accumulate during the interval between collections and shall insure that such containers are maintained in good repair.
- (d) Unless exempted by the Commissioner or Director of Solid Waste, private waste or storage containers shall be set out in public places only during the period of collection. At other times such containers must be kept on the owner's property.
- (e) Waste and storage containers shall be kept as dry as practicable, set on a platform or other dry, well drained area and placed in a location easily accessible for collection. Such containers shall be secured against intrusion by animals.
- (f) It shall be the duty and responsibility of the owners of apartment buildings, office buildings and other commercial structures to provide suitable waste or storage containers for all waste generated in such buildings. Persons who generate, store, or treat hazardous wastes shall be responsible for providing their own waste or storage receptacles as provided in subsection (b) of this section.

#### Section 1560-103 Public litter containers

Public wastepaper and litter baskets shall not be used for the disposal of waste generated incident to the conduct of a household, store, or other place of business or domicile, but shall be reserved for the disposal of small quantities of litter by the

public.

#### Section 1560-104 Public storage containers

Public storage containers shall be used only by those residents who do not receive house to house collection. Areas will be so designated by the placing of bins thereon and by notice in a newspaper of general circulation as to the location of containers and geographic area to be served. It is prohibited for any business, commercial or industrial establishment to place waste in such containers.

#### Division 3. Collection and Transportation

#### Section 1560-200 Responsibilities for collection

- The Department of Public Works shall collect waste from and other facilities of the Government instrumentalities. The Department shall also collect waste from public litter containers and public storage containers maintained by the Department and from private residences in areas which may be designated for house-to-house collection. The Department shall collect discarded appliances, furniture, bed springs, mattresses and other large household items, as well as timber logs, stumps and vegetation trimmings greater than 24 inches long, but only on such days and at such collection sites as designated and publicized by the Commissioner or Director of solid Waste. The Department will collect waste from only such other places as may be specifically approved for collection by the Commissioner or Director of Solid Waste.
- (b) All other waste generators, including places of business, shall be responsible for collecting their own waste or procuring commercial collection service for transportation to an approved disposal site.
- (c) The Commissioner or Director of Solid Waste shall establish and from time to time revise a schedule of fees for the removal of specific kinds and/or quantities of solid waste that have been permitted to accumulate on any property and not removed after notification as provided for in Title 19, Section 1554 (f), Virgin Islands Code. Such schedule shall be appropriately published and copies of same shall be available from the Office of the Director of Solid Waste.

Section 1560-201 Waste collection permit: exemptions

- (a) Every private waste collector, junk dealer and salvage operator shall hold a waste collection permit issued by the Department of Public Works, unless specifically exempted from such permit requirement.
- (b) There shall be charged a reasonable fee of not less than \$50.00 for each permit, which shall be renewed annually in January. Such collectors, dealers and operators shall provide proof of liability insurance covering their operations in the amount of \$50,000 per person, \$200,000 per accident and \$50,000 for property damage.
- (c) A business, industrial or commercial establishment operating its own collection service entirely for the benefit of such establishment under one ownership and for no other establishment, and disposing of wastes so collected at an approved disposal area, need not obtain a waste collection permit; provided, that no material which is classed as hazardous or special waste is being collected, transported or disposed of contrary to the provisions of Section 1560-102(b),501, 502, 503 of this Subchapter 1560. Such establishments shall, however, register the service with the Department of Public Works and shall comply with all applicable requirements for collection and transportation of waste.
- (d) The owner of a farm collecting waste entirely from the premises so owned and disposing of such waste on the premises at an approved disposal area need not obtain a waste collection permit, but shall comply with all other requirements for collection and transportation and/or disposal of such waste.
- (e) The owner or occupant of any dwelling unit need not obtain a waste collection permit for collecting and transporting waste from such premises in a vehicle owned or operated by him to an approved disposal area, but shall comply with all other requirements for collection and/or transportation and disposal of such waste.

#### Section 1560-202. Time of collection; placing of containers

(a) Waste containers shall be placed at the front steps or curb, easily accessible for collection, only on the day assigned for collection and such containers shall be removed thereafter before the following day. No person, except the collector, shall in any way interfere with any waste container other than his own. For purposes of this subsection "easily accessible" means the placing of waste containers on or near the premises in the access way or other place immediately adjacent to public roads, the

unfastening of gates, the constraining of domestic animals, and otherwise providing easy access to waste containers during the hours of collection.

(b) The place where waste containers are kept pending collection shall be clean, free of spilled waste, or foul smelling water or residue. The container shall be set on a dry, well-drained base which does not permit animals from overturning the container.

Section 1560-203 <u>Collection of waste; responsibilities and duties</u>

Unless otherwise specified, the following minimum standards and requirements are established for the sanitary collection of waste by both public and private waste collectors.

- (a) All private waste collectors shall operate under a waste collection permit issued by the Department of Public Works.
- (b) The collector shall empty and return all waste containers to the designated collection place without damage.
- (c) Plastic bags and other disposable containers will be placed in the collection vehicle unemptied. Plastic bags and other disposal containers may be emptied into the vehicle if they contain materials destined for a resource recovery facility or salvage operation as defined in Section 1560-400(b) if this Subchapter 1560.
- (d) A waste container in poor repair and not meeting the requirements of Section 1560-100 or 1560-502 shall be tagged securely by the collector with a notice to repair or replace the container, a duplicate of which notice shall be filed with the Department of Public Works, Office of the Director of Solid Waste, and in the principal office of any private collector involved.
- (e) A container found to have been tagged as above on a subsequent collection and which is still not in compliance with container requirements shall have affixed thereon a "condemned" tag or seal; notification of which shall be filed with the Director of Solid Waste and in the principal office of any private collector involved.
- (f) A container owner whose container has been condemned shall have 24 hours or the time prior to the next scheduled collection date, whichever is longer, to contest in writing the

condemnation, directed to the office of the Director of Solid Waste.

- (g) Thereafter the collector shall not collect the contents of a condemned container and the container owner shall be deemed to have committed a nuisance as defined in Title 14, Section 1461, Virgin Islands Code.
- (h) The Director of Solid Waste on receipt of the notice filed in accordance with subsection (d) above, shall investigate the condition reported and, upon receipt of the container owner's filing in accordance with subsection (f) above shall hold an informal hearing with the owner of the condemned container within one week of such receipt, wherein the owner may present evidence and testimony on his/her behalf. If the condition of the container is found, by hearing or otherwise, to be as reported, the Director of Solid Waste shall proceed to abate the nuisance as provided by law. A representative of the Deputy Commissioner of Operations shall be the hearing officer and his determination of the matter shall be final.
- (i) No collector shall leave behind the spilled contents of any container, or any waste which has fallen out of any collection vehicle, or any waste placed in the designated collection place.
- (j) Any person observing any violation of this section shall report the permit number of the vehicle and the exact location of the violation to the Department of Public Works, Office of the Commissioner or Director of Solid Waste, and to the principal office of any private collector involved.
- (k) The collector shall furnish at collection sites and/or publish in a newspaper of general circulation a printed schedule of collection times for each route or area serviced.
- (1) Designated collectors employed by the Department of Public Works shall be responsible for the periodic collection and disposal of discarded appliances, furniture and other large items left at storage container sites specified by the Commissioner or Director of Solid Waste pursuant to Section 1560-200 (a).

Section 1560-204 <u>Transportation of waste; responsibilities and duties</u>

The following minimum standards and requirements are established for the sanitary transportation of waste by both public

and private collectors.

- (a) Every vehicle used for the transportation of waste by a private waste collector shall be owned and/or operated under the supervision of a person holding a waste collection permit, unless exempted as prescribed in Section 1560-201 (c), (d) and (e).
- (b) Every vehicle used by a public or private waste collector for the transportation of garbage, as defined, shall have a watertight hauling body constructed of metal, or shall have a water-tight lining on the floor and all side walls of the hauling body.
- (c) Every such vehicle shall be provided with a means of covering the waste to be hauled and of keeping such waste securely within the hauling body.
- (d) The hauling body shall be provided with a tight metal hood having adequate openings fitted with smoothly operating loading and unloading doors, or shall be provided with heavy tarpaulin or other canvas cover fitted with proper eyes, grommets, tie ropes and hooks whereby the cover can be held securely over the loaded waste in a manner acceptable to the Director of Solid Waste.
- (e) Every such vehicle shall be kept well painted, clean and in good repair.
- (f) Every such vehicle shall carry a legend on the side walls of the hauling body identifying it as a waste transporter and giving the permittee's name and permit number. The legend shall be painted on the body or, if the vehicle has other uses, the legend may be placed on a separate durable metal or wood plaque which shall be firmly fixed to the vehicle when used for waste collection and transportation.
- (g) No vehicle without permanent cover shall be loaded with waste to a level above the side wall height.
- (h) No vehicle shall be loaded with waste in a manner which will permit material to swing off, fall out, be wind dispersed or jarred loose while the vehicle is in motion.
- (i) Whenever vehicles are to be used for the transportation of containers holding waste, other than hazardous or special waste, the container so carried shall meet the minimum requirements for waste containers set forth in Section 1560-100 of these regulations.

(j) No driver, owner, or superintendent having charge or control of any vehicle used for the transportation of waste shall keep or allow such vehicle or anything thereto appertaining to be kept in a condition needlessly filthy or offensive; nor allow such vehicle or implement thereto appertaining to be parked, stored or kept in a place where its presence is needlessly offensive. No driver of any such vehicle shall consume an unreasonable length of time in loading such vehicle; nor, when not engaged in collecting garbage, allow the lid of such vehicle to be otherwise than securely closed; nor allow such vehicle to be otherwise than securely covered.

## Division 4 Disposal in accordance with 40 CFR Parts 257,258, 264 and 265

#### Section 1560-300 Approved public or private disposal sites; permit

- (a) All solid and hazardous waste shall be disposed of only at publicly or privately operated disposal sites duly approved and for which permits have been issued by the Department of Planning and Natural Resources pursuant to applications and plans filed therefor. For purposes of this section the word "plans" means technical reports and engineering drawings, including a narrative operative description, prepared by professionals which properly describe and record the landfill and disposal facility and its proposed operation.
- (b) Disposal shall be only by sanitary landfill or by other method approved in the permit. Except as provided in Section 1560-301 (h) hereof, open burning or dumping of wastes at disposal sites shall not be permitted.
- (c) Applications for the establishment and operation of municipal solid waste landfill disposal sites shall include detailed plans, maps and drawings as necessary to show:
  - (1) the entire site;
  - (2) current ground water conditions and maximum highwater level of record;
  - (3) any floodplains, waterways or channels likely to affect the site; plans for drainage and erosion control; and methods to prevent water flow restriction, reduction of temporary water storage capacity of the floodplain,

#### or washout of solid wastes;

- (a) For purposes of this section "floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters which are inundated by a flood that has one percent or greater chance of recurring in any year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period;
- (4) location of springs and wells within less than a mile of proposed site boundary line;
  - (5) contours of site before and after filling;
  - (6) existing and proposed building locations;
  - (7) intended points of ingress and egress for an all-weather road;
  - (8) means to control public access after closing hours;
  - (9) location and type of fences and gates;
  - (10) method by which explosive gases will be controlled or vented; and
  - (11) location of litter control fences.
- (d) Said land fill disposal site applications shall include a detailed report stating the following:
  - (1) type of underlying soil;
  - (2) means of controlling dust and accidental fires;
  - (3) a description of proposed disposal and operation methods, estimated completion time and a schedule of operating hours and fees;
  - (4) manpower needs and description of earth moving equipment to be used;
  - (5) method and type of vegetation to be used for revegetating upon completely filling the site or portion thereof; and

- (6) litter control methods.
- (e) Public or private operators of disposal sites shall provide:
  - (1) adequate earth-moving equipment, properly maintained;
  - (2) periodic grading, as necessary, to maintain proper drainage;
  - (3) prompt revegetation of completed portions of the landfill;
  - (4) maintenance of site boundaries within limits to be determined by the permitting agency after review of the application;
  - (5) that any deviation or modification in the original application plan for the site is approved by the permitting agency;
  - (6) a scale for weighing waste collection and disposal vehicles; and
  - (7) any other requirements that may reasonably be established by the permitting agency or stated in 40 CFR Parts 257, 258, 264, 265 and any other applicable Federal rules, laws, and regulations or requirements.
- (f) No disposal site shall be issued a permit which does or, on the basis of the permitting agency's investigation, is determined to be likely to:
  - (1) contaminate an underground drinking water source beyond the solid waste boundary specified by the Department of Planning and Natural Resources, using the criteria stated in 40 CFR Parts 257,258, 264 and 265;
  - (2) apply solid waste to land used for the production of food-chain crops, unless it meets the criteria stated in 40 CFR Parts 257, 258, 264 and 265;
  - (g) Permits for disposal sites shall be issued only to the

operator thereof, or in the case of the Government, to the operating department or agency and shall not be transferred or assigned. A permit fee of \$500 shall be charged for each privately operated disposal site and shall be renewed each year in January. The Commissioner of the Department of Planning and Natural Resources, in his discretion, may waive the permit fee when he deems it to be in the public interest.

(h) The owner or operator of a municipal solid waste landfill unit must comply with any other applicable Federal Rules, laws, regulations, or other requirements.

#### §1560-301.10. General Operation Requirements

The following requirements shall govern the operation of all publicly and privately operated landfill disposal sites:

- (a) The site shall be fenced, with a gate which shall be locked when the site is closed. Operating hours shall be posted at the gate.
- (b) As a minimum, operating personnel must be provided with adequate shelter; toilet and wash-up facilities, drinking water and telephone for emergency use.
- (c) There shall be an adequate, suitable water supply for firefighting and dust control.
- (d) No pigs, goats, cattle, donkeys, dogs, chickens, peacocks or other domestic animals shall be permitted on the site.
- (e) Unloading of wastes shall be in a clearly marked area with an attendant to direct the operation.
- (f) Sewage sludge, liquids and hazardous wastes are specifically forbidden by part 258 of the Code of Federal Regulations and these Rules and Regulations, to be disposed of in a municipal solid waste landfill. Procedures to insure that sewage sludge, liquids and hazardous waste, as defined in Part 258, are not disposed of at a municipal solid waste landfill are to be instituted by the landfill operator.
  - (g) There shall be a separate unloading area for bulky items.
- (h) All open burning shall be prohibited except with special permission for specific instances from the Commissioner of the

Department of Planning and Natural Resources.

- (i) Wastes shall be deposited in two-foot layers or lifts and compacted. A daily cover of at least six inches of compacted earth or alternative materials as described in \$1560-301.21(b) shall be placed over compacted waste.
- (j) Blowing dust and paper and other debris shall be controlled.
- (k) Paper, plastic bags and other loose material shall be cleaned up from the site at least weekly.
- (1) Salvaging or sorting of wastes shall be organized so as not to hamper orderly and prompt waste disposal or create nuisances or hazards.
- (m) When a landfill site or portion thereof is completely filled, it shall be covered with at least six inches of impermeable (permeability less than 1 x  $10^{-5}$  cm/sec.) material underlying an infiltration layer that contains a minimum 18-inches of earthen material and an erosion layer that contains a minimum 6-inches of earthen material capable of supporting vegetative growth. The vegetative cover shall in no way affect the integrity of the impermeable layer below. The site or area shall then be graded and revegetated in the manner approved by the Department of Planning and Natural Resources.

## §1560-301.20. Procedures for Excluding the Receipt of Hazardous Waste

No person shall mix inflammable or explosive materials nor any material classed as a hazardous waste under these regulations with other solid waste for disposal purposes. Disposal of sewage sludge, liquids and hazardous waste is prohibited in accordance with 40 CFR Part 258. Owners and Operators must implement a program at the facility for detecting and preventing the disposal of regulated hazardous waste as defined in 40 CFR Part 261 and polychlorinated biphenyl (PCB) wastes as defined in 40 CFR Part 761. The Program must include at a minimum:

- (1) Random inspections of incoming loads unless the Owner or Operator takes other steps to insure that incoming loads do not contain regulated hazardous waste or PCB waste.
- (2) Officers or agents of the Virgin Islands Government charged with the administration and enforcement of these

regulations may visit any public or private disposal site during normal operating hours for the purpose of conducting inspections. The Department of Planning and Natural Resources shall fully enforce laws and regulations within their respective jurisdictions at public as well as private sites;

- (3) There must be records of any inspections;
- (4) Training of facility personnel to recognize hazardous waste and polychlorinated biphenyls (PCB) wastes; and
- (5) If a regulated hazardous waste or polychlorinated biphenyls (PCB) is discovered and the Virgin Island's does not have an EPA approved program in place, the EPA Regional Administrator should be notified.

#### \$1560-301.21. Cover Material Requirements

- (a) Wastes shall be deposited in two-foot layers or lifts and compacted. A daily cover of at least six inches of compacted earth shall be placed over compacted wasted unless otherwise approved.
- (b) Alternative materials of an alternative thickness (other than at least six inches of earthen material) may be approved by the Commissioner of the Department of Planning and Natural Resources if the owner or operator demonstrates that the alternative material and thickness control disease vectors, fires, odors, blowing litter and scavenging without presenting a threat to human health and the environment.
- (c) The Commissioner of DPNR may grant a temporary wavier from the requirement of paragraph (a) and (b) of this section if their owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.

#### \$1560-301.22 Disease Vector Control

- (a) Owners or operators of all MSWLF units must prevent or control on-site population of disease vectors using techniques appropriate for protecting human health and the environment.
- (b) For purposes of this section, "disease vectors" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.

#### §1560-301.23 Explosive Gas Control

- (a) Owners and operators of all MSWLF units must ensure that the concentration of methane gas generated by the facility does not exceed twenty-five percent of the lower explosive limit for methane in facility structures (excluding gas control or recovery system components), and the concentration of Methane gas does not exceed the lower explosive limit for methane at the facility property boundary.
- (b) Owners or operator of all MSWLF units must implement a routine methane monitoring program to ensure that the standards of paragraph (a) of this section are met.
- (1) The type and frequency of monitoring must be determined based on the following factors:
  - (I) Soil conditions;
  - (II) The hydrogeologic conditions surrounding the facility;
  - (III) The hydraulic conditions surrounding the facility; and
  - (IV) The location of facility structures and property boundaries.
- (2). The minimum frequency of monitoring shall be quarterly.
- (c) If methane gas levels exceeding the limits specified in Section 1560-301.23 of this section are detected, the owner or operator must:
- (1) Immediately take all necessary steps to ensure protection of human health and notify the Commissioner of DPNR;
- (2) Within the time set by the Commissioner of DPNR or not more than seven days of detection, place in the operating record to the methane gas levels detected and a description of the steps taken to protect human health; and
  - (3) Within the time set by the Commissioner of DPNR or

not more than 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the Commissioner that the plan has been implemented. The plan shall describe the nature and extent of the problem of the proposed remedy.

- (4) The Commissioner of DPNR may establish alternative schedules for demonstrating compliance with paragraphs (c)(2) and (3) of this section.
- (d) For the purpose of this section "lower explosive limit" means the lowest percent volume of a mixture of explosive gases in air which will propagate a flame at 25 degrees Celsius and atmospheric pressure.

#### \$1560-301.24 Air Criteria

- (a) Owners or operator of all MSWLF's must ensure that the units not violate any applicable requirements developed under a State Implementation Plan (SIP) approved or promulgated by the United States Environmental Protection Agency Administrator pursuant to section 110 of the Clean Air Act, as amended. All sections of the Clean Air Act, and 40 CFR Parts 51, 52, and 60, Standards of Performance for New Stationary Sources and Guidelines for control of existing sources: Municipal Solid Waste Landfills.
- (b) Open burning of solid waste except for the infrequent burning of agricultural wasted, silvicultural wastes, land clearing debris, diseased trees, or debris from emergency cleanup operations, is prohibited at all MSWLF units.

#### \$1560-301.25 Access Requirements

Owners or operators of all MSWLF units must control public access and prevent unauthorized vehicular traffic, scavengers and illegal dumping of wastes by using artificial barriers, natural barriers, or both, as appropriate to protect human health and the environment.

#### \$1560-301.26 Run-on / Run-off Control Systems

- (a) Owners or Operators of all MSWLF units must design, construct, and maintain:
- (1) A run-on control system to prevent flow onto the active portion of the landfill during the peak discharge from a 25-

year storm;

- (2) A run-off control system from the active portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-hour storm.
- (b) Run-off from the active portion of the landfill unit must be handled in accordance with 1560-301.27 of this subchapter 1560,

#### §1560-301.27 <u>Surface Water Requirements</u>

#### (a) MSWLF units shall not:

- (I) Cause a discharge of pollutants into waters of the Territory that is in violation of the requirements of Sections 402 and 404 of the Clean Water Act, as amended or is a violation of the Clean Water Act, National Pollution Discharge Elimination System "NPDES", the Virgin Islands Water Pollution Control Act and The Territorial Pollution Discharge Elimination System or Wetlands Regulations as amended.
- (II) Cause non-point source pollution of waters of the Territory that violate applicable requirements for implementing the Territorial Water Quality Management Plan approves by the Administrator under Section 208 or 319 of the Clean Water Act as amended.

#### §1560-301.28 Liquid Restrictions

- (a) Bulk or noncontainerized liquid waste may not be placed in MSWLF units unless:
- (1)1 The waste is household waste other than septic waste; or
- (2) The waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit, whether it is a new or existing MSWLF pr lateral expansion, is designed with a composite liner and leachate collection system as described in Section 1560-309 (a) (2) of this Subchapter 1560. The owner or operator must place the demonstration in the operating record and notify the Commissioner of DPNR that is has been placed in the operating record.
- (b) Containers holding liquid waste may not be placed in a MSWLF unit unless;
  - (1) The container is a small container similar in size

to that found in household waste;

- (2) The container is designed to hold liquids for use other than storage; or
  - (3) The waste is household waste.
  - (c) For purposes of this section:
- (1) "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquid Test), as described in "Tests Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).
- (2) "Gas condensate" means the liquid generated as a result of gas recovery process (es) at the MSWLF unit.

## §1560-302.10 Applicability and Effective Date

(a) The requirements of Section 1560-302.20 through 302.30 apply to owners or operators who are persons within the meaning provided in these Rules and Virgin Islands or federal government entities whose debts and liabilities are the debts and liabilities of the Virgin Islands or the United States.

### \$1560-302.20 Financial Assurance for Closure

- (a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of hiring a third party to close the largest area of all MSWLF units ever requiring under section 1560-900 of this Subchapter 1560 at any time during the active life in accordance with the closure plan. The owner or operator must notify the Commissioner of DPNR that the estimate has been placed in the operating record.
- (1) The cost estimate must equal the cost of closing the largest area of all MSWLF units ever requiring a final cover at any time during the active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see Section 1560-900 (c)(2) of this Subchapter 1560).
- (2) During the active life of the MSWLF unit, the owner or operator must annually adjust the closure cost estimate for inflation.

- (3) The owner or operator must increase the closure cost estimated and the amount of financial assurance provided under paragraph (b) of this section if changes to the closure plan or MSWLF unit conditions increase the maximum cost of closure at any time during the remaining active life.
- (4) The owner or operator may reduce the closure cost estimate and the amount of financial assurance provided under paragraph (b) of this section if the cost estimate exceeds the maximum cost of closure at any time during the remaining life of the MSWLF unit. The owner or operator must notify the Commissioner of DPNR that the justification for the reduction of the closure cost estimate and the amount of financial assurance has been placed in the operating record.
- (b) The owner or operator of each MSWLF unit must establish financial assurance for closure of the MSWLF unit in compliance with Section 1560-302.50 of this Subchapter 1560. The owner or operator must provide continuous coverage for closure until released from financial assurance requirements by demonstration compliance with Section 1560-900 (h) and (I) of this Subchapter 1560.

# \$1560-302.30 Financial Assurance for Post-Closure Care

- (a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of hiring a third party to conduct post-closure care for the MSWLF unit in compliance with post-closure plan developed under Section 1560-911 of this Subchapter 1560. The post-closure cost estimate used demonstrate financial assurance in paragraph (b) of this section must account for the total costs of conducting post-closure care, including annual and periodic costs as described in the post-closure plan over the entire post-closure care period. The owner or operator must notify the Commissioner of DPNR that the estimate has been placed in the operating record.
- (1) The cost estimate for post-closure care must be based on the most expensive costs of post-closure care during the post-closure care period.
- (2) During the active life of the MSWLF unit and during the post-closure care period, the owner or operator must annually adjust the post-closure cost estimate for inflation.
- (3) The owner or operator must increase the post-closure care cost estimate and the amount of financial assurance provided

under paragraph (b) of this section if changes in the post-closure plan or MSWLF unit conditions increase the maximum costs of post-closure care.

- (4) The owner or operator may reduce the post-closure cost estimate and the amount of financial assurance provided under paragraph (b) of this section if the cost estimate exceeds the maximum costs of post-closure care remaining over the post-closure period. The owner or operator must notify the Commissioner of DPNR that the justification fro the reduction of the post-closure cost estimate and the amount of financial assurance has been placed in the operating record.
- (b) The owner or operator of each MSWLF unit must establish, in a manner in accordance with Section 1560-302.50 of this Subchapter 1560, financial assurance for the costs of post-closure care as required under Section 1560-911 of this Subchapter 1560. The owner or operator must provide continuous coverage for post-closure care until released from financial assurance requirements for post-closure care by demonstrating compliance with Section 1560-911 (e) of the Subchapter 1560.

## §1560-302.40 Financial Assurance for Corrective Action

- (a) An owner or operator of a MSWLF unit required to undertake a corrective action program under Section 1560-818 of this Subchapter 1560 must have a detailed written estimate, in current dollars, of the cost of hiring a third party to perform the corrective action in accordance with the program required under Section 1560-818 of this Subchapter 1560. The corrective action cost estimate must account for the total costs of corrective action activities as described in the corrective action plan for the entire corrective action period. The owner or operator must notify the Commissioner of DPNR that the estimate has been placed in the operating record.
- (1) The owner or operator must annually adjust the estimate for inflation until the corrective action program is completed in accordance with Section 1560-818 of this Subchapter 1560.
- (2) The owner or operator must increase the correction action cost estimate and the amount of financial assurance provided under paragraph (b) of this section if changed in the corrective action program or MSWLF unit conditions increase the maximum costs of corrective action.

- (3) The owner or operator may reduce the amount of the corrective action cost estimate and the amount of financial assurance provided under paragraph (b) of this section if the cost estimate exceeds the maximum remaining costs of corrective action. The owner or operator must notify the Commissioner of DPNR that the justification for the reduction of the corrective action cost estimate and the amount of financial assurance has been placed in the operating record.
- (b) The owner or operator of each MSWLF unit required to undertake a corrective action program under Section 1560-818 of this Subchapter 1560 must establish, in a manner in accordance with Section 1560-302.50 of this Subchapter 1560 financial assurance for the most recent corrective program. The owner or operator must provide continuous coverage for corrective action until released from financial assurance requirements for corrective action by demonstrating compliance with Sections 1560-818 (f) and (g) of thus Subchapter 1560.

### \$1560-302.50 <u>Allowable Mechanism</u>

- (a) Virgin Islands Approved Mechanism. An owner or operator may satisfy the requirements of this section by obtaining a mechanism that meets the criteria specified in Section 1560-302.50(1) of this Subchapter 1560, and that is approved by the Commissioner of DPNR. The owner or operator may choose from the options specified in 40 CFR, Part 258.74 (a) through (k).
- Use of Multiple Financial Mechanisms. (b) An owner or satisfy the requirements of this operator may section establishing more than one financial mechanism per facility. mechanisms must be as specified in paragraphs (a) and (b) of this section, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable. The financial test and a guarantee provided by a corporate parent, sibling, or grandparent may not be combined if the financial statements of the two firms are consolidated
- (c) The language of the mechanisms listed in paragraphs (a),(b) and (c) of this Section must ensure that the instruments satisfy the following criteria:
- (1) The financial assurance mechanisms must ensure that the amount of funds assured is sufficient to cover the costs of

closure, post-closure care, and corrective action for known releases when needed;

- (2) The financial assurance mechanisms must ensure that funds will be available in a timely fashion when needed.
- (3) The financial assurance mechanisms must be obtained by the owner or operator by the effective date of these requirements or prior to the initial receipt or solid waste, whichever is later, in the case of closure and post-closure care, and no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of Section 1560-818 of this Subchapter 1560, until the owner or operator is released from the financial assurance requirements 302.40 of this Subchapter 1560.
- (4) The financial assurance mechanisms must be legally valid, binding, and enforceable under Virgin Islands and Federal law.

# Section 1560-303 Inspections; records

- (a) Officers or agents of the Virgin Islands Government charged with the administration and enforcement of these regulations may visit any public or private disposal site during normal operating hours for the purpose of conducting inspections. The Departments of Health and the Department of Planning and Natural Resources shall fully enforce laws and regulations within their respective jurisdictions at public as well as private sites.
- (b) The Departments of Health, Public Works and the Department of Planning and Natural Resources may require any disposal site operator to keep such operating records as it may deem necessary and to submit or make available such records to appropriate agencies of the Government. The following information must be recorded and kept in operating record as it becomes available:
- (1) Any location restriction demonstration required under Sections 1560-310, 311, 312, 313, 314, 315 and 316 of this Subchapter 1560;
- (2) Inspection records, training procedures, and notification procedures required in Section 1560-301.20 of this Subchapter 1560;

- (3) Gas monitoring results from monitoring and any remediation plans required by Section 1560-301.23 of this Subchapter 1560;
- (4) Any MSWLF unit design documentation for placement of leachate or gas condensate in a MSWLF unit as required under Section 1560-301.28(a)(2) of the Subchapter 1560;
- (5) Any demonstration, certification, finding monitoring, testing, or analytical data required by Section 1560-800 of Subchapter 1560;
- (6) Closure and post-closure care plans and any monitoring, testing, or analytical data as required by Section 1560-900 and 1560-911 of this Subchapter 1560;
- (7) Any cost estimated and financial assistance documentation required by Section 1560-302 of the Subchapter 1560; and
- (8) Any information demonstrating compliance with small community exemption as required by this Chapter 56.
- (c) The owner/operator must notify the Commissioner of the Department of Planning and Natural Resources (DPNR) when the documents from paragraph (a) of this Section have been placed or added to the operating record, and all information contained in the operating record must be furnished upon request to the Commissioner of the Department of Planning and Natural Resources.
- (d) The Commissioner of DPNR can set alternative schedules for record keeping and notification requirements as specified in Section 1560-303(b) and © of this Subchapter 1560 except for the notification requirements in Section 1560-310(b) and Section 1560-815(g) (iii) of this Subchapter 1560.

# Section 1560-304 Compliance; violations

(a) The Commissioner of the Department of Planning and Natural Resources shall investigate any report of non-compliance by a public or private disposal site pursuant to the relevant provision of laws or of these regulations. Upon verifying that a violation exists he/she shall notify the operator of such site in writing stating the nature of the violation and steps for abatement. If steps are taken to correct the violation within five (5) days of receipt of notification by the site operator or his

representative, the said Commissioner may modify, suspend or revoke the disposal site permit. If the permittee continues to operate the facility in violation of the permit suspension, the Commissioner may seek an injunction to restrain such violation or commence or cause to be commenced such civil or criminal proceedings as may be authorized by Title 19, Sections 1561 and 1562, Virgin Islands Code.

### Section 1560-305 Private compost piles

Private compost piles may be maintained for not more than two family units. If only soil and garden clippings are used, the pile may be enclosed by wire or other loose fitting materials. garbage, manure or other putrescible matter is included, the pile must be covered by at least one foot of soil or tightly enclosed so as to be rodent and fly proof. If any compost pile becomes a public nuisance or health hazard, the Department of Health may investigate the condition reported and notify the owner of its If the condition of the compost pile is found to be as prescribed by health officer. If the condition persists or is deemed by the Department of Health to be such that immediate action is warranted the Department of Health may order its removal. purposes of this section "compost" means the product resulting from the decomposition of leaves, straw, grasses and other such vegetable matters mixed with inorganic materials ordinarily materials forming a part of the soil such as sand or lime, and used, useable or intended to be used, as a fertilizer and soil conditioner.

### Section 1560-306 Manure

In a populous district, stable manure must be kept in a covered water-tight pit or chamber and shall be removed at least once a week. Manure on farms or isolated premises, other than dairy farms, need not be so protected and removed unless ordered by a health officer. Manure may be used as fertilizer for farming, gardening or similar uses, subject to appropriate controls by the Department of Health regarding public nuisance or health hazard considerations. For purposes of this Section "manure" means that particular waste which is the accumulation of animal droppings with or without added decomposable material such as straw, grasses, or leaves and exclusive of human excrement.

Section 1560-307 <u>Dead animals</u>

It shall be the duty of owners to dispose of the carcasses of dead animals. Carcasses of dogs, cats and other small animals may be taken, enclosed in a tightly sealed plastic bag or other air tight container, to an approved disposal area. The carcass of any other dead animal not killed for food shall be removed and disposed of within 24 hours after death by burial or other method approved by the Commissioner of Health.

# Section 1560-308 Removal of building construction waste

Any person engaged in the construction, repair or demolition of any building or structure or part thereof, shall remove and dispose of in an authorized manner from any street, alley, gutter, park, sidewalk, curbing, curb space, any public way or any premises not owned by him all waste matter deposited thereon in connection with that portion of the construction, repair or demolition work under his specific or general supervision. Such waste matter shall be cleaned up, removed and disposed of in a sanitary manner within seven days after the final cessation of work on such building or structure or part thereof unless otherwise specifically authorized in writing by a health officer or the Solid Waste Planner.

# \$1560-309 <u>Design Criteria</u>

- (a) All MSWLF units and lateral expansions shall be constructed:
- (1) In accordance with a design approved by the Commissioner of DPNR. The design must ensure that the concentration values listed in Table 1 below, will not be exceeded in the uppermost aquifer at the relevant point of compliance, as specified by the Commissioner of DPNR under Section 1560-309(d) of Subchapter 1560, or
- (2) With a composite liner, as defined in Section 1560-309(b) of this Subchapter 1560 and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.
- (b) For purposes of this Section, "composite liner" means a system consisting of two components: the upper components must consist of a minimum of 30-mil flexible membrane liner (FML), and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity to on more than  $1\times10^7 \text{cm/sec}$ . FML components consisting of High Density Polyethylene (HDPE) shall be at least 60-mil tick. The FML component must be

installed in direct and uniform contact with a compacted soil component.

- (c) When approving a design that complies with Section 1560-309 paragraph (a) (1) of this Subchapter 1560, the Commissioner of DPNR must consider at least the following factors:
- (1) The hydrogeolgical characteristics of the facility and surrounding land;
  - (2) The climate factors of the area; and
- (3) The volume and physical and chemical characteristics of the leachate.
- (d) The relevance point of compliance specified by the Commissioner of DPNR shall be no more than 150 meters from the waste management unit boundary and shall be located on land owned by the owner of the MSWLF unit. In determining the relevant point of compliance, the Commissioner of DPNR shall consider at least the following factors:
- (1) The hydrogeological characteristics of the facility and surrounding land;
- (2) The volume and physical and chemical characteristics of the leachate;
- (3) Current ground-water level and maximum highwater level of record;
- (4) Location of springs and wells within 1000 feet of proposed site boundary line;
  - (5) Public health, safety, and welfare effects;
- (6) Practicable capability of the owner or operator;

(7) the quantity, quality and detection of flow of ground-water;

water users;

(8) the proximity and withdrawal rate of ground-

(9) Availability of alternative drinking water

supplies;

(10) existing quality of the ground-water, including other sources of contamination and their cumulative impacts on the ground-water and whether ground-water is currently used or

reasonably expected to be used for drinking water.

- (e) If the Virgin Islands does not have an EPA approved program is place and if EPA does not promulgate a rule establishing the procedures and requirements for State compliance with RCRA section 4005(c)(1)(B) by October 9, 1993, owners and operators in the Virgin Islands may utilize a design meeting the performance standard in Section 1560-309(a)(1) of this Subchapter 1560 if the following conditions are met:
- (1) The Virgin Islands determines the design meets the performance standard in Section 1560-309 (a)(1) of This Subchapter;
- (2) The Virgin Islands petitions EPA to review the determination; and
- (3) EPA approves the Virgin Islands determination or does not disapprove the determination within 30 days.

#### TABLE 1

Chemical 1)	MCL (mg/
Arsenic Barium Benzene Cadmium Carbon tetrachloride Chromium (hexavalent) 2,4-Dichlorophenoxy acetic acid 1,4-Dichlorobenzene 1,2-Dichloroethane 1,1-Dichloroethylene Endrin Fluoride Lindane Lead Mercury Methoxychlor Nitrate Selenium Silver Toxaphene	0.05 1.0 0.005 0.01 0.005 0.05 0.1 0.075 0.005 0.007 0.0002 4 0.004 0.05 0.002 0.1 10 0.01 0.05

 1,1,1-Trichloromethane
 0.2

 Trichloroethylene
 0.005

 2,4,5-Trichlorophenoxy acetic acid
 0.01

 Vinyl Chloride
 0.002

## \$1560-310 <u>Location Restrictions for Airport Safety</u>

- (a) No disposal site, or lateral expansions of a disposal site shall be issued a permit if it is located within 10,000 feet (3,048 meters) of any airport runway end use by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway end used by only piston-type aircraft, unless the owner of operator can demonstrate to the permitting agency that the units are designed and operated so that the MSWLF unit does not pose a bird hazard to the aircraft.
- (b) Owners or operators proposing to site new MSWLF units and lateral expansions located within a five-mile radius of any airport runway end used by turbojet of piston-type aircraft must notify the affected airport and the Federal Aviation Administration (FAA).
- (c) The owners or operator must place the demonstration in this Section  $1560-310\,(a)$  of this Subchapter 1560, in the operation record and notify the Commissioner of DPNR that it has been placed in the operating record.
  - (d) For purposes of this section:
- (1) "Airport" means public -use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.
- (2) "Bird hazard" means an increase in the likelihood of bird/craft collisions that may cause damage to the aircraft or injury to its occupants.

### \$1560-311 <u>Location Restrictions for Floodplains</u>

(a) Owners or operators of new MSWLF units, existing MSWLF units, and lateral expansions located in 100-year floodplains must demonstrate that the unit will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the Floodplain, or result in washout of solid waste so as to pose a hazard to human health and the environment. The owner or operator must place the demonstration in the operating record and notify the commissioner of DPNR that it has been placed in the operating

record.

- (b) For the purposes of this section:
- (1) "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands which are inundated by a flood that has a one percent or greater chance of recurring in any year of a flood of a magnitude equaled or exceeded once a 100 years on the average over a significantly long period,
- (2) "Washout" means the carrying away of solid waste by waters of the base flood.
- (3) "100-year flood" means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equaled or exceeded once in 100-years on the average over a significantly long period.

### §1560-312 <u>Location Restrictions for Wetlands</u>

- (a) New MSWLF units and lateral expansions shall not be located in wetlands, unless the owner or operator can make the following demonstrations to the Commissioner of DPNR:
- (1) Where applicable under Section 404 of the Clean Water Act or applicable wetlands laws of the Virgin Islands, the presumption that a practicable alterative to the proposed landfill is available which does not involve wetlands is clearly rebutted;
- (2) The construction and operation of the MSWLF unit will not:
- (I) Cause non-point sources pollution of waters of the Territory that violate applicable requirements for implementing the Territorial Water Quality Management Plan approved by the Administrator of EPA under Section 208 of the Clean Water Act, as amended;
- (II) Contaminate an underground drinking water source beyond the solid waste boundary specified by the Department of Planning and Natural Resources, using the criteria stated in 40 CFR parts 257, 258, 264 and 265;
- (III) Cause a discharge of pollutants into waters of the Territory that is in violation of the requirements of Section

402 and 404 of the Clean Water Act, as amended. (Pub.L. 92-500);

- (IV) Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973.
- (V) Violate any requirements under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;
- (VI) Violate any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act.
- (3) The MSWLF unit will not cause or contribute to significant degradation of wetlands. The owner of operator must demonstrate the integrity of the MSWLF unit and its ability to protect ecological resources by addressing the following factors;
- (I) Erosion, stability, and migration potential of dredged and fill materials and native wetland soils muds and deposits under to support the MSWLF unit;
- (II) The volume and chemical nature of the waste ma managed in the MSWLF unit;
- (III) Impacts on fish, wildlife, and other aquatic resources in their habitat from release of the solid waste;
- (IV) The potential effects of catastrophic release of waste to the wetland and resulting impacts on the environment; and
- (V) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.
- (4) To the extent required under Section 404 of the Clean Water Act or applicable wetlands laws of the Virgin Islands, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by paragraph (a)(1) of this Section, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g. restoration of existing degraded wetlands or creation of man-made wetlands); and

- (5) Sufficient information is available to make a reasonable determination with respect to these demonstrations.
- B) For purposes of this section, "wetlands" means those areas that are defined in 40 CFR 232.2(r).

### \$1560-313 <u>Location Restrictions for Fault Areas</u>

- (a) New MSWLF units and lateral expansions shall not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the owner or operator demonstrated to the Commissioner of DPNR that an alternative setback distance of less than 200 feet (60 meters) will present damage to the structural integrity of the MSWLF unit and will be protective human health and environment.
  - (b) For the purposes of this Section:
- (1) "Fault" means a fracture or a zone of fractures in any material along with strata of one side had been displaced with respect to that on the other side.
- (2) "Displacement" means the relative movement of any two sides of a fault measured in any direction.
- (3) "Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

### §1560-314 Location Restrictions for Seismic Impacts Zones

- (a) Mew MSWLF units and lateral expansions shall not be located in seismic impact zones, unless the owner or operator demonstrated to the Commissioner of DPNR that all containment structures, including liners leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. The owner or operator must place the demonstration in the operating record and notify the Commissioner of DPNR that it has been placed in the operating record.
  - (b) For the purposes of this Section:
- (1) "Seismic impact zone" means an area with a ten percent or greater probability that a maximum horizontal

acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull will exceed 0.10g in 250 years.

- (2) "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic map, with a 90 percent or greater probability that acceleration will not be exceed in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.
- (3) "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil or regolith lying at or near earth surface.

### \$1560-315 <u>Location Restriction for Unstable Areas</u>

- (a) Owners or operator of new MSWLF units, existing MSWLF units, and lateral expansions located in an unstable area must demonstrate that engineering measures have been incorporated into the MSWLF units's design to ensure that the integrity of the structural components of the MSWLF unit will not be disrupted. The owner or operator must place the demonstration in the operating record and notify the Commissioner of DPNR that it has been placed in the operating record. The owner or operator must consider the following factors, at a minimum, when determining whether an area is unstable:
- (1) On-site or local soil conditions that may results in significant differential setting;
- (2) On-site or local geologic or geomorphologic features; and
- (3) On-site or local human-made features or event (both surface and subsurface).
  - (b) For the purpose of this section:
- (1) "Unstable area" means a location that is susceptible to natural or human-induces events or forces capable of impairing the integrity of some of all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to

mass movements, and Karst terrains.

- (2) "Structural components" means liners, leachate collection system, final covers, run-on/run-off systems, and any other components used in the construction and operation of the MSWLF that is necessary for protection of human health and the environment.
- (3) "Poor foundation conditions" means those areas where features exist which indicate that a natural or man-induced event may result inadequate foundation support for the structural components of an MSWLF unit.
- (4) "Areas susceptible to mass movement" means those areas of influence (i.e. areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to MSWLF unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to landslided, avalanches, debris slides and flows, soil flection, block sliding and rock fall.
- (5) "Karst terrains" means areas where karst topography, with its characteristics surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristics physiographic features present in karst terrains include, but are not limited to, sinkholes, sinking streams, caves large springs, and blind valleys.

# §1560-316 Closure of Existing MSWLFS

- (a) Existing MSWLF units that cannot make the demonstration specified in Sections 1560-310(a) pertaining to airports, Section 1560-311(a) pertaining to floodplain, or Section 1560-311(a) pertaining to floodplain, or Section 1560-315(a) pertaining to unstable areas, must close by October 9, 1996, in accordance with Sections 1560-900 of the Subchapter 1560 and conduct post-closure activities in accordance with Section 1560-911 of this Subchapter 1560.
- (b) The deadline for closure required by paragraph (a) of this section may be extended up to two years if the owner or operator demonstrates to the Commissioner of DPNR that:
  - There is no available alternative disposal capacity;

(2) There is no immediate threat to human health and the environment.

## <u>Division 5. Salvaging and Resource Recovery</u>

### Section 1560-400 Joint permit required; fee

(a) Any person seeking to establish any resource recovery facility or salvage operation, as those terms are defined in subsection (b) hereof, shall first obtain a joint permit from the Commissioner of Public Works and the Commissioner of the Department of Planning and Natural Resources. The Commissioner of Public Works shall assess a reasonable fee for such permit, which shall be deposited into the General Fund of the Treasury of the Virgin Islands. The Commissioner may waive the annual permit fee if he deems such waiver to be in the public interest.

## (b) For purposes of this section:

- (1) "resource recovery facility" means any facility at which solid waste is processed for the purpose of extracting, converting to energy, or otherwise separating and preparing solid waste for reuse;
- (2) "salvage operation" means any operation carried on by a person, or agent or employee of such person, for the express purpose of reclaiming or removing discarded reusable materials for commercial or other purposes.

## Section 1560-401 Source of waste materials

- (a) Resource recovery facilities and salvage operations may be operated in conjunction with waste disposal facilities, but shall require a separate joint permit issued pursuant to Section 1560-400 hereof.
- (b) Pursuant to the provisions of Section 4003(5) of Public Law 941-580 (42 USC 6943 (5)), no agency or regulation of the Government of the Virgin Islands may prohibit long-term contracts for the supply of wastes to an authorized resource recovery facility or salvage operation which is dependent upon such a supply, provided that such contracts are conditioned upon the continued availability of funds appropriated therefor.
- (c) All waste management practices associated with a resource recovery facility or salvage operation shall conform to the requirements of these regulations.

# <u>Division 6. Hazardous Wastes in Accordance</u> <u>With 40 CFR Part 261</u>

### Section 1560-500 Identification

Examples of hazardous wastes, as defined in Section 1560-1 of these regulations, include, but are not limited to, poisons, acids, ammunition, explosives, infectious materials, pathological wastes, caustic chemicals, petroleum products and their wastes, excluding special wastes, radiological materials, pesticides, toxic chemicals, inflammables, asbestos, benzene, and vinyl chloride.

Any person engaged in generation, storage, transportation, treatment, disposal or recovery of hazardous wastes shall obtain a permit therefor from the Department of Planning and Natural Resources.

## §1560-501 Permit required

- (a) Any person engaged in the collection, generation, storage, transportation, treatment, disposal or recovery of hazardous wastes and special wastes shall obtain a permit therefore from the Department of Planning and Natural Resources. However, do-it-yourself used oil generators need not obtain any permits from the Department of Planning and Natural Resources.
- (b) For the purposes of this section: "Do-It-Yourself" means a person or household who generates, stores, transport, or collects five (5) gallons or less of used oil per month.

## Section 1560-502 Containers for hazardous wastes

The Commissioner of the Department of Planning and Natural Resources may require separate, special storage or waste containers or methods for the storage and handling of hazardous wastes. Such containers shall conform to the requirements of 40 CFR Part 265(I) and (j) and shall be clearly marked "Contains Hazardous Waste Material.

## \$1560-503 Standards for the management of used oil

The standards for the management of used oil shall be identical to those in 40 CFR part 279, except as distinguished in Section 1560-102, 501, and 502 of this Subchapter 1560.

### Division 7. Motor Vehicles and Boats

### Section 1560-600. Removal

Pursuant to Title 19, Section 1559, Virgin Islands Code, an abandoned or junked motor vehicle or part thereof may be removed by the Department of Public Safety in accordance with Title 20, Chapter 49, Virgin Islands Code, and the owner thereof, if ascertainable, assessed a removal feel of \$50 and arrested for a violation of Section 1563 (6) of said Title 19. Any abandoned or junked boat or part thereof may be removed by the Department of Planning and Natural Resources in accordance with Title 12, Section 715, Virgin Islands Code, and the same actions taken with respect to the owner, if ascertainable. A policy is hereby established, however, that a court order be sought, in conjunction with any arrested owner's trial, to require said owner to cause his vehicle or boat, or part thereof, to be removed within a reasonable time, at his own expense.

## Division 8. Penalties

## Section 1560-700 Civil or criminal remedies

Properly designated officials of the departments of Public Works, Planning and Natural Resources and Health, charged by these regulations with the obligation to administer and enforce the provisions of Title 19, Chapter 56, Virgin Islands Code, and the provisions of these rules and regulations shall fully utilize the visions of Sections 1561 and 1562 of said Title 19 in addressing the violations of the law and of these regulations by any person.

Division 9, Ground Water Monitoring and Corrective Action

### §1560-800 Applicability

- (a) The requirements in this part apply to MSWLF units, except as provided in paragraph (b) of this section.
- (b) Ground-water monitoring requirements under Sections 1560-811 through Section 1560-815 of this Subchapter 1560, may be suspended by the Commissioner of DPNR for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the uppermost aquifer (as defined in Section 15601 of this Subchapter 1560) during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified ground-water scientist and approved by the Commissioner of DPNR, and must be based upon:

- (1) Site-specified field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport; and
- (2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.
- (c) Owners and operators of MSWLF units must comply with the ground-water monitoring requirements of this Chapter 56 and its Subchapter 1560 according to the following schedule unless an alternative schedule is specified under paragraph (d) of this Section:
- (1) Existing MSWLF units and lateral expansions less than one mile from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in Sections 1560-811 through 1560-815 of this Subchapter 1560 by October 9, 1994;
- (2) Existing MSWLF units and lateral expansions greater than one mile but less than two miles from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in Sections 1560-811 through Section 1560-815 of this Subchapter 1560 by October 9, 1995;
- (3) Existing MSWLF units and lateral expansion greater than two miles from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in §\$258.51-258.55 by October 9, 1996.
- (4) New MSWLF units must be in compliance with the ground-water monitoring requirements specified in Sections 1560-811 through 1560-815 of this Subchapter 1560 before waste can be placed in the unit.
- (d) The Commissioner of DPNR may specify an alternative schedule for the owners or operators of existing MSWLF units and lateral expansions to comply with the ground water monitoring requirements specified in Sections 1560-811 through 1560-815 of this Subchapter 1560. This schedule must ensure that 50 percent of all existing MSWLF units are in compliance by October 9, 1994 and all existing MSWLF units are in compliance by October 9, 1996. In setting the compliance schedule, the Commissioner of DPNR must consider potential risk posed by the unit to human health and the environment. The following factors should be considered in

# determining potential risk:

- (1) Proximity of human and environment receptors;
- (2) Design of the MSWLF unit;
- (3) Age of the MSWLF unit;
- (4) The size of MSWLF unit;
- (5) Types and quantities of wastes disposed including sewage sludge; and
- (6) Resources value of the underlying aquifer, including:
  - (I) Current and future uses;
  - (II) Proximity and withdrawal rate of users; and
  - (III) Ground-water quality and quantity.
- (e) Once established at a MSWLF unit, ground-water monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit as specific in Section 1560-911 of this Subchapter 1560.
- (f) For the purposes of this Chapter 56 and its Subchapter 1560, a qualified ground-water scientist is a scientist or engineer which has received a baccalaureate or post-graduate degree in the natural science training and experience in ground-water hydrology and related fields as may be demonstrated by Virgin Islands registration, professional Certifications, or completion of accredited university programs that enable that individual to make sound professional judgements regarding ground-water monitoring, contaminant fate and transport, and corrective-action.
- (g) The Commissioner of DPNR may establish alternative schedules for demonstrating compliance with Section 1560-811(d)(2) of this Subchapter 1560, pertaining to notification of placement of certification in operating record; Section 1560-814(c)(1) of this Subchapter 1560 pertaining to notification that statistically increase (SSI) notice is in operating record; Section 1560-814(c)(2) and (3) of this Subchapter 1560, pertaining to an assessment monitoring program; Section 1560-815(b) of this Subchapter 1560, pertaining to sampling and analyzing appendix II constituents; Section 1560-815(d)(1) of this Subchapter 1560,

pertaining to placement of notice in record; Section 1560-815(d)(2) of this Subchapter 1560, pertaining to sampling fro appendix I and II to this Chapter 56 and its Subchapter 1560; Section 1560-815(q) of this Subchapter 1560 pertaining to notification (and placement of notice in record) of SSI above ground-water protection standard; 1560-815(q)(1)(iv) and Section 1560-816(a) Subchapter 1560, pertaining to assessment of corrective measures; Section 1560-817(a) of this Subchapter 1560, pertaining selection of remedy and notification of placement in record; Section 1560-818 (c)(4) of this Subchapter 1560, pertaining to notification of placement in the record (alternative corrective action measures); and Section 1560-818(f) of this Subchapter 1560, pertaining to notification of placement in record (certification of remedy completed).

## \$1560-811 Ground Water Monitoring System

- (a) A ground-water monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield ground-water samples from the uppermost aquifer (as defined in Section 1560-1 of this Subchapter 1560) that:
- (1) Represent the quality of background ground-water that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of he waste management area where:
- (I) Hydrogeologic conditions do not allow the owner of operator to determine what wells are hydraulically upgradient; or
- (II) Sampling at other wells will provide an indication of background-water quality that is as representative or more representative than that provided by the upgradient wells; and
- (2) If the Virgin Islands does not have and EPA approved program in place, represent the quality of ground-water passing the relevant point of compliance specified by the Commissioner of DPNR under Section 1560-309(d) of this Subchapter 1560 or at the waste management unit boundary in the Virgin Islands. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Commissioner of DPNR under Section 1560-309(d) if this Subchapter 1560 or at the waste management unit boundary in the Virgin Islands, if the Virgin Islands is unapproved, that ensures detection of ground-water contamination in the uppermost aquifer. When physical obstacles preclude

installation of ground-water wells at the relevant point of compliance at existing units, the downgradient monitoring system system may be installed at the closest practicable distance hydraulically downgradient.

- (b) The Commissioner of DPNR may approve a multi-unit ground-water monitoring system instead of separate ground-water monitoring systems for each MSWLF unit when the facility has several units, provided the multi-unit ground-water monitoring system meets the requirements of Section 1560-811(a) of this Subchapter 1560 and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:
  - (1) Number, spacing and orientation of the MSWLF units;
  - (2) Hydrogeologic setting;
  - (3) Site history;
  - (4) Type of waste accepted at the MSWLF units.
  - (5) Engineering design of the MSWLF.
- (c) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground-water samples. The annular space (i.e. the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground-water.
- (1) The owner or operator must notify the Commissioner of DPNR that the design, installation, development, and decommission of any monitoring wells, piezometer and other measurement, sampling, and analytic devices documentation has been placed in the operating the record; and
- (2) The monitoring wells, piezometer, and other measurement, sampling and analytic devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.
- (d) The number, spacing and depths of monitoring systems shall be:
  - (1) Determined based upon site-specific technical

information that must include thorough characterization of :

- (I) Aquifer thickness, ground-water flow rate. Ground-water flow direction including seasonal and temporal fluctuations in ground-water flow; and
- (II) Saturated and unsaturated geologic units and fill materials overlying ht uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited, thickness, stratigraphy, lithology, hydraulic conductivires, porosities and effective porosities.
- (2) Certified by a qualified ground-water scientist or approved by the Commissioner of DPNR. Within 14 days of this certification, the owner or operator must notify the Commissioner of DPNR that the certification has been placed in the operating record.

## §1560-813 Ground Water Sampling and Analysis Requirements

- (a) The ground-water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of ground-water quality at the background and downgradient wells installed in compliance with section 1560-811 (a) of Subchapter 1560. The owner of operator must notify the Commissioner of DPNR that the sampling and analysis program documentation has been placed in the operating record and the program must include procedures and techniques for:
  - (1) Sample collection;
  - (2) Sample preservation an shipment;
  - (3) Analytical procedures;
  - (4) Chain of custody controls; and
  - (5) Quality assurance and quality control.
- (b) The ground-water monitoring program must include sampling and analytical methods that are appropriate for ground-water sampling and that accurately measure hazardous constituents and other monitoring parameters I ground-water samples. Ground-water samples shall not be field-filtered prior to laboratory analysis.

- (c) The sampling procedures and frequency must be protective of human health and the environment.
- (d) ground-water elevations must be measured in each well immediately prior to purging, each time ground-water is sampled. The owner or operator must determine the rate and direction of ground-water flow each time ground-water is sampled. Ground-water elevations in wells which monitor the same waste management area must be measures within a period of time short enough to avoid temporal variations in ground-water flow which could preclude accurate determination of ground-water flow rate and direction.
- (e) The owner or operator must establish background ground-water quality in a hydraulically upgradient or background well(s) for each of the monitoring parameters or constituents required in the particulate ground-water monitoring program that applies to the MSWLF unit a, as determined under Section 1560-814(a) or Section 12560-815(a) of this Subchapter 1560. Background ground-water quality may be established at wells that are not located hydraulically upgradient from the MSWLF unit if it meets the requirements of Section 1560-811(a)(1) of this Subchapter 1560 for corrective action.
- (f) The number of samples collected to establish ground-water quality data must ne consistent with the appropriate statistical procedures determined pursuant to paragraph (g( of this section. The sampling procedures shall be those specified under Section 1560-814(b) of this Subchapter 1560 for detection monitoring. Section 1560-815 (b) and (d) of this Subchapter 1560 for assessment monitoring, and Section 1560-816(b) of this Subchapter 1560 for corrective action.
- (g) The owner or operator must specify on the operating record one of the following statistical methods to be used in evaluating ground-water monitoring data for each hazardous constituent. The statistical test chosen shall be conducted separately for each hazardous constituent in each well.
- (1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's means and the background means levels for each constituent.
- (2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method

must include estimation and testing of contrasts between each compliance well's median and the background median levels for each constituent.

- (3) A tolerance or prediction interval procedure in which an interval for each constituents is established form from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
- (4) A control chart approach that gives control limits for each constituent.
- (5) Another statistical test method that meets performance standards of Section 1560-813(h) of this Subchapter 1560. The owner or operator must place a justification for this alternative in the operating record and notify the Commissioner DPNR of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of Section 1560-813(h) of this Subchapter 1560.
- (h) Any statistical method chosen under Section 1560-813(g) of this Subchapter 1560 shall comply with the following performance standard, as appropriate:
- (1) The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters are hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.
- (2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing time period. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period shall be no less tan 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.
  - (3) If a control chart approach is used to evaluate

ground-water monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

- (4) If a tolerance interval or a predictional interval is used to evaluate ground-water monitoring data, the levels of confidence and , for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituents of concern.
- (5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environmental. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can he reliability achieved within specified limits of precision and accuracy during routine laboratory conditions that are available to the facility.
- (6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
- (I) The owner or operator must determine whether or not there is a statistically significant increase over background values for each parameter or constituents required in the particular ground-water monitoring program that applies to the MSWLF unit, as determined under Sections 1560-814(a) or Section 1560-815(a) of this Subchapter 1560.
- (1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the ground-water quality of each parameter or constituent at each monitoring well designated pursuant to Section 1560-811(a)(2) of this Subchapter 1560 to the background value of that constituent, according to the statistical procedures and performance standards specified under paragraphs (g) and (h) of this section.
- (2) Within a reasonable period of time after completing sampling and analysis, the owner or operator must determine whether there has been a statistically significant increase over background

at each monitoring well.

# §1560-814 <u>Detection Monitoring Program</u>

- (a) Detection Monitoring is required at MSWLF units at all ground-water monitoring wells defined under Sections 1560-811(a)(1) and 1560-811(a)(2) of this Subchapter 1560. At a minimum, a detection monitoring program must include the monitoring for the constituents listed in appendix I to this Chapter 56 and its Subchapter 1560.
- (1) The Commissioner of DPNR may delete any of the appendix I monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the unit.
- (2) The Commissioner of DPNR may establish an alternative list of inorganic indicator parameters for a MSWLF unit, in lieu of some or all of the heavy metals (constituents 1-15 in appendix I to this Chapter 56 and its Subchapter 1560, if the alternative parameters provide a reliable indication of inorganic releases from the MSWLF unit to the ground-water. In determining alternative parameters, the Commissioner of DPNR shall consider the following factors:
- (I) The types, quantities, and concentrations of constituents in waste managed at the MSWLF unit;
- (II) The mobility , stability, and persistence of waste constituents, and their reaction products in the unsaturated zone beneath the MSWLF unit;
- (III) The detectability of indicator parameters, waste constituents, and reaction products in the ground-water; and
- (IV) The concentration or values and coefficients of variation of monitoring parameters or constituents in the ground-water background.
- (b) The monitoring frequency for all constituents listed in appendix I to this Chapter 56 and its Subchapter 1560, or in the alternative list approved in accordance with paragraph (a)(2) of this section, shall be at least semiannual during the active life of the facility (including closure) and the post-closure period. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed for the appendix I constituents, or the alternative list approved in accordance with

paragraph (a)(2) of this section, during the first semiannual sampling event. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.

The Commissioner of DPNR may specify an appropriate alternative frequency for repeated sampling and analysis for appendix I constituents, or the alternative list approved in accordance with paragraph (a)(2) of this section, during the active life (including closure) and the post-closure care period. The alternative frequency during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the following factors:

- (1) Lithology of the aquifer and unsaturated zone;
- (2) Hydraulic conductivity of the aquifer and unsaturated zone;
  - (3) Ground-water flow rates;
- (4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel); and
  - (5) Resource value of the aquifer.
- (c) If the owner or operator determines, pursuant to Section 1560-813 of this Subchapter 1560, that there is a statistically significant increase over background for one or more of the constituents listed in appendix I to this Chapter 56 and its Subchapter 1560, or in the alternative list approved in accordance with paragraph (a)(2) of this section, at any monitoring well at the boundary specified under Section 1560-811(a)(2) of this Subchapter 1560, the owner or operator:
- (1) Must, within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the Commissioner of DPNR that this notice was placed in the operating record; and
- (2) Must establish an assessment monitoring program meeting the requirements of Section 1560-815 of this Subchapter 1560 within 90 days except as provided for in paragraph (c)(3) of this section.

other than a MSWLF unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis statistical evaluation, or natural variation in ground-water quality. A report documenting this demonstration must be certified by a qualified ground-water scientist or approved by the Commissioner and be placed in the operating record. If a successful demonstration is made and documented, the owner or operator may continue detection monitoring as specified in this section. If after 90 days, a successful demonstration is not made, the owner or operator must initiate an assessment monitoring program as required in Section 1560-815 of this Subchapter 1560.

### §1560-815 <u>Assessment Monitoring Program</u>

- (a) Assessment monitoring is required whenever a statistically significant increase over background has been detected for one or more of the constituents listed in appendix I or in the alternative list approved in accordance with Section 1560-814(a)(2) of the Subchapter 1560.
- (b) Within 90 days of triggering an assessment monitoring program and annually thereafter, the owner or operator must sample and analyze the ground-water for all constituents identified in appendix II of this Chapter 56 and its Subchapter 1560. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any constituent detected in the downgradient wells as the result of the complete appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the new constituents.

The Commissioner of DPNR may specify an appropriate subset of wells to be sampled and analyzed for appendix II constituents during assessment monitoring. The Commissioner of DPNR may delete any of the appendix II monitoring parameters for a MSWLF unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the unit.

- (c) The Commissioner of DPNR may specify an appropriate alternate frequency for repeated sampling and analysis for the full set of appendix II constituents required by Section 1560-815(b) of this Subchapter 1560, during the active life (including closure) and post-closure care of the unit considering the following factors:
  - (1) Lithology of the aquifer and unsaturated zone;

- (2) Hydraulic conductivity of the aquifer and unsaturated zone;
  - (3) Ground-water flow rates;
- (4) Minimum distance between upgradient edge of the MSWLF unit and downgradient monitoring well screen (minimum distance of travel);
  - (5) Resource value of the aquifer; and
- (6) Nature (fate and transport) of any constituents detected in response to this section.
- (d) After obtaining the results from the initial or subsequent sampling events required in paragraph (b) of this section, the owner or operator must;
- (1) Within 14 days, place a notice in the operating record identifying the appendix II constituents that have been detected and notify the Commissioner of DPNR that this notice has been placed in the operating the record;
- (2) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by Section 1560-811(a) of this Subchapter 1560, conduct analyses for all constituents in appendix I of this Chapter 56 and its Subchapter 1560 or in the alternative list approved in accordance with Section 1560-814(a)(2) of this Subchapter 1560, and for those constituents in appendix II to this Chapter 56 and its Subchapter 1560 that are detected in response to paragraph (b) of this section, and record their concentrations in the facility operating record. At least one sample from each well (background and downgradient) must be collected and analyzed during these sampling events.

The Commissioner of DPNR may specify an alternative monitoring frequency during the active life (including closure) and the post-closure care period for the constituents referred to in this paragraph. The alternative frequency for appendix I constituents, or the alternative list approved in accordance with 258.54(a)(2), during the active life (including closure) shall be no less than annual. The alternative frequency shall be based on consideration of the factors specified in paragraph © of this section;

(3) Establish background concentrations for any constituents detected pursuant to paragraphs (b) or (d)(2) of this section; and

- (4) Establish ground-water protection standards for all constituents detected pursuant to paragraph (b) or (d) of this section. The ground-water protection standards shall be established in accordance with paragraphs (h) or (I) of this section.
- (e) If the concentrations of all appendix II constituents are shown to be at or below background values, using the statistical procedures in section 1560-813 (g) of this subchapter 1560, for the two consecutive sampling events, the owner or operator must notify the Commissioner of DPNR of this finding and may return to detection monitoring.
- (f) If the concentrations of any appendix II constituents are above background values, but all concentrations are below the ground-water protection standard established under paragraphs (h) or (I) of this section, using the statistical procedures in Section 1560-813 (g) of this Subchapter 1560, the owner of operator must continue assessment monitoring in accordance with this section.
- (g) If one or more appendix II constituents are detected at statistically significant levels above the ground-water protection standard established under paragraphs (h) or (I) of this section in any sampling event, the owner or operator must, within 14 days of this finding, place a notice in the operating record identifying the appendix II constituents that have exceeded the ground-water protection standard and notify the commissioner of DPNR and all appropriate local government officials that the notice has been placed in the operating record. The owner or operator must also:
- (1) (I) Must characterize the nature and extent of the release by installing additional monitoring wells as necessary;
- (II) Must install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with Section 1560-815 (d) (2) of this Subchapter 1560;
- (III) Must notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site indicated by sampling of wells in accordance with Section 1560-815(g)(1) of this Subchapter 1560; and
- (IV) Must initiate an assessment of corrective measures as required by Section 1560-816 of this Subchapter 1560 within 90 days; or

- May demonstrate that a source other than a MSWLF unit caused the contamination, or that the SSI increase resulted from error in sampling, analysis, statistical evaluation, natural variation in ground-water quality. A record documenting this demonstration must be certified by a qualified ground-water scientist or approved by the Commissioner of DPNR and placed in the operating record. If a successful demonstration is made the owner or operator must continue monitoring in accordance with the assessment program pursuant to Section 1560-815 of this Subchapter 1560, and may return to detection monitoring if the appendix II constituents are at or below background as specified in Section Subchapter 1560. Until a successful 1560-815(e) of this demonstration is made, the owner or operator must comply with Section 1560-815 (g) of this Subchapter 1560 including initiating an assessment of corrective measures.
- (h) The owner of operator must establish a ground-water protection standard for each appendix II constituents detected in the ground water. The ground water protection standard shall be:
- (1) For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Safe Drinking Water Act (codified) under 40 CFR part 141, the MCL for that constituents;
- (2) For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with Section 150-811(a)(1) of this Subchapter 1560; or
- (3) For constituents for which the background level is higher than the MCL identified under subparagraph (h)(1) of this section or health based levels identified under Section 1560-815(I)(1) of this Subchapter 1560, the background concentration.
- (I) The Commissioner of DPNR may establish an alternative ground-water protection standard for constituents for which MCLs have not been established. These ground-water protection standards shall be appropriate health based levels that satisfy the following criteria:
- (1) The level is derived in a manner constituent with Agency guidelines for assessing the health risks of environmental pollutants 51 CFR 33992,34006, 34014,34028, September 24, 1986;
  - (2) The level is based on scientifically valid

studies conducted in accordance with the Toxic Substances Control Act Good Laboratory Practice Standards (40 CFR part 792) or equivalent;

- (3) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  range; and
- (4) For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime. For purposed of this subpart, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.
- (I) In establishing ground-water protection standards under paragraph (I) of this section, the Commissioner of DPNR may consider the following:
  - (1) Multiple contaminants in the ground-water;
- (2) Exposure threats to sensitive environmental receptors; and
- (3) Other site specific exposure or potential exposure to ground-water.

## \$1560-816 Assessment of Corrective Measures

- (a) Within 90 days of finding that any of the constituents listed in appendix II have been detected at a statistically significant level exceeding the ground-water protection standards defined under Section 1560-815(h) or Section 1560-815(I) of this Subchapter 1560, the owner or operator must initiate an assessment of corrective measures. Such an assessment must be completed within a reasonable period of time.
- (b) The owner or operator must continue to monitor in accordance with the assessment monitoring program as specified in Section 1560-815 of this Subchapter 1560.
- (c) The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under Section 1560-817 of Subchapter 1560, addressing at least the

### following:

- (1) The performance, reliability, ease of implementation, and potential cross media impacts of appropriate potential remedies, including safety impacts, and control of exposure to any residual contamination;
  - (2) The time required to begin and complete the remedy;
  - (3) The costs of remedy implementation; and
- (4) The institutional requirements such as Virgin Islands or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(s).
- (d) The owner of operator must discuss the results of the corrective measures assessments, prior to the selection of remedy, in a public meeting with interested and affected parties.

### \$1560-817 Selection of Remedy

(a) Based on the results of the corrective measures assessment conducted under Section 1560-816 of this Subchapter 1560, the owner or operator must select a remedy that, at a minimum, meets the standards listed in paragraph (b) of this section. The owner or operator must notify the Commissioner of DPNR, within 14 days of selecting a remedy, that a report describing the selected remedy has been placed in the operating record and how it meets the standards in paragraph (b) of this section.

### (b) Remedies must:

- (1) Be protective of human health and the environment;
- (2) Attain the ground-water protection standard as specified pursuant to Section 1560-815(h) or 1560-815(I) of this Subchapter 1560;
- (3) Control the source(s) of releases so as to reduce or eliminate to the maximum extent practicable, further release of appendix II constituents into the environment that may pose a threat to human health or the environment; and
- (4) Comply with standards for management of wastes as specified in Section 1560-818 of this Subchapter 1560.

- (c) In selecting a remedy that meets the standards of Section 1560-817(b) of this Subchapter 1560, the Owner or operator shall consider the following evaluation factors:
- (1) The long-and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:
  - (I) Magnitude of reduction of existing risks;
- (II) Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;
- (III) The type and degree of long-term management required, including monitoring, operation and maintenance;
- (IV) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;
  - (V) Time until full protection is achieved;
- (VI) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with the excavation, transportation, redisposal or containment;
- (VII)Long-term reliability of the engineering and institutional controls; and
  - (VIII) Potential need for replacement of the remedy.
- (2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors;
- (I) The extent to which containment practices will reduce further releases;
- (II) The extent to which treatment technologies may be used.
  - (3) The ease or difficulty of implementing a potential

remedy(s) based on consideration of the following types of factors:

- (I) Degree of difficulty associated with constructing the technology;
- (II) Expected operational reliability of the technologies;
- (III) Need to coordinate with and obtain necessary approvals and permits from other agencies;
- (IV) Availability of necessary equipment and specialists; and
- (V) Available capacity and location of needed treatment, storage, and disposal services.
- (4) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.
- (5) The degree to which community concerns are addressed by a potential remedy(s).
- (d) The owner or operator shall specify as part of the selected remedy a schedule for initialing and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in paragraphs (d) (1-8). The owner or operator must consider the following factors in determining the schedule of remedial activities:
  - (1) Extent and nature of contamination;
- (2) Practical capabilities of remedial technologies in achieving compliance with ground-water protection standards established under Section 1560-815(g) or Section 1560-815(h) of this Subchapter 1560 and other objectives of the remedy;
- (3) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;
- (4) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;
  - (5) Potential risks to human health and the environment

from exposure to contamination prior to completion of the remedy;

- (6) Resource value of the aquifer including:
  - (I) Current and future uses;
  - (II) Proximity and withdrawal rate of users;
  - (III) Ground-water quantity and quality;

(IV) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

- (V) The Hydrogeologic characteristics of the facility and surrounding land;
- - (7) Practicable capability of the owner or operator.
  - (8) Other relevant factors.
- (e) The Commissioner of DPNR may determine that remdiation of a release of an appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrated to the Commissioner of DPNR that:
- (1) The ground-water is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or
  - (2) The constituent(s) is present in ground-water that:
- (I) Is not currently or reasonably expected to be a sources of drinking water; and
- (II) Is not hydraulically connected with water to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the ground-water protection standards established under Section 1560-815(h) or 1560-815(I) of this Subchapter 1560; or

- (3) Remediation of the release(s) is technically impracticable; or
- (4) Remediation results in unacceptable cross-media impacts.
- (f) A determination by the Commissioner of DPNR pursuant to paragraph (e) of this section shall not affect the authority of the Virgin Islands to require the owner of operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the ground-water, to prevent exposure to the ground-water, or to remediate the ground-water to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

#### §1560-818 Implementation of the Corrective Action Program

- (a) Based on the schedule established under Section 1560-817(d) of this Subchapter 1560 for initiation and completion of remedial activities the owner or operator must:
- (1) Establish and implement a corrective action ground-water monitoring program that:
- (I) At a minimum, meet the requirements of an assessment monitoring program under Section 1560-815 of this subchapter 1560;
- (II) Indicate the effectiveness of the corrective action remedy; and
- (III) Demonstrate compliance with ground-water protection standard pursuant to paragraph (e) of this section.
- (2) Implement the corrective action remedy selected under Section 1560-817 of this Subchapter 1560; and
- (3) Take any interim measures necessary to ensure the protections of human health and the environment. Interim measures should to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to Section 1560-817 of this Subchapter 1560. The following factors must be considered by an owner or operator in determining whether interim measures are necessary:
- (I) Time required to develop and implement a final remedy;

- (II) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;
- (III) Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- (IV) Further degradation of the ground-water that may occur if remedial action is not initiated expeditiously;
- (V) Weather conditions that may cause hazardous constituents to migrate or be released;
- (VI) Risks of fire or explosion or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and
- (VII) Other situations that may pose threats to human health and the environment.
- (b) An owner or operator may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of Section 1560-817(b) of this Subchapter 1560 are not being achieved through the remedy selected. In such cases, the owner or operator must implement other methods or techniques that could practicably achieve with the requirements, unless the owner or operator makes the determination under Section 1560-818 © of this Subchapter 1560.
- (c) If the owner or operator determines that compliance with requirements under Section 1560-817(b) of this Subchapter 1560 cannot be practically achieved with any currently available methods, the owner or operator must:
- (1) Obtain certification of a qualified ground-water scientist or approval by the Commissioner of DPNR that compliance with requirements under Section 1560-817(b) of this Subchapter 1560 cannot be practicably achieved with any currently available methods;
- (2) Implement alternate measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and
- (3) Implement alternate measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

- (I) Technically practicable; and
- (II) Consistent with the overall objective of the remedy.
- (4) Notify the Commissioner of DPNR within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.
- (d) All solid wastes that are managed pursuant to a remedy required under Section 1560-817 of this Subchapter 1560, or an interim measure requires under Section 1560-818(a)(3) of this Subchapter 1560, shall be managed in a manner;
- (1) That is protective of human health and the environment; and
  - (2) That complies with applicable RCRA requirements.
- (e) Remedies selected pursuant to Section 1560-817 of this Subchapter 1560 shall be considered complete when:
- (1) The owner or operator complies with ground-water protection standards established under the Section 1560-815(h) or (I) of this Subchapter 1560 at all points within the plume of contamination that lie beyond the ground-water monitoring well system established under Section 1560-811(a) of this Subchapter 1560.
- with ground-water protection Compliance the standards established under Section 1560-815(h) or (I) of this Subchapter 1560 has been achieved by demonstrating concentrations of appendix II constituents have not exceeded the ground-water protection standard(s) for a period of consecutive years using the statistical procedures and performance standards in section 1560-813(g) and (h) of this Subchapter 1560. The Commissioner of DPNR may specify an alternative length of time during which the owner or operator must demonstrate concentrations of appendix II constituents have not exceeded that ground-water protection standard(s) taking into consideration:
  - (I) Extent and concentration of the release(s);
- (II) behavioral characteristics of the hazardous constituents in the ground-water;
  - (III) Accuracy of monitoring or modeling techniques,

including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

- (IV) Characteristics of the ground-water.
- (3) All actions required to complete the remedy have been satisfied.
- (f) Upon completion of the remedy, the owner or operator must notify the Commissioner of DPNR within 14 days that a certification that the remedy has been completed in compliance with the requirements of Section 1560-818(e) of this Subchapter 1560 has been placed in the operating record. The certification must be signed by the owner or operator and by a qualified ground-water scientist or approved by the Commissioner of DPNR.
- (g) When, upon completion of the certification, the owner of operator determines that the corrective action remedy has been completed in accordance with the requirements under paragraph (e) of this section, the owner or operator shall be released from the requirements for financial assurance for corrective action under Section 1560-302.40 of this Subchapter 1560.

#### Division 10

Closure and Post Closure Care

#### §1560-900 <u>Closure Criteria</u>

- (a) Owners or operators of all MSWLF units must install a final cover system that is designed to minimize infiltration and erosion. The final cover system must be designed and constructed to:
- (1) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than  $1 \times 10^{-5} \text{cm/sec.}$  whichever is less; and
- (2) Minimize infiltration through the closed MSWLF by the use of an infiltration layer that contains a minimum 18-inches of earthen material; and
- (3) Minimize erosion of the final cover by the use of an erosion layer that contains a minimum 6-inches of earthen material that is capable of sustaining native plant growth.

- (b) The Commissioner of DPNR may approve an alternative final cover design that includes:
- (1) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (a)(1) and (a) (2) of this section; and
- (2) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in paragraph (a)(3) of this section; and
- (c) The owner of operator must prepare a written closure plan that describes the steps necessary to close all MSWLF units at any point during their active life in accordance with the cover design requirements in Section 1560-900(a) or (b) of this Subchapter 1560, as applicable. The closure plan, at a minimum, must include the following information:
- (1) A description of the final cover, designed in accordance with Section 1560-900 (a) of this Subchapter 1560 and the methods and procedures to be used to install the cover;
- (2) An estimate of the largest area of the MSWLF unit ever requiring a final cover as required under Section 1560-900(a) of this Subchapter 1560 at any time during the active life;
- (3) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and
- (4) A schedule for completing all activities necessary to satisfy the closure criteria in Section 15650-900 of this Subchapter 1560.
- (d) The owner or operator must notify the Commissioner of DPNR that a closure plan has been prepared and placed in the operation record no later than the effective date of this Chapter 56 or its Subchapter 1560, or by the initial receipt of waste, whichever is later.
- (e) Prior to beginning closure of each MSWLF unit as specified in Section 1560-900(f) of this Subchapter 1560, an owner or operator must notify the Commissioner of DPNR that a notice of the intent to closure the unit has been placed in the operating record.
- (f) The owner or operator must begin closure activities of each MSWLF unit no later than 30 days after the date on which the

MSWLF unit receives the known final receipt of wastes or, if the MSWLF unit has remaining capacity and there is a reasonable likelihood that the MSWLF until will receive additional wastes, no later than one year after the most recent receipt of wastes. Extensions beyond the one-year deadline or beginning closure may be granted by the Commissioner of DPNR if the owner or operator demonstrated the MSWLF unit has the capacity to receive additional wastes and the owner or operator has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed MSWLF unit.

- (g) The owner of operator of all MSWLF units must complete closure activities of each MSWLF unit in accordance with the closure plan within 180 days following the beginning of closure as specified in paragraph (f) of this section. Extensions of the closure may be granted by Commissioner of DPNR if the owner or operator demonstrated that closure will, of necessity, take longer than 180 days and he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed MSWLF unit.
- (h) Following closure of each MSWLF unit, the owner or operator must notify the Commissioner of DPNR that a certification, signed by an independent registered professional engineer or approved by the Commissioner of DPNR, verifying that closure has been completed in accordance with the closure plan, has been placed in the operating record.
- (i) (1) Following closure of all MSWLF units, the owner or operator must record a notation on the deed to the landfill facility property, or some other instrument that is normally examined during title search, and notify the Commissioner of DPNR that the notation has been recorded and a copy has been placed in the operating record.
- (2) The notation on the deed must in perpetuity notify any potential purchaser of the purchaser of the property that:
  - (I) The land has been used as a landfill facility;

and

- (II) Its use is restricted under Section 1560-911(c).
- (j) The owner of operator may request permission from the Commissioner of DPNR to remove the notation from the deed if all

wastes are removed from the facility.

#### §1560-911 <u>Post-Closure Care Requirements</u>

- (a) Following closure of each MSWLF unit, the owner or operator must conduct post-closure care. Post-closure care must be conducted for 30 years, except as provided under paragraph (b) of this section, and consist of at least the following:
- (1) Maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;
- (2) Maintaining and operating the leachate collection system in accordance with the requirements in Section 1560-309 of this Subchapter 1560, if applicable. The Commissioner of DPNR may allow the owner or operator to stop managing leachate if the owner or operator demonstrates that leachate no longer poses a threat to human health and the environment;
- (3) Monitoring the ground-water in accordance with requirements of Division 9 of this Subchapter 1560 and maintaining the ground-water monitoring system, if applicable; and
- (4) Maintaining and operating the gas monitoring system in accordance with the requirements of Section 1560-301.23 of this Section 1560.
  - (b) The length of the post-closure care period may be:
- (1) Decreased by the Commissioner of DPNR if the owner or operator demonstrated that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the Commissioner of DPNR; or
- (2) Increases by the Commissioner of DPNR if the Commissioner of DPNR determines that the lengthened period is necessary to protect human health and the environment.
- (c) The owner or operator of all MSWLF units must prepare written post-closure plan that includes, at a minimum, the following information:
- (1) A description of the monitoring and maintenance activities required in Section 1560-911(a) of this Subchapter 1560

for each MSWLF unit, and the frequency at which these activities will be performed;

- (2) Name, address, and telephone number of the person or officer to contact about the facility during the post-closure period; and
- (3) A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this Chapter 56 and its Subchapter 1560.

The Commissioner of DPNR may approve any other disturbance if the owner or operator demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.

- (d) The owner or operator must notify the Commissioner of DPNR that a post-closure plan has been prepared and placed in the operating record no later than the effective date of this Chapter 56 and its Subchapter 1560, October 9, 1993, or by the initial receipt of waste, whichever is later.
- (e) Following completion of the post-closure care period for each MSWLF unit, the owner or operator must notify the Commissioner of DPNR that a certification, signed by an independent registered professional engineer or approved by the commissioner of DPNR, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.

Appendix I to Part 258-Constituents for Detection Monitoring  $\{1\}$ 

Common name {2}	-	CAS	RN {3}
Inorganic Constituents: (1) Antimony		•	Total) Total)
(3) Barium (4) Beryllium (5) Cadmium	-	(	Total) Total) Total)

(6) Chromium (Total) (7) Cobalt (Total) (8) Copper (Total) (9) Lead (Total) (10) Nickel (Total) (11) Selenium (Total) (11) Selenium (Total) (12) Silver (Total) (13) Thallium (Total) (14) Vanadium (Total) (15) Zinc (Total) (15) Zinc (Total) (16) Acetone (Total) (17) Acyjonitrile (Total) (18) Benzene (Total) (19) Bromochloromethane (Total) (19) Bromochloromethane (Total) (19) Bromochloromethane (Total) (21) Bromochloromethane (Total) (22) Carbon disulfide (Total) (23) Carbon disulfide (Total) (24) Chlorobenzene (Total) (25) Chloroform; Tribromomethane (Total) (26) Chloroform; Trichloromethane (Total) (27) Dibromochloromethane; Chloride (Total) (28) 1,2-Dibromochloromethane; Chlorodibromomethane (Total) (28) 1,2-Dibromochloromethane; Chlorodibromomethane (Total) (28) 1,2-Dibromochloromethane; Ethylene dibromide, EDB (Total) (28) 1,2-Dibromochane; Ethylene dibromide, EDB (Total) (30) o-Dichlorobenzene; 1,2-Dichlorobenzene (Total) (31) p-Dichlorobenzene; 1,4-Dichlorobenzene (Total) (32) trans-1,4-Dichloro-2-butene (Total) (33) 1,1-Dichlorobenzene; 1,1-Dichlorobenzene (Total) (34) 1,2-Dichlorobenzene; 1,1-Dichlorobenzene (Total) (35) 1,1-Dichlorobenzene; 1,1-Dichlorobenzene (Total) (36) cis-1,2-Dichlorobenylene; trans-1,2-Dichlorobenzene (Total) (36) cis-1,2-Dichloropenyene (Total) (37) trans-1,3-Dichlorocthylene; trans-1,2-Dichlorobenzene (Total) (36) cis-1,2-Dichloropenpene (Total) (37) trans-1,3-Dichlorocpenpene (Total) (38) 1,2-Dichloropenpene (Total) (39) cis-1,3-Dichloropenpene (Total) (30) cis-1,3-Dichlorocpenpene (Total) (31) Methyl bromide; Bromomethane (Total) (32) Examone; Methyl butyl ketone (Total) (33) Methyl bromide; Diromomethane (Total) (34) Methyl choride; Chloromethane (Total) (35) 1,1-Dichlorochane (Total) (36) cis-1,2-Dichloropenpene (Total) (37) Methyl dene chloride; Chloromethane (Total) (38) Methyl bromide; Diromomethane (Total) (39) Cis-1,3-Dichlorochane (Total) (40) Methyl chloride; Chloromethane (Total) (41) Methyl chloride; Chloromethane (Total) (42) Ethylbenge (Total) (43) Methyl bromide;		
(B) Copper (101a) Control (101a) (101 Nickel (101a) (101		(Total)
(9) Lead (70tal) (10) Nickel (70tal) (11) Selenium (70tal) (11) Selenium (70tal) (12) Silver (70tal) (70tal) (70tal) (12) Silver (70tal) (70ta		(Total)
(10) Nickel         (Total)           (11) Selenium         (Total)           (12) Silver         (Total)           (13) Thallium         (Total)           (14) Vanadium         (Total)           (15) Zinc         (Total)           Organic Constituents:         (Total)           (16) Acetone         67-64-1           (17) Acylonitrile         107-13-1           (18) Benzene         71-43-2           (19) Bromochloromethane         75-27-4           (21) Bromoform; Tribronomethane         75-27-4           (21) Bromoform; Tribronomethane         75-27-4           (21) Bromoform; Tribrionomethane         75-52-6           (23) Carbon tetrachloride         56-23-5           (24) Chlorobenzene         108-90-7           (25) Chloroethane; Ethyl chloride         75-00-3           (26) Chloroform; Trichloromethane; Chlorodibromomethane         12-66-3           (27) Dibromochloromethane; Ethylene dibromide; EDB         106-93-4           (30) o-Dichlorobenzene; 1,2-Dichlorobenzene         12-48-1           (31) p-Dichlorobenzene; 1,4-Dichlorobenzene         106-46-7           (32) trans-1,4-Dichlorocthylene; cis-1,2-Dichloroethene         106-63-3           (33) 1,1-Dichlorocthane; Ethylidene chloride         75-34-3 <td>(8) Copper</td> <td>! '</td>	(8) Copper	! '
(11) Selenium         (Total)           (12) Silver         (Total)           (13) Thallium         (Total)           (14) Vanadium         (Total)           (15) Zinc         (Total)           Organic Constituents:         (67-64-1)           (16) Acetone         67-64-1           (17) Acrylonitrile         107-13-1           (18) Benzene         71-43-2           (19) Bromochloromethane         74-97-5           (20) Bromofoln; Tribromomethane         75-27-4           (21) Bromofoln; Tribromomethane         75-27-2           (22) Carbon disulfide         75-15-0           (23) Carbon tetrachloride         75-15-0           (24) Chlorobenzene         108-90-7           (25) Chloroform; Trichloromethane         75-00-3           (26) Chloroform; Trichloromethane; DBCP         108-90-7           (27) Dibromochloromethane; Ethylene dibromide; EDB         106-93-4           (29) 1,2-Dibromo-3-chloropropane; DBCP         96-12-8           (29) 1,2-Dibromo-3-chloropropane; DBCP         106-93-4           (30) o-Dichlorobenzene; 1,2-Dichlorobenzene         106-46-7           (31) p-Dichlorobenzene; 1,4-Dichlorobenzene         106-46-7           (32) trans-1,3-Dichloroc-bulene; crans-1,2-Dichloroethene         106-62-6 </td <td></td> <td>[ -</td>		[ -
(12) Silver       (Total)         (13) Thallium       (Total)         (14) Vanadium       (Total)         (15) Zinc       (Total)         Organic Constituents:       (Total)         (17) Aczylonitrie       107-13-1         (18) Benzene       71-43-2         (19) Bromochloromethane       75-27-2         (20) Bromodichloromethane       75-27-2         (21) Bromoform; Tribromomethane       75-27-2         (22) Carbon disulfide       75-25-2         (23) Carbon tetrachloride       56-23-5         (24) Chlorobenzene       108-90-7         (25) Chloroethane; Ethyl chloride       75-00-3         (27) Dibromochloromethane; Ethylene dibromide; BDB       108-90-7         (27) Dibromochloromethane; Ethylene dibromide; BDB       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene       106-46-7         (32) trans-1,4-Dichloro-2-butene       106-46-7         (33) 1,1-Dichloroethane; Ethylene dichloride       75-34-3         (34) 1,2-Dichloroethylene; cis-1,2-Dichloroethene       106-46-7         (33) 1,2-Dichloropopane; Propylene dichloride       75-35-4         (36		
(13) Thallium       (Total)         (14) Vanadium       (Total)         (15) Zinc       (Total)         Organic Constituents:       (Total)         (16) Acetone       67-64-1         (17) Acryionitrile       107-13-1         (18) Benzene       71-43-2         (19) Bromochloromethane       74-97-5         (20) Bromofolm; Tribromomethane       75-27-4         (21) Bromoform; Tribromomethane       75-27-2         (22) Carbon disulfide       75-15-0         (23) Carbon tetrachloride       56-23-5         (24) Chlorobenzene       108-90-7         (25) Chloroform; Trichloromethane       75-00-3         (27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP       96-12-8         (29) 1,2-Dibromo-3-chloropropane; DBCP       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB       106-46-7         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene       106-46-7         (32) trans-1,4-Dichloro-2-butene       110-57-6         (33) 1,1-Dichloroethane; Ethylene dichloride       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride       107-06-2         (35) 1,1-Dichloroe		1 '
(14) Vanadium         (70tal)           (15) Zinc         (70tal)           Organic Constituents:         (70tal)           (16) Acetone         67-64-1           (17) Aczylonitrile         107-13-1           (18) Benzene         71-42-2           (19) Bromochloromethane         74-97-5           (20) Bromodichloromethane         75-27-4           (21) Bromoform; Tribromomethane         75-27-2           (21) Bromoform; Tribromomethane         75-52-2           (22) Carbon disulfide         56-23-5           (24) Chlorobenzene         108-90-7           (25) Chloroethane; Ethyl chloride         75-00-3           (26) Chloroform; Trichloromethane         67-66-3           (27) Dibromochloromethane; Chlorodibromomethane         124-48-1           (28) 1,2-Dibromo-3-chloropropane; DBCP         96-12-6           (29) 1,2-Dibromo-dhane; Ethylene dibromide; EDB         106-93-4           (30) o-Dichlorobenzene; 1,2-Dichlorobenzene         95-50-1           (31) p-Dichlorobenzene; 1,4-Dichlorobenzene         95-50-1           (32) trans-1,4-Dichloro-2-butene         100-46-7           (32) trans-1,4-Dichloroethane; Ethylene dichloride         75-34-3           (34) 1,2-Dichloroethane; Ethylene dichloride         75-35-4           (35) 1,1-D		
(Total) Organic Constituents: (16) Acetone		
Organic Constituents:         67-64-1           (16) Acetone.         67-64-1           (17) Acrylonitrile.         107-13-1           (18) Benzene.         71-43-2           (19) Bromochloromethane.         74-97-5           (20) Bromodichloromethane.         75-27-4           (21) Bromoform; Tribromomethane.         75-27-4           (21) Bromoform; Tribromomethane.         75-15-0           (23) Carbon tetrachloride.         108-90-7           (24) Chlorobenzene.         108-90-7           (25) Chlorothane; Ethyl chloride.         75-00-3           (27) Dibromochloromethane; Chlorodibromomethane         124-48-1           (28) 1,2-Dibromo-3-chloropropane; DBCP.         96-12-8           (29) 1,2-Dibromo-3-chloropropane; DBCP.         96-12-8           (29) 1,2-Dibromoethane; Ethylene dibromide; EDB         106-46-7           (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.         95-50-1           (31) p-Dichlorobenzene; 1,2-Dichlorobenzene.         106-46-7           (32) trans-1,4-Dichloroethane; Ethylene dichloride.         75-34-3           (31,1-Dichloroethane; Ethylene dichloride.         75-34-3           (34) 1,2-Dichlorobenzene; 1,2-Dichlorobenzene.         110-57-6           (33) 1,1-Dichloroethane; Ethylene dichloride.         100-49-6           (35) 1,1-Di	• • • • • • • • • • • • • • • • • • • •	
(16) Acetone.       67-64-1         (17) Acrylonitrile.       107-13-1         (18) Benzene.       71-43-2         (19) Bromodichloromethane.       74-97-5         (20) Bromodichloromethane.       75-27-2         (21) Bromoform; Tribromomethane.       75-25-2         (22) Carbon disulfide.       75-15-0         (23) Carbon tetrachloride.       56-23-5         (24) Chlorothane; Ethyl chloride.       75-00-3         (25) Chlorothane; Ethyl chloride.       75-00-3         (26) Chloroform; Trichloromethane.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene       106-46-7         (32) trans-1,4-Dichloro-2-butene       106-46-7         (33) 1,1-Dichloroethane; Ethylene dichloride       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride       75-34-3         (34) 1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-59-2         (35) 1,1-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5 <td>(</td> <td>(Total)</td>	(	(Total)
(17) Acrylonitrile.       107-13-1         (18) Benzene.       71-43-2         (19) Bromochloromethane.       74-97-5         (20) Bromodichloromethane.       75-27-4         (21) Bromofolori. Tribromomethane.       75-25-2         (22) Carbon disulfide.       75-15-0         (23) Carbon tetrachloride.       56-23-5         (24) Chlorobenzene.       108-90-7         (25) Chloroethane; Ethyl chloride.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane.       67-66-3         (27) Dibromochloromethane; Ethylene dibromide; EDB.       106-93-4         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromochane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       106-46-7         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethylene; ithylene dichloride.       75-34-3         (35) 1,1-Dichloroethylene; rems-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloro		
(18) Benzene.       71-43-2         (20) Bromodichloromethane.       74-97-5         (20) Bromodichloromethane.       75-27-4         (21) Bromoform; Tribromomethane.       75-125-2         (22) Carbon disulfide.       75-15-0         (23) Carbon tetrachloride       56-23-5         (24) Chloroethane; Ethyl chloride.       75-00-3         (25) Chloroethane; Ethyl chloride.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane.       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene       10-46-47         (33) 1,1-Dichloroethane; Ethyllene dichloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride.       75-34-3         (34) 1,2-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       106-46-7         (35) 1,1-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5 <td></td> <td></td>		
(19) Bromochloromethane.       74-97-5         (20) Bromodichloromethane.       75-27-4         (21) Bromoform; Tribromomethane.       75-25-2         (22) Carbon disulfide.       75-15-0         (23) Carbon tetrachloride.       56-23-5         (24) Chlorobenzene.       108-90-7         (25) Chlorocthane; Ethyl chloride.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane.       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       106-69-4         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-64-7         (32) trans-1,4-Dichloro-2-butene.       106-63-4         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylidene chloride.       107-06-2         (35) 1,1-Dichloroethane; Ethylene dichloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; cris-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropane; Propylene dichloride       78-		
(20) Bromodichloromethane.       75-27-4         (21) Bromoform; Tribromomethane       75-25-2         (22) Carbon disulfide.       75-15-0         (23) Carbon tetrachloride.       56-23-5         (24) Chlorobenzene.       108-90-7         (25) Chloroform; Trichloromethane.       67-66-3         (27) Dibromochloromethane; Ethylene dibromide; EDB.       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromochane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       106-46-7         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride.       75-35-4         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       107-06-2         (35) 1,1-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropene.       1006-102-6         (40) trans-1,3-Dichloropropene.       1006-102-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       74-87-3		
(21) Bromoform, Tribromomethane.       75-25-2         (22) Carbon disulfide.       75-15-0         (23) Carbon tetrachloride.       56-23-5         (24) Chlorobenzene.       108-90-7         (25) Chloroethane; Ethyl chloride.       75-00-3         (26) Chloroform; Trichloromethane.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (39) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride.       75-35-4         chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) i,2-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl chloride; Chloromethane. <td></td> <td>)</td>		)
(22) Carbon disulfide.       75-15-0         (23) Carbon tetrachloride.       56-23-5         (24) Chlorobernee.       108-90-7         (25) Chloroethane; Ethyl chloride.       75-00-3         (26) Chloroform; Trichloromethane.       124-48-1         (27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromochane; Ethylene dibromide; EDB.       106-93-4         (30) 0-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       100-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethylene; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       107-06-2         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-01-5         (41) Ethylbenzene.       10061-01-5         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9 </td <td></td> <td></td>		
(23) Carbon tetrachloride.       56-23-5         (24) Chlorobenzene.       108-90-7         (25) Chlorocethane; Ethyl chloride.       75-00-3         (26) Chloroform; Trichloromethane.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromocal-chloroppropane; DBCP.       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichloroethane; Ethylidene chloride.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       100-57-6         (33) 1,1-Dichloroethane; Ethylene dichloride.       75-34-3         (34) 1,2-Dichloroethylene; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (38) 1,2-Dichloropropane; Propylene dichloride       75-35-4         (40) trans-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-01-5         (41) Ethylbenzene       10061-02-6         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl-ene chloride; Dichloromethane.       75-09-2	• • • • • • • • • • • • • • • • • • • •	
(24) Chlorobenzene.       108-90-7         (25) Chlorothane; Ethyl chloride.       75-00-3         (27) Dibromochlorom; Trichloromethane.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP       96-12-8         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene       106-93-8         (32) trans-1,4-Dichloro-2-butene       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride       75-34-3         (34) 1,2-Dichloroethane; Ethylidene chloride       107-06-2         (35) 1,1-Dichloroethylene; trans-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene       10061-01-5         (40) trans-1,3-Dichloropropene       10061-02-6         (41) Ethylbenzene       100-41-4         (42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl bromide; Bromomethane       74-87-3         (45) Methylene bromide; Dichloromethane       75-92-2         (47) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (48) Methyl iodide; Iodomethane       78-93-3		
(25) Chloroethane; Ethyl chloride.       75-00-3         (26) Chloroform; Trichloromethane.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane.       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethylene; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; tis-1,2-Dichloroethene       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       156-60-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl chloride; Bromomethane.       74-83-9         (45) Methylene bromide; Dichloromethane.       74-83-9         (46) Methyl ethyl ketone; M	• • • • • • • • • • • • • • • • • • • •	
(26) Chloroform; Trichloromethane.       67-66-3         (27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylidene chloride.       107-06-2         (35) 1,1-Dichloroethylene; trans-1,2-Dichloroethene       75-35-4         chloride.       107-06-2         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-01-5         (41) Ethylbenzene.       10061-02-6         (42) Etaxanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl ene chloride; Dichloromethane.       74-83-9         (45) Methylene chloride; Dichloromethane.		108-90-7
(27) Dibromochloromethane; Chlorodibromomethane       124-48-1         (28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene       106-93-4         (30) o-Dichlorobenzene; 1,4-Dichlorobenzene       106-93-4         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene       106-46-7         (32) trans-1,4-Dichloro-2-butene       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride       107-06-2         (35) 1,1-Dichloroethylene; tis-1,2-Dichloroethene       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene       10061-01-6         (40) trans-1,3-Dichloropropene       10061-01-5         (40) trans-1,3-Dichloropropene       10061-02-6         (41) Ethylbenzene       100-41-4         (42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl chloride; Chloromethane       74-83-9         (44) Methyl chloride; Dichloromethane       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanon		
(28) 1,2-Dibromo-3-chloropropane; DBCP.       96-12-8         (29) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       10061-02-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-83-9         (45) Methylene bromide; Dibromomethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       78-93-3         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       100-42-5         (51) 1		
(29) 1,2-Dibromoethane; Ethylene dibromide; EDB.       106-93-4         (30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       10061-02-6         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       79-34-5         (51) 1,1,1,2-Tet		
(30) o-Dichlorobenzene; 1,2-Dichlorobenzene.       95-50-1         (31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylidene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       156-59-2         (37) trans-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       10064-02-6         (42) Methyl bromide; Bromomethane.       74-83-9         (43) Methyl bromide; Bromomethane.       74-88-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       630-20-6         (51) 1,1,2-Tetrachloroethane.		96-12-8
(31) p-Dichlorobenzene; 1,4-Dichlorobenzene.       106-46-7         (32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylidene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,2-Tetrachloroethane.		106-93-4
(32) trans-1,4-Dichloro-2-butene.       110-57-6         (33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dichloromethane.       74-95-3         (46) Methylene chloride; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       78-93-3         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       79	(30) o-Dichlorobenzene; 1,2-Dichlorobenzene	
(33) 1,1-Dichloroethane; Ethylidene chloride.       75-34-3         (34) 1,2-Dichloroethane; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloropethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene       10061-01-5         (40) trans-1,3-Dichloropropene       10061-02-6         (41) Ethylbenzene       100-41-4         (42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl bromide; Bromomethane       74-83-9         (44) Methyl chloride; Chloromethane       74-87-3         (45) Methylene bromide; Dibromomethane       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (48) Methyl iodide; Iodomethane       78-93-3         (48) Methyl iodide; Iodomethane       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone       100-42-5         (51) 1,1,1,2-Tetrachloroethane       630-20-6         (52) 1,1,2,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       108-88-3         (54) Toluene       71-55-6	(31) p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7
(34) 1,2-Dichloroethane; Ethylene dichloride.       107-06-2         (35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloropropane; Propylene dichloride.       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       78-93-3         (49) Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       108-88-3         (54) Toluene.       71-55-6         (54) Toluene.       71-55-6         (55) 1,1,2-Trichloroethane;		
(35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.       75-35-4         (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		75-34-3
chloride.       (36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride.       78-87-5         (39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       71-55-6         (56) 1,1,2-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		107-06-2
(36) cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene       156-59-2         (37) trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene       156-60-5         (38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene       10061-01-5         (40) trans-1,3-Dichloropropene       10061-02-6         (41) Ethylbenzene       100-41-4         (42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl bromide; Bromomethane       74-83-9         (44) Methyl chloride; Chloromethane       74-95-3         (45) Methylene bromide; Dibromomethane       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone       108-10-1         (50) Styrene       100-42-5         (51) 1,1,2-Tetrachloroethane       630-20-6         (52) 1,1,2,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene       108-88-3         (54) Toluene       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform       71-55-6         (56) 1,1,2-Trichloroethane       79-00-5	(35) 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene	75-35-4
(37) trans-1, 2-Dichloroethylene; trans-1, 2-Dichloroethene       156-60-5         (38) 1, 2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1, 3-Dichloropropene       10061-01-5         (40) trans-1, 3-Dichloropropene       10061-02-6         (41) Ethylbenzene       100-41-4         (42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl bromide; Bromomethane       74-83-9         (44) Methyl chloride; Chloromethane       74-87-3         (45) Methylene bromide; Dibromomethane       74-95-3         (46) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (47) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone       108-10-1         (50) Styrene       100-42-5         (51) 1,1,2-Tetrachloroethane       630-20-6         (52) 1,1,2-Tetrachloroethane; Tetrachloroethene;       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       108-88-3         (54) Toluene       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform       71-55-6         (56) 1,1,2-Trichloroethane       79-00-5		
(38) 1,2-Dichloropropane; Propylene dichloride       78-87-5         (39) cis-1,3-Dichloropropene       10061-01-5         (40) trans-1,3-Dichloropropene       10061-02-6         (41) Ethylbenzene       100-41-4         (42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl bromide; Bromomethane       74-83-9         (44) Methyl chloride; Chloromethane       74-87-3         (45) Methylene bromide; Dibromomethane       74-95-3         (46) Methylene chloride; Dichloromethane       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (48) Methyl iodide; Iodomethane       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone       108-10-1         (50) Styrene       100-42-5         (51) 1,1,1,2-Tetrachloroethane       630-20-6         (52) 1,1,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform       71-55-6         (56) 1,1,2-Trichloroethane       79-00-5		
(39) cis-1,3-Dichloropropene.       10061-01-5         (40) trans-1,3-Dichloropropene.       10061-02-6         (41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methylene chloride; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(40) trans-1,3-Dichloropropene       10061-02-6         (41) Ethylbenzene       100-41-4         (42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl bromide; Bromomethane       74-83-9         (44) Methyl chloride; Chloromethane       74-87-3         (45) Methylene bromide; Dibromomethane       74-95-3         (46) Methylene chloride; Dichloromethane       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (48) Methyl iodide; Iodomethane       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone       108-10-1         (50) Styrene       630-20-6         (51) 1,1,2,2-Tetrachloroethane       630-20-6         (52) 1,1,2,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene       108-88-3         (54) Toluene       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform       71-55-6         (56) 1,1,2-Trichloroethane       79-00-5		
(41) Ethylbenzene.       100-41-4         (42) 2-Hexanone; Methyl butyl ketone.       591-78-6         (43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methylene chloride; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(42) 2-Hexanone; Methyl butyl ketone       591-78-6         (43) Methyl bromide; Bromomethane       74-83-9         (44) Methyl chloride; Chloromethane       74-87-3         (45) Methylene bromide; Dibromomethane       74-95-3         (46) Methylene chloride; Dichloromethane       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone       78-93-3         (48) Methyl iodide; Iodomethane       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone       108-10-1         (50) Styrene       630-20-6         (51) 1,1,1,2-Tetrachloroethane       630-20-6         (52) 1,1,2,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform       71-55-6         (56) 1,1,2-Trichloroethane       79-00-5		10061-02-6
(43) Methyl bromide; Bromomethane.       74-83-9         (44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methylene chloride; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       71-55-6         (56) 1,1,2-Trichloroethane.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(44) Methyl chloride; Chloromethane.       74-87-3         (45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methylene chloride; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       531 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       71-55-6         (56) 1,1,2-Trichloroethane.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(45) Methylene bromide; Dibromomethane.       74-95-3         (46) Methylene chloride; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       531 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(46) Methylene chloride; Dichloromethane.       75-09-2         (47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5	(44) Methyl chloride; Chloromethane	
(47) Methyl ethyl ketone; MEK; 2-Butanone.       78-93-3         (48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       50.         (51) 1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(48) Methyl iodide; Iodomethane.       74-88-4         (49) 4-Methyl-2-pentanone; Methyl isobutyl ketone.       108-10-1         (50) Styrene.       100-42-5         (51) 1,1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		75-09-2
(49) 4-Methyl-2-pentanone; Methyl isobutyl ketone       108-10-1         (50) Styrene       100-42-5         (51) 1,1,2-Tetrachloroethane       630-20-6         (52) 1,1,2,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene       108-88-3         (54) Toluene       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform       71-55-6         (56) 1,1,2-Trichloroethane       79-00-5	(47) Methyl ethyl ketone; MEK; 2-Butanone	78-93-3
(50) Styrene.       100-42-5         (51) I,1,1,2-Tetrachloroethane.       630-20-6         (52) 1,1,2,2-Tetrachloroethane.       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(51) 1,1,1,2-Tetrachloroethane       630-20-6         (52) 1,1,2,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(52) 1,1,2,2-Tetrachloroethane       79-34-5         (53) Tetrachloroethylene; Tetrachloroethene;       127-18-4         Perchloroethylene.       108-88-3         (54) Toluene.       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		
(53) Tetrachloroethylene; Tetrachloroethene;127-18-4Perchloroethylene.108-88-3(54) Toluene.108-88-3(55) 1,1,1-Trichloroethane; Methylchloroform.71-55-6(56) 1,1,2-Trichloroethane.79-00-5		
Perchloroethylene.       108-88-3         (54) Toluene.       108-88-3         (55) 1,1,1-Trichloroethane; Methylchloroform.       71-55-6         (56) 1,1,2-Trichloroethane.       79-00-5		79-34-5
(54) Toluene	(53) Tetrachloroethylene; Tetrachloroethene;	127-18-4
(54) Toluene		
(56) 1,1,2-Trichloroethane	(54) Toluene	
	(57) Trichloroethylene; Trichloroethene	79-01-6

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(58)	Trichlorofluoromethane; CFC-11	75-69-4
(59)	1,2,3-Trichloropropane	96-18-4
(60)	Vinyl acetate	108-05-4
(61)	Vinyl chloride	75-01-4
	Xylenes	

{1} This list contains 47 volatile organics for which possible analytical

procedures provided in EPA Report SW-846 ``Test Methods for Evaluating

Solid Waste,'' third edition, November 1986, as revised December 1987,

includes Method 8260; and 15 metals for which SW-846 provides either

Method 6010 or a method from the 7000 series of methods.

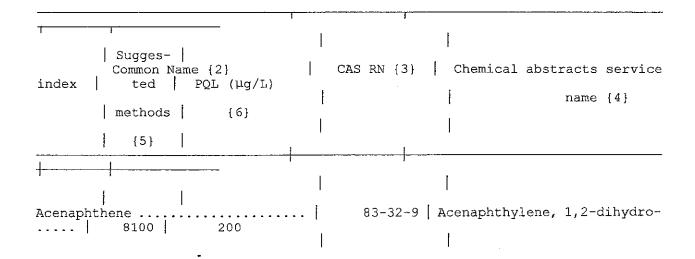
{2} Common names are those widely used in government regulations,

scientific publications, and commerce; synonyms exist for many chemicals.

{3} Chemical Abstracts Service registry number. Where ``Total'' is entered,

all species in the ground water that contain this element are included.

Appendix II to Part 258-List of Hazardous Inorganic and Organic Constituents {1}



8270   10 Acenaphthylene	208-96-8   Acenaphthylene
Acetone	67-64-1   2-Propanone
Acetonitrile; Methyl cyanide   8015   100	75-05-8   Acetonitrile
Acetophenone	98-86-2   Ethanone, 1-phenyl-
2-Acetylaminofluorene; 2-AAF   N-9H-fluoren-2-yl   8270   20	53-96-3   Acetamide,
Acrolein	107-02-8   2-Propenal
	1
8260   100 Acrylonitrile	107-13-1   2-Propenenitrile
	I
8260   200 Aldrin	309-00-2
1,4:5,8-Dimethanonaphthalene, 1,2,   8080	0.05
3,4,10,10-hexachloro-1,4,4a,5,8, 8270	10   8a-hexahydro-
(1α, 4α, 4aß, 5α, 8α, 8a	- (a
Allyl chloride   10	07-05-1   1-Propene, 3-chloro-
8260   10	1
4-Aminobiphenyl 92-6	7-1   [1,1{1}-Biphenyl]-4-amine
Anthracene 8100 200	120-12-7   Anthracene
8270   10	1
Antimony 6010 300	(Total)   Antimony
7040   2000	I
7041   30	1
Arsenic	(Total) Arsenic
	1
7060   10	1
7061   20 Barium	(Total)   Barium
6010   20	) 
7080   1000	

Benzene 8020	71-43-2   Benzene
8021   0.1	. ' 
8260   5  Benzo[a]anthracene; Benzanthracene   8100   200	56-55-3   Benz[a]anthracene
8270   10 Benzo[b]fluoranthene	205-99-2   Benz[e]acephenanthrylene
8270   10  Benzo[k]fluoranthene	207-08-9   8100   200
8270   10 Benzo[ghi]perylene  8100   200	191-24-2   Benzo[ghi]perylene
Benzo[a]pyrene 10 Benzo[a]pyrene	50-32-8   8100   200
8270   10  Benzyl alcohol   8270   20  Beryllium   6010	100-51-6   Benzenemethanol (Total)   Beryllium
7090   50	
7091   2 alpha-BHC	319-84-6   Cyclohexane, 1,2,3,4,5,6-
(1\alpha, 2\alpha, 3\beta, 4\alpha, 5\beta, 6\beta) -   8270   beta-BHC   8080   0.05	hexachloro-, 10 319-85-7   Cyclohexane, 1,2,3,4,5,6-
(1\alpha, 2\beta, 3\alpha, 4\beta, 5\alpha, 6\beta) -   8270   delta-BHC	hexachloro-, 20 319-86-8   Cyclohexane, 1,2,3,4,5,6-
$(1\alpha, 2\alpha, 3\alpha, 48, 5\alpha, 68) -   8270  $ gamma-BHC; Lindane	hexachloro-, 58-89-9   Cyclohexane, 1,2,3,4,5,6-
$(1\alpha, 2\alpha, 3\beta, 4\alpha, 5\alpha, 6\beta) - $ 8270   Bis(2-chloroethoxy)methane 1,1{1}-[methylenebis(oxy)]   8110	hexachloro-, 20   111-91-1   Ethane, 5
8270   10 Bis(2-chloroethyl) ether;	bis[2-chloro-   111-44-4   Ethane,

```
1,1{1}-oxybis[2-chloro- .. |
                       8110
                                   3
 Dichloroethyl ether.
          8270
Bis-(2-chloro-1-methylethyl)
                       ether;
                                           108-60-1 | Propane,
2,2{1}-oxybis[1-chloro- | 8110 |
                                  10
 2,2{1}-Dichlorodiisopropyl ether;
         8270 10
 DCIP, See note 7.
Bis(2-ethylhexyl) phthalate .....
                                  117-81-7 | 1,2-Benzenedicarboxylic
acid, bis 8060
                    20
                                          (2-ethylhexyl) ester
Bromochloromethane;
                                    74-97-5 Methane, bromochloro-
8021
                       0.1
 Chlorobromomethane.
    8260
Bromodichloromethane;
                                  75-27-4 | Methane, bromodichloro-
..... 8010
 Dibromochloromethane.
     8021
                    0.2
         8260
Bromoform; Tribromomethane .....
                                    75-25-2 | Methane, tribromo-
8010
          8021
                    15
         8260
4-Bromophenyl phenyl ether.....
                           101-55-3 | Benzene, 1-bromo-4-phenoxy-
8110 25
        8270
Butyl benzyl phthalate; Benzyl
                                  85-68-7 | 1,2-Benzenedicarboxylic
acid, | 8060 |
butyl phthalate.
                                       butyl phenylmethyl ester
     8270
                   10
                                            (Total) Cadmium
                      6010
                                  40
         7130
                   50
         7131 |
                1
                                      75-15-0 | Carbon disulfide
Carbon disulfide ..
8260
                          100
                                  56-23-5 | Methane, tetrachloro-
Carbon tetrachloride .....
8010
        8021
                   0.1
        8260
Chlordane .....
                              See Note 8 4,7-Methano-1H-indene,
1,2,4,5,6,7, 8080 0.1
8,8-octachloro-2,3,3a,4,7,7a- 8270
                                       50
```

	111011 70
1 1	hexahydro-
p-Chloroaniline	106-47-8   Benzenamine, 4-chloro-
	108-90-7   Benzene, chloro-
	2
8020   2	1
8021   0.1	1
	510-15-6   Benzeneacetic acid,
ethyl	chlorophenyl)-α-hydroxy-,
1 1	ester
p-Chloro-m-cresol; 4-Chloro-3- 8040 5	59-50-7   Phenol, 4-chloro-3-methyl-
methylphenol. 8270 20	1
Chloroethane; Ethyl chloride	-   75-00-3   Ethane, chloro-
	1
8260   10 Chloroform; Trichloromethane	
8010   0,	
8021   0.2	
8260   5 2-Chloronaphthalene	91-58-7   Naphthalene, 2-chloro-
8270   10	I
2-Chlorophenol 8040	95-57-8   Phenol, 2-chloro- 5
8270   10 4-Chlorophenyl phenyl ether     8110   40	7005-72-3   Benzene, 1-chloro-4-phenoxy-
8270   10 Chloroprene	
8010   50	
8260   20 Chromium	(Total)   Chromium
6010	70
7190   500	

7191   10
Chrysene
8100   200
8270   10   Cobalt (Total)   Cobalt
6010   70 (10tal)   Cobalt
7200   500
7201   10
Copper (Total) Copper
6010   60
7210 200
7211 10
m-Cresol; 3-methylphenol   108-39-4   Phenol, 3-methyl-
o-Cresol; 2-methylphenol   ' 95-48-7   Phenol, 2-methyl-
p-Cresol; 4-methylphenol 106-44-5   Phenol, 4-methyl-
Cyanide
2,4-D; 2,4-Dichlorophenoxyacetic   200   24-75-7   Acetic acid,
(2,4-dichlorophenoxy) 8150 10 -
4,4{1}-DDD   72-54-8   Benzene 1,1{1}-(2,2-
dichloroethylidene)bis[4-chloro-   8270   10
4,4{1}-DDE
(dichloroethyenylidene)bis[4-   8270   10   chloro-
4,4{1}-DDT   50-29-3   Benzene, 1,1{1}-{2,2,2-
8080   0.1
trichloroethylidene)bis[4-chloro- , 8270   10
Diallate
methylethyl)-,S-(2,3-dichloro-2-
propenyl) ester
Dibenz[a,h]anthracene   53-70-3   Dibenz[a,h]anthracene
8100   200
8270   10 Dibenzofuran   132-64-9
Dibenzofuran   8270   10

					· · · · · · · · · · · · · · · · · · ·
Dibromochlor Chlorodibro	8010	0.3	1		124-48-1   Methane, dibromochloro-
1,2-Dibromo-3 1,2-dibrome-3	8260   3-chloropropa 3-chloro	5 ine;	DBCP 8011		96-12-8   Propane,
1	8021	30		1	
1,2-Dibromoet dribromide;	8260   thane; Ethyle   8011   EDB. 8021	25 ene 10	0.	   1 	106-93-4   Ethane, 1,2-dibromo-
Di-n-butyl placid,	8260   nthalate 8060	5	•••• 5	1	84-74-2   1,2-Benzenedicarboxylic
ı	8270	10			dibutyl ester
o-Dichlorober			2		95-50-1   Benzene, 1,2-dichloro-
Dichlorobenz		5	2.		
ĺ	8021	0.5		i	1
I	8120	10			l
1	8260	5			1
m-Dichloroben Dichlorobenz	8010	10	5		541-73-1   Benzene, 1,3-Dichloro-
1	8021	0.2		<u> </u>	1
1	8120	10	!		
. 1	8260	5		1	
p-Dichloroben Dichlorobenz	8010	10	2	   	106-46-7   Benzene, 1,4-dichloro-
	8021	0.1	į		· 
]	8120	15			· 

```
8260
           8270
                       10
3,3{1}-Dichlorobenzidine
                                                          91-94-1
[1,1{1}-Biphenyl]-4,4{1}-diamine,
                                   8270
                                            3,3{1}-dichloro-
trans-1,4-Dichloro-2-butene .....
                                     110-57-6 | 2-Butene, 1,4-dichloro-,
(E) - .... 8260
                      100
Dichlorodifluoromethane; CFC 12; . |
                                     75-71-8 Methane, dichlorodifluoro-
          8021
                       0.5
           8260
1,1-Dichloroethane; Ethyldidene
                                       75-34-3 | Ethane, 1,1-dichloro-
..... 8010 |
 chloride.
           8021
                       0.5
           8260
1,2-Dichloroethane; Ethylene
                                       107-06-2 | Ethane, 1,1-dichloro-
..... 8010
                           0.5
 dichloride.
           8021
                       0.3
           8260
1,1-Dichloroethylene; 1,1-
                                        75-35-4 | Ethene, 1,1-dichloro-
..... 8010
Dichloroethene; Vinylidene
           8021
                       0.5
chloride.
           8260
cis-1,2-Dichloroethylene; cis-1,2- |
                                   156-59-2 Ethene, 1,2-dichloro-, (Z)-
8021
                      0.2
Dichloroethene.
           8260
trans-1,2-Dichloroethylene trans-1,
                                   156-60-5 | Ethene, 1,2-dichloro-, (E)-
8010
2-Dichloroethene.
          8021
                       0.5
           8260
                                       120-83-2 | Phenol, 2,4-dichloro-
2,4-Dichlorophenol ...
..... 8040
          8270
                      10
2,6-Dichlorophenol ......
                                       87-65-0 | Phenol, 2,6-dichloro-
..... 8270 10
                                       78-87-5 | Propane, 1,2-dichloro-
1,2-Dichloropropane; Propylene
..... 8010
dichloride.
          8021
                       0.05
          8260
1,3-Dichloropropane; Trimethylene
                                     142-28-9 | Propane, 1,3-dichloro-
8021
```

	2332 02
dichloride.	į –
8260   5 2,2-Dichloropropane;	594-20-7   Propane, 2,2-dichloro-
Isopropylidene chloride.	i
8260   15 1,1-Dichloropropene	563-58-6   1-Propene, 1,1-dichloro-
8021   0.2	1
8260   5	
cis-1,3-Dichloropropene	10061-01-5   1-Propene, 1,3-dichloro-,
8260   10	1
trans-1,3-Dichloropropene   (E)   8010   5	10061-02-6   1-Propene, 1,3-dichloro-,
8260   10	İ
Dieldrin	60-57-1     8080   0.05
	8080   0.05   oxirene, 3,4,5,6,9,9-hexa,
chloro   8270   10	. 1
-1a,2,2a,3,6,6a,7,7a-octahydro-,	
$(1a\alpha, 2\beta, 2a\alpha, 3\beta, 6\beta, 6a\alpha, 7\beta, 7a\alpha) -$ Diethyl phthalate	84-66-2   1,2-Benzenedicarboxylic
acid,   8060   5	· · · · · · · · · · · · · · · · · · ·
8270   10	diethyl ester
0,0-Diethyl 0-2-pyrazinyl   0,0-diethyl   8141   5	297-97-2   Phosphorothioic acid,
phosphorothioate; Thionazin.   8270   20	0-pyrazinyl ester
Dimethoate   8141   3	60-51-5   Phosphorodithioic acid, 0,0-
S-[2-(methylamino)-2-   8270	dimethyl 20
2 (ModifyEdiaLife) 2   02/0	oxoethyl] ester
p-(Dimethylamino) azobenzene	60-11-7   Benzenamine, N,N-dimethyl-4-
8270   10	(phenylazo)~
7,12-Dimethylbenz[a]anthracene	57-97-6   Benz[a]anthracene,
7,12-dimethyl-   8270   10 3,3{1}-Dimethylbenzidine	119-93-7
[1,1{1}-Biphenyl]-4,4{1}-diamine,	8270   10   3,3{1}-dimethyl-
2,4-Dimethylphenol; m-Xylenol	105-67-9   Phenol, 2,4-dimethyl-
2,4-bimethylphenol; m-xylenol   8040   5	1
8270   10	1
Dimethyl phthalate	131-11-3   1,2-Benzenedicarboxylic

8270   10   99-65-0   Benzene, 1,3-dinitron   534-52-1   Phenol, 2-methyl-4,6-dinitron   99-65-0   Benzene, 1,3-dinitron   98-85-5   Phenol, 2,4-dinitron   98-85-5   Phenol, 2,4-dinitron   98-85-7   Phenol, 2,4-dinitron   98-85-7   Phenol, 2,4-dinitron   98-85-7   Phenol, 2,4-dinitron   98-85-7   Phenol, 2,4-dinitron   99-65-0   Benzene, 1,3-dinitron   99-65-0   99-
4,6-Dinitro-o-cresol 4,6-Dinitro-2   534-52-1   Phenol, 2-methyl-4,6-dinitro-2   534-52-1   Phenol, 2-methyl-4,6-dinitro-2   534-52-1   Phenol, 2-methyl-4,6-dinitro-2   534-52-1   Phenol, 2-methyl-4,6-dinitro-2   534-52-1   Phenol, 2-methyl-4,6-dinitro-3   51-28-5   Phenol, 2,4-dinitro-3   606-20-2   Benzene, 2-methyl-2,4-dinitro-3   606-20-2   Benzene, 2-methyl-1,3-dinitro-3   606-20-2   Benzene, 2-methyl-1,3-dinitro-3   606-20-2   88-85-7   Phenol, 2-(1-methylpropyl)-4,6-   8150   1   61nitro-3   61nitro-3
8040   150 -methylphenol.   50 2,4-Dinitrophenol;   51-28-5   Phenol, 2,4-dinitro-   8270   50   8270   50   8270   50 2,4-Dinitrotoluene   121-14-2   Benzene, 1-methyl-2,4-dinitro   8090   0.2   8270   10 2,6-Dinitrotoluene   606-20-2   Benzene, 2-methyl-1,3-dinitro   8090   0.1   8270   10 Dinoseb; DNBP; 2-sec-Butyl-4,6-   88-85-7   Phenol, 2-(1-methylpropyl)-4,6-   8150   1 dinitrophenol.   dinitro-
8270   50 2,4-Dinitrophenol;
8270   50   121-14-2   Benzene,   121-14-2
2,4-Dinitrotoluene
1-methyl-2,4-dinitro   8090   0.2
2,6-Dinitrotoluene   606-20-2   Benzene, 2-methyl-1,3-dinitro   8090   0.1
2-methyl-1,3-dinitro   8090   0.1   8270   10 Dinoseb; DNBP; 2-sec-Butyl-4,6-   88-85-7   Phenol, 2-(1-methylpropyl)-4,6-   8150   1 dinitrophenol.   dinitro-   8270   20
Dinoseb; DNBP; 2-sec-Butyl-4,6-   88-85-7   Phenol, 2-(1-methylpropyl)-4,6-   8150   1   dinitro-   8270   20
2-(1-methylpropyl)-4,6-   8150   1 dinitrophenol.   dinitro-   8270   20
8270   20
DI II OCCVI DIBUIGIACE AA.A.A.A.A. I III OH O I I.ZBEHZEHEULGA(DOXV)II
acid, 8060 30
dioctyl ester   8270   10
Diphenylamine   122-39-4   Benzenamine, N-phenyl-
Disulfoton
S-[2-(ethylthio)ethyl]   8141   0.5
Endosulfan I   959-98-8   6,9-Methano-2,4,3-   8080   0.1
6,7,8,9,10,10-   8270   benzodioxathiepin,
hexa- chloro-1,5,5a,6,9,9a-
hexahydro-, 3-oxide,
Endosulfan II
benzodioxathiepin, 6,7,8,9,10,10-
hexa-chloro-1,5,5a,6,9,9a-
hexahydro-, 3-oxide,
$(3\alpha, 5a\alpha, 6\beta, 9)$ $\beta, 9a\alpha$

	PO DRA
Endosulfan sulfate	,9-Methano-2,4,3-
6,7,8,9,10,10-   8270   10	benzodioxathiepin,
· · · · · · · · · · · · · · · · · · ·	a- chloro-1,5,5a,6,9,9a-
	hexahydro-,3-3-dioxide
Endrin	72-20-8
3,4,5,6,9,9-hexachloro-   8270   20	oxirene,
1a,2,2a,3,6,6a,7,7a-octahydro-,	
2β, 2aβ, 3α, 6α, 6aβ, 7β, 7aα) -	(1aα,
	,4-Methenocyclopenta[cd]
2,2a, 8270   10	talene-5-carboxaldehyde,
3,3,4,7-hexachlorodecahydro-, (1 $\alpha$	
,2B,2aB,4B,4aB,5B,6aB,6bB,7R*)-	11-4   Benzene, ethyl-
8221   0.05	
8260   5 Ethyl methacrylate   97-63-2   2-Pr ethyl   8015   5	copenoic acid, 2-methyl-,
_ · · · · · · · · · · · · · · · · · · ·	ester
8270   10  Ethyl methanesulfonate   62-50-0   Metester   8270   20	hanesulfonic acid, ethyl
Famphur	phorothioic acid, 0-[4-[
8270   20	
(dimethylamino)sulfonyl]phenyl] 0,	0-dimethyl ester
Fluoranthene 20	06-44-0   Fluoranthene
8100   200	
8270   10 Fluorene	86-73-7   9H-Fluorene
8270   10	
Heptachlor 76-44-8	4,7-Methano-lH-indene,
1,4,5,6,7,8, 8080 0.05	3-heptachloro-3a,4,7,7a-

		-T. B. W.C.	• • • • • • • • • • • • • • • • • • • •	************************************	PORD   1 P	rachmorome	T ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?		Isodrin	racharly arcomor			Indone (1 2 2 2)	· · · · · · · · · · · · · · · · · · ·	uo en chi lossossossossossossossossossossossossoss		hexachioroethane		Hexachlorocyclopentadiene	17			nexachioroputagiene		nexacniorobenzene					Heptachlor epoxide	8270   10
	(Total)		F4010010	173 50 0	, ,	78-59-1			465-73-6	78-83-1	1	193-39-5	9-8/-I6G	1888-71-7	1		67-72-1		77-47-4				87-68-3		118-74-1					1024-57-3	
	Lead	<pre>5a,5b,6-decachlorooctahydro-</pre>	1,3,4-Metheno-2H-cyclobuta[cd]	1,3-Benzodioxole, 5-(1-propenyl)-	trimethyl-		hexahydro- $(1\alpha, 4\alpha, 4a\beta, 5\beta, 8\beta, 8a\beta)$ -	4,10,10- hexachloro-1,4,4a,5,8,8a	1,4,5,8-Dimethanonaphthalene,1,2,3,	1-Propanol, 2-methyl		Indeno(1,2,3-cd)pyrene	2-Hexanone	1-Propene, 1,1,2,3,3,3-hexachloro-			Ethane, hexachloro	hexachloro-	1,3-Cyclopentadiene, 1,2,3,4,5,5-			hexachloro-	1,3-Butadiene, 1,1,2,3,4,4-		Benzene, hexachloro	ß, 6ß, 6aΩ)	dro-, (1aα, 1bß, 2α,	<u>ر</u> .	,7,7-	tetrahydro- 2,5-Methano-2H-indeno[1,2-b]	<del>-</del>
7421	200		27	8270	27	60		26	8240 8270	01	27	10	26	27	27	26	12	27	12	27	26	12	02	27	12		_		8270	80	_
10	<i>2</i> 4, €			10				10	100 20	G	10	200	50	10	10	0	O.5	10	(រះ	10	10		0.5		0,5				10	<u>.</u>	

Naphthalene	Methylene chloride; Dichloromethane.		Methylene bromide: Dibromomethane	4-Metnyl-2-pentanone; Methyl		mecnyi parachion; Parachion methyi	Weth: Translatene	Methyl methanesulfonate		Methyl methacrylate	Methyl lodide; lodomethane	Bucanone.	Methyl ethyl ketone; MEK; 2-	3-Methylcholanthrene	Methyl chloride; Chloromethane	Methyl bromide; Bromomethane	Methoxychlor	Methapyrilene	Mercury
91-20-3	75-09-2	ر ر	74-95-3	108-10-1		2-00-0	91-57-6	66-27-3		80-62-6	74-88-4		78-93-3	56-49-5	74-87-3	74-83-9	72-43-5	91-80-5	(Total) 126-98-7
Naphthalene	Methane, dichloro	יזה נוומווה, מבטבטווטר		2-Pentanone, 4-methyl		Phosphorothioic acid, 0,0-dimethyl	methyl	Methanesulfonic acid, methyl ester	o K	2-Propenoic acid, 2-methyl-,	Methane, iodo		2-Butanone	Benz[j]aceanthrylene, 1,2-dihydro-	Methane, chloro	Methane, bromo	thienylmethyl)- Benzene,1,1{1}-(2,2,2, trichloroethylidene)bis[4-methoxy	1,2-Ethanediamine, N.N-dimethyl-N (1)-2-pyridinyl-N1/2-	Mercury 2-methyl
8260 8021 8100	8010	8021	8260	8015	8141 8270	8140	8270	8270	8260	8260 8015	8010	8260	8015	8021 8270	8010	8010	8080 8270	8270	7470 8015
10 0.5 200	0.2	1 2 L 2 O G	100	C <sub>1</sub>	10 •	0.5	10	10	30	10 2	40	100	10	0.3 10	1	20	10 10	100	, , ,

Phenacetin	Pentachlorobenzene  Pentachloronitrobenzene  Pentachlorophenol	N-Nitrosopiperidine	N-Nitrosomethylethalamine  N-Nitrosomethylethalamine	· · · ·	o-Nitrophenol; 2-Nitrophenol p-Nitrophenol; 4-Nitrophenol	o-Nitroaniline; 2-Nitroaniline m-Nitroaniline; 3-Nitroanile p-Nitroaniline; 4-Nitroaniline Nitrobenzene	1,4-Naphthoquinone
62-44-2 85-01-8	608-93-5 82-68-8 87-86-5	100-75- 930-55- 99-55- 56-38-	86-30-6 621-64-7 10595-95-6	924-16-3 55-18-5 62-75-9	88-75-5 100-02-7	88-74-4 99-09-2 100-01-6 98-95-3	130-15-4 134-32-7 91-59-8 (Total)
Acetamide, N-(4-ethoxyphen1) Phenanthrene	Benzene, pentachloro  Benzene, pentachloronitro  Phenol, pentachloro	1-nitroso, 1-nitroso, 2-methyl-5-nitro- loic acid, 0,0-diet	Benzenamine, N-nitroso-N-phenyl 1-Propanamine, N-nitroso-N-propyl- Ethanamine, N-methyl-N-nitroso-	1-Butanamine, N-butyl-N-nitroso Ethanamine, N-ethyl-N-nitroso Methanamine, N-methyl-N-nitroso	Phenol, 2-nitro	Benzenamine, 2-nitro Benzenamine, 3-nitro Benzenamine, 4-nitro	1,4-Naphthalenedione
27	27 27 27 27 27 27 27 27 27 27 27 27 27 2	8270 8270 8270 8141	07	27 27 27 07	04 04 04	52 27 27 27 29	8260 8270 8270 8270 8270 6010
200 10		100.5		50 20 2	10 10 10	00004	10 10 10 10

Tetrachloroethylene;	1,1,2,2-Tetrachloroethane	1,2,4,5-Tetrachloroethane 1,1,1,2-Tetrachloroethane	Sulfide	Styrene	Silvex; 2,4,5-TP	Silver	Safrole	Pyrene	Propionitrile; Ethyl cyanide	Pronamide	Polychlorinated biphenyls; PCBs;	Phenol
127-18-4	79-34-5	95-94-3 630-20-6	18496-25-8 93-76-5	100-42-5	93-72-1	(Total)	94-59-7 (Total)	129-00-0	107-12-0	23950-58-5	See Note 9	108-95-2 106-50-3 298-02-2
Ethene, tetrachloro	Ethane, 1,1,2,2-tetrachloro	trichlorophenoxy)- Benzene, 1,2,4,5-tetrachloro Ethane, 1,1,1,2-tetrachloro	Sulfide	Benzene, ethenyl	Propanoic acid, 2-(2,4,5-	Silver	1,3-Benzodioxole, 5-(2-propenyl)- Selenium	Pyrene	Propanenitrile	Benzamide, 3,5-dichloro-N-(1,1-	1,1'-Biphenyl, chloro derivatives	Phenol
9 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	27 01	8260 9030 8150	02 02	76 15	74 01 76	8270 8270 6010 7740	10	01	27	08	8040 8270 8140 8141
	0.5 0.5 0.5	)		0. 1	10	100	10 10 750 20	150 200	60	200 10	10 50	10 2 0.5

sym-Trinitrobenzene	0,0,0-Triethyl phosphorothioate		1,2,3 Trichtoropropane	1 0 0 E	2,4,6-Trichlorophenol	2,4,5-Trichtorophenol			rrrentorontenane; CrC-II			ritchtoroethyrene; Erichtoroethene		+/+/2711#CHITOTOEthane	1 1 0+Eない(ない)(ない)(ない)	meenyrenrororm.	Mathy; ohlowers				1/2/4-IIIICHICOTODENZENE		Torontone			roluene	1 h 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3		III CALLLUIII	whallim	Perchloroethylene.
99-35-4	126-68-1		96-18-4		88-06-2	95-95-4			75-69-4	1		79-10-6		79-00-5	I > >		71-55-6	! !			120-82-1	See Note 10	95-53			108-88-3	(Total)	ì		(Total)	58-90-2	
triethylester Benzene, 1,3,5-trinitro	Phosphorothioic acid, 0,0,0-		Propane, 1,2,3-trichloro		Phenol, 2,4,6-trichloro	lor			Methane, trichlorofluoro			Ethene, trichloro		Ethane, 1,1,2-trichloro			Ethane, 1,1,1-trichloro				Benzene, 1,2,4-trichloro	Toxaphene	Benzenamine, 2-methyl			Benzene, methyl	Tin			Thallium	Phenol, 2,3,4,6-tetrachloro	
8270	27	02	01	27	0.4	27	90	02	01	26	02	01	90	01	26	02	01	27	20	12	02	80	27	26	02	02	01	48	84	01	27	8021 8260
10	10	ំហ	10	10	ហ	10		0.3.	10	ហ	0.2	₽	ហ	0.2	ហ	0.3	•	10		0.5	•	2	10		0.1	2	40	10	1000	400	10	<b>თ</b> ი.

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		Zinc			Xylene (total)			Vinyl chloride; Chloroethene	Vinyl acetate			Vanadıum	
_		(Total)			See Note 11	_	_	75-01-4	108-05-4	Westernage		(Total)	
		Zinc			Benzene, dimethyl	_		Ethene, chloro	Acetic acid, ethenyl ester	_	_	(Total)   Vanadium	,
7951	7950	6010	8260	8021	8020	8260	8021	8010	8260	7911	7910	6010	
0.5	50	20	ſл	0.2	ഗ	10	0.4	2	50	40	2000	80	

Notes

columns (Methods and {1} The regulatory requirements pertain only to the list of substances; the right hand

PQL) are given for informational purposes only. See also footnotes 5 and 6.

- {2} Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.
- {3} Chemical Abstracts Service registry number. Where ``Total'' is entered, all species in the ground water that contain this element are included.
  - {4} CAS index are those used in the 9th Collective Index.
- {5} Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 ``Test Methods for

Evaluating Solid Waste'', third edition, November 1986, as revised, December 1987. Analytical details can be

found in SW-846 and in documentation on file at the agency.

{6} Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can

be reliably determined within specified limits of precision and accuracy by the indicated methods under

routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. PQLs

are based on 5 mL samples for volatile organics and 1 L samples for semivolatile organics. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

- {7} This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies
- to its noncommercial isomer, Propane, 2,2"-oxybis[2-chloro- (CAS RN 39638-32-9).
- {8} Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2),

gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6). PQL shown is for technical chlordane. PQLs of specific isomers are about 20  $\mu$ g/L by method 8270.

{9} Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including

constituents of Aroclor 1016 (CAS RN 12674-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1),

and Aroclor 1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

{10} Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), I.e., chlorinated

By his signature hereon, the Governor of the Virgin Islands certifies, in accordance with the provisions of Title 3, Chapter 35, Section 938, Virgin Islands Code, that compelling circumstances, which include the immediate need for protection and preservation of the public health in Virgin Islands, and the public interest require the Virgin islands Rules and Regulations contained herein become effective on this \_\_\_\_ day of \_\_\_\_\_, 2000, without the lengthy delay of prior publication, and on which date they have been submitted to the Legislature pursuant to Title 3, Chapter 35, Section 913, Virgin Islands Code. A copy of this certification and these Rules and Regulations has been filed with the Lieutenant Governor pursuant to Title 3 V.I.C. 938.

Pursuant to the provisions of Title 19, Chapter 56, Section 1560, Virgin Islands Code, the above Rules and Regulations are hereby promulgated.

Dated:

Dean C. Plaskett, Esq.

Commissioner

Department of Planning and Natural Resources

Pursuant to the Powers vested in me by Section 11 of the Revised Organic Act of 1954, and by Title 3, Section 913, Virgin Islands Code, the above Amended Rules and Regulations are hereby approved.

Dated: 6/2

CHARLES W. TURNRULI

GOVERNOR