Specific Chemicals Found In Contaminants of Concern
(Listed In Alphabetical Order)

Abrasives: Emery, glues, resins, aluminum, antimony, carborundum, zirconium

Acetates: Acetic acid, acetic anhydride

Acetic acid: Acetaldehyde, formic acid, methyl alcohol, sulfuric acid

Adhesives: Benzol, cresols, dichloroethane, ethyl silicate, hydrogen silfide, isocyanates, mercaptans, sulfureted hydrogen, trichloroethene

Alkalis: Calcium chloride, chlorine, iodine, manganese, carbon disulfide

Animal Feeds: Phosphoric acid

Antifreeze: Ethyl alcohol, ethylene glycol, isopropyl alcohol, methyl alcohol

Antiseptics: Boron, magnesium, mercury, tetramethylthiuram disulfide

Aviation fuels: Benzene, ethyl benzene, methyl tertiary butyl ether, polynuclear aromatic, hydrocarbons, toluene, xylenes

Bactericides: Mercury, silver

Batteries: Alkalis, epoxy resins, pitch, plastics, solvents, antimony cadmium, cobald, copper, lead, magnesium, mercury, nickel, picric acid, sulfuric acid, zinc

Bleaches and Bleaching: Alkalis, Solvents, bromine, borax, chlorinated lime, chlorine, fluorine, hydrochloric acid, hydrogen chloride, hydrogen peroxide, manganese, oxalic acid, potassium hydroxide, sodium hydroxide

Brake Linings: Metals, resins, solvents, asbestos, graphite, phenols, tin, acetone, benzene, tetrachloroethene, trichloroethane, trichloroethene

Brines: Chlorides, magnesium, potassium, sodium

Cleaners: Alcohols, solvents, surfactants, n-propyl alcohol

Coal Tar and Distillates: Coal, petroleum fuels, pitch, solvents, acetate, acridine, aniline, arsenic, creosote, cresol, lead, naphthalene, phenols, polynuclear aromatic hydrocarbons, benzene, benzol, ethyl benzene, toluene, xylenes

Cutting Fluids (oils): Ethanolamines, polychlorinated biphenyls, polynuclear aromatic hydrocarbons

Deodorants: Chlorinated benzenes, formaldehyde, zinc, zirconium

Detergents: Naphtha, benzene, dioxane, ethanolamines, ethyl alcohol, n-butyl alcohol, phosphoric acid, sulfuric acid

Diesel Fuel: Benzene, creosote, ethyl benzene, polynuclear aromatic hydrocarbons, toluene, xylenes

Disinfectants: Acetaldehyde, acridine, aniline, beta-propiolactone, bismuth, chlorinated benzenes, chlorinated lime, chlorine, cresol, ethylene oxide, formaldehyde, furfural, hydrogen sulfide, iodine, isopropyl alcohol, manganese, mercury, alkyl mercury, phenols, picric acid, propyl alcohol, sulfur dioxide, tetramethylthiuram dislfide, trichloroethene, zinc

Drugs: Acridine, allyl alcohol, arsenic, benzyl chloride, chloroform, cobalt, dibromomethane, dichloroethene, dimethyl sulfate, ethyl chloride, ethyl ether, ethylene chlorohydrin, ethylenediamine, hexamethylenetetramine, hydrazine and derivatives, hydroquinone, manganese, mercury, molybdenum, n-butyl alcohol, n-butylamine, phenols, picric acid, platinum propyl alcohol, silver, tetrachloroethane, trichloroethene

Dyes: Acetates, acids, alkalis, bleaches, coal tar products, detergents, dyes, gums, solvents, acetic acid, acetic anhydride, acridine, alpha-naphthylamine, aminodiphenyl, ammonia, aniline, antimony arsenic, arsine, benzene, benzyl chloride, beta-naphthylamine, boron, bromine, carbon disulfide, chlorine, chlorodiphenyls, chromates, copper, cresol, cyanides, dextrins, dimethyl sulfate, dimethylaminoazobenzene, dinitro-o-cresol, dinitrobenzene, dinitrophenol, dinitrotoluene, ethanolamines, ethyl chloride, ethylenediamine, formaldehyde, formic acid, furfural, hydrogen fluoride, hydrogen sulfide, hydroquinones, iron, isopropyl alcohol, lead, manganese, mercaptans, mercury, n-butyl alcohol, n-butylamine, naphthalene, nickel, nitrobenzene, nitrogen, nitrophenol, oxalic acid, phenols, phosphates, phosphorus, phthalic anhydride, picric acid, potassium chlorate, pyridine, quinone, selenium, silicates, silver, sodium hydroxide, sulfer chloride, sulfuric acid, thallium, tin, titanium, trichloroethene, vanadium, zinc

Epoxy Resins: Resins, solvents, epichlorohydrin, ketones, MOCA, styrene, xylenes

Fertilizers: Acids, herbicides, pesticides, ammonia, arsine, calcium cyanamide, fluorides, hydrogen sulfide, manganese, manure, molybdenum, nitrates, nitrogen, phenols, phosphates, phosphoric acid, phosphates, phosphoric acid, phosphorus, potassium salts, sulfuric acid

Flame Retardants: tricresyl phosphates

Fungicides: Allyl alcohol, boron, cadmium, calcium oxide, chromium, copper, cyclohexane, cyclohexene, cyclopropane, diphenyl, ethylene oxide, ethylenediamine, formaldehyde, furfural, magnesium, mercaptans, mercury, alkyl mercury, methylcyclohexene, naphthalene, pentachlorophenol, phenols, tetramethylthiuram disulfide, thallium, tin, zinc

Gasoline: Benzene, ethyl benzene, toluene, xylenes, gasoline additives

Gasoline Additives: Alcohols, gasoline, benzyl chloride, boron hydrides, dibromoethane, dibromomethane, dichloroethane, ethyl alcohol, ethyl ether, ethylene, oxide, hydroquinone, lead, alkyl lead, methyl tertiary butyl ether, phosphorus, platinum, tricresyl phosphates

Germicides: Benzyl chloride, formaldehyde, furfural, mercury

Glues: Ammonia, ethylene glycol, sulfuric acid

Gums: Dibromomethane, dichloroethyl ether, epichlorohydrin, ethyl ether, furfural, ketones, n-propyl alcohol, propylene, dichloride, trichloroethene, tetrachloroethene

Hazardous Substances: For purposes of this plan, a general term used to describe any substance that could negatively affect ground water or stormwater quality including the specific chemicals of concern listed in this appendix.

Herbicides: Kerosene, petroleum oils, allyl alcohol, amino triazole, ammonium sulfamate, arsenic, arsenic trioxide, calcium cyanamide, carbamate derivatives, chlorodiphenyls, copper, copper sulfate, crag herbivide, creosote, cresol, dinitro-o-cresol, dinitrophenol, dinitrophenols, ethanolamines, furfural, mercury, pentachlorophenol, phenols, phenoxyacetic

acid derivatives, phenylmercuric acetate, sodium arsenate, sodium borate, sodium chlorate, tetrachloroethane, trichloroacetic acid

Hydraulic Fluids: Petroleum hydrocarbons, amyl alcohol, ethylene glycol, ethylene glycol ether, ketones, phosphorus, polychlorinated biphenyls, polynuclear aromatic hydrocarbons, tricresyl phosphates

Ink: Antioxidants, detergents, resins, soaps, solvents, turpentine, varnishes, aniline, arsenic, cerium, chromium, cobalt, dichlorobenzidine, ethylene glycol, formaldehyde, manganese, mercury, methyl alcohol, molybdenum, nickel, oxalic acid, platinum potassium hydroxide, silver, tin

Insecticides: Kerosene, naphtha, turpentine, acetic acid, aniline dyes, arsenic, cadmium, calcium arsenate, calcium oxide, carbon tetrachloride, chlorinated benzenes, copper, dichloroethane, dioxins, ethanolamines, ethylenediamine, formic acid, furans, furfural, hydrazine and derivatives, hydrogen fluoride, lead, lead arsenate, lead arsenite, mercury, methoxychlor, n-butylamine, nicotine, phenols, phosphides, phosphorus, phthalic anhydride, piperonly compounds, pyrethrum, rotenone, selenium, strobane, sulfur chloride, tetrachloroethane, thallium, tin

Lacquer: Acetates, resins, solvents, turpentine, waxes, acetaldehyde, antimony, cellulose acetate, cellulose esters, chlorinated benzenes, chlorodiphenyls, epichlorohydrin, ethyl silicate, formic acid, isocyanates, molybdenum, n-hexane, titanium, zinc

Lubricant Additives: Arsenic, calcium oxide, chlorodiphenyls, ethanolamines, graphite, ketones, lead, molybdenum, nickel, nitrosodimethylamine, phosphorus, tetramethylthiuram disulfide, tricresyl phosphates

Metals: Arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, nickel, selenium, silver, zinc

Naphtha: Benzene, cumenes, ethyl benzene, polynuclear, aromatic hydrocarbons, toluene, xylenes

Oils (grease, mineral oils): Metals, petroleum hydrocarbons, solvents, dimethyl sulfate

Paint: Acetates, acids, acrylics, alkalis, antimildew agents, coal tar products, cutting oils, drier, enamels, epoxy resins, fish oils, latex, naphtha, paint removers, paints, pigments, plasticizers, resins, solvents, thinners, turpentine, aluminum, antimony, arsenic, boron, cadmium, chlorinated benzenes, chromates, chromium, cobalt, copper, epichlorohydrin, ethyl silicate, ethylene glycol, graphite, hydroquinone, isocyanates, lead manganese, mercury, molybdenum, nichel, oxalic acid, phenols, phthalates, potassium hydroxide, pyridine, sulfuric acid, tin titanium, toluene, zinc

Pesticides: Acetylaminofluorene, acrylonitrile, ammonia, calcium cyanamide, chlorinated lime, chlorine, dinitro-o-cresol, dinitrophenol, fluorides, formats, hydrazine and derivatives, mercaptans, n-butylamine, pentachlorophenol, phenols, phosphorus, trichloroethene

Petroleum Hydrocarbons: Diesel fuel, gasoline, heating oil, jet fuel, petroleum fuels, waste oils, transmission fluids, oils, chlorides, lead, polychlorinated biphenyls, Polycyclic Aromatic Hydrocarbons (PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides), BTEX compounds (BTEX is an acronym for **benzene, toluene, ethylbenzene**, and **xzylene**. This group of volatile organic

compounds (VOCs) is found in petroleum hydrocarbons, such as gasoline, and other common environmental contaminants).

Polishes: Abrasives, acetates, paraffin, ethanolamines, graphite, hydrogen cyanide, propyl alcohol

Removers (Paint): Cresol, oxalic acid, phenols, potassium hydroxide, amyl alcohol, cyclohexane, cyclohexene, cylopropane, dichloroethyl ether, dioxane, ketones, methyl alcohol,methylcyclohexene, methylene chloride

Resins: Acetates, turpentine, acrolein, acrylonitrile, allyl alcohol, aniline, benzyl chloride, beta-propiolactone, butadiene, chlorinated benzenes, chlorodiphenyls, cresol, dichloroethane, epichlorohydrin, ethyl chloride, ethylene glycol ether, ethylenediamine, formaldehyde, hexamethylenetetramine, isocyanates, isopropyl alcohol, methyl alcohol, MOCA, phenols, phthalic anhydride, tetrachloroethane

Rodenticides: alpha-naphthylthiouria, arsenic, coumarins, fluorides, fluoroacetate, indandiones, phosphides, phosphorus, strychnine, tetramethylthiuram dislfide, thallium, thallium sulfate

Rubber: Ethylenediamine, formic acid, furfural, lead phosphoric acid, selenium, sulfur, chloride, tellurium, carbon disulfide

Shellac: Ethylenediamine, n-butyl alcohol, ethyl alcohol, n-propyl alcohol, nitroparaffins

Soap: Alkalis, bacteriostats, detergents, perfumes, boron, chlorinated lime, ethanolamines, hydrogen sulfide, isopropyl alcohol, nickel, phenols, potassium hydroxide, propyl alcohol, sodium hydroxide, tetrachloroethene, tetramethylthiuram disulfide, trichloroethene

Solder: Acids, fluxes, antimony, arsine, bismuth, boron, cadmium, copper, cyanides, hydrazine and derivatives, lead, rosin, silver, stibine, tin, zinc

Solvents: These include Volitile Organic Compounds (VOC), which are common ground water contaminants. VOCs are used and produced in the manufacture of paints, pharmaceuticals, and refrigerants. VOCs typically are industrial solvents, such as trichloroethylene; fuel oxygenates, such as methyl tert-butyl ether (MTBE); or by-products produced by chlorination in water treatment, such as chloroform. VOCs are often components of petroleum fuels, hydraulic fluids, paint thinners, and dry cleaning agents. Gasoline, ketones, naphtha, turpentine, acetonitrile, carbon tetrachloride, chlorinated benzenes, chlorinated naphthalenes, chloroform, dichloroethane, dichloroethene, dimethyl sulfate, dimethylacetamide, epichlorohydrin, ethyl alcohol, ethyl benzene, ethylenediamine, methylene chloride, n-heptane, n-propyl alcohol, nitrobenzene, nitrosodimethylamine, propylene dichloride, pyridine, tetrachloroethane, tetrachloroethene, toluene, trichloroethane, trichloroethene, tricresyl phosphates, vinyl chloride, xylenes

Stains (wood): Naphtha, pigment, solvents, turpentine, cresol, n-butyl alcohol

Surfactants: Ethanolamines, ethylene oxide, ethylenediamine, phosphorus

Thinners: mineral spirits, naphtha, aliphatic hydrocarbons, benzene, ethyl benzene, nitrobenzene, toluene, xylenes

Turpentine: Alpha pinene, beta pinene, camphene, monocylic terpenes, terpene alcohols

Varnishes: Acetates, naphtha, paraffin, solvents, turpentine, aniline, epichlorohydrin, furfural, lead, manganese, nickel, oxalic, acid, potassium hydroxide, titanium, zinc

Waxes: Naphtha, turpentine, ethanolamines, ethyl chloride, ethylene glycol, phosphoric acid, polynuclear aromatic hydrocarbons

Wood Preservatives: Gasoline, resins, tar and derivatives, arsenic, benzidine, boron, chlorinated naphthalenes, chlorodiphenyls, chromium, copper, creosote, cresol, dinitrophenol, fluorides, formaldehyde, mercury, alkyl mercury, pentachlorophenol, phenols, chlorinated phenols, selenium, sulfur chloride

Appendix D

Portions of HAR §11-281 (Underground Storage Tanks)

State Application for Underground Storage Tank Permit

State Form "Certification of Underground Storage Tank Installation"

HAWAII ADMINISTRATIVE RULES

TITLE 11

DEPARTMENT OF HEALTH

CHAPTER 281

UNDERGROUND STORAGE TANKS

Subchapter 1: Scope and Prohibition

Subchapter 2: Design, Construction, and Installation

Subchapter 3: Notification, Permits, and Variances

Subchapter 4: General Operating Requirements

Subchapter 5: Release Detection

Subchapter 6: Release Reporting, Investigation, and Confirmation

Subchapter 7: Release Response Action

SUBCHAPTER 1

SCOPE AND PROHIBITION

§11-281-01 Applicability. (a) The requirements of this chapter apply to all owners and operators of underground storage tanks or tank systems as defined in section 11-281-03 except as otherwise provided in subsections (b), (c), and (d). Any UST or tank system listed in subsection (c) must meet the requirements of section 11-281-02.

(b) The following USTs or tank systems are excluded from the requirements of this chapter:

(1) Any UST or tank system holding hazardous wastes listed or identified under chapter 342J, Hawaii Revised Statutes or the rules adopted thereunder, or Subtitle C of the federal Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances.

(2) Any wastewater treatment UST system that is part of a wastewater treatment facility regulated under chapter 342D, Hawaii Revised Statutes or section 402 or 307(b) of the federal Clean Water Act (33 U.S.C. section 1342 or 1317).

(3) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks.

(4) Any UST or tank system whose capacity is 110 gallons or less.

(5) Any UST or tank system that contains a de minimis concentration of regulated substances.

(6) Any emergency spill or overflow containment UST or tank system that is expeditiously emptied after use.

(c) Subchapters 2, 3, 4, 5, 6, 8, and 9 are deferred for the following types of USTs or tank systems:

(1) Wastewater treatment USTs or tank systems;

(2) Any USTs or tank systems containing radioactive material that are regulated under the federal Atomic Energy Act of 1954 (42 U.S.C. section 2011 and following);

(3) Any UST or tank system that is part of an emergency generator system at nuclear power

generation facilities regulated by the federal Nuclear Regulatory Commission under 10 C.F.R. Part 50, Appendix A;

(4) Airport hydrant fuel distribution USTs and tank systems; and

(5) USTs or tank systems with field-constructed USTs.

(d) Subchapter 5 does not apply to any UST or tank system that stores fuel solely for use by emergency power generators. [Eff] (Auth: HRS §342L-3) (Imp: 40 C.F.R. §280.10)

§11-281-02 Prohibition for deferred underground storage tanks or tank systems. (a) No person may install an UST or tank system listed in section 11-281-01(c) for the purpose of storing regulated substances unless the UST or tank system (whether of single- or double-wall construction):

(1) Will prevent releases due to corrosion or structural failure for the operational life of the UST or tank system;

(2) Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and

(3) Is constructed or lined with material that is compatible with the stored substance.

(b) Notwithstanding subsection (a), an UST or tank system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators must maintain records that demonstrate compliance with the requirements of this subsection for the remaining life of the UST or tank system.

NOTE: The National Association of Corrosion Engineers Standard RP0285-95, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems", may be helpful in

that deviates from, the requirements of this chapter that are more stringent than 40 CFR Part 280.

"Wastewater treatment tank" means an UST tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods. [Eff] (Auth: HRS §342L-3) (Imp: 40 C.F.R. §280.12)

§§11-281-04 to 11-281-10 (Reserved)

SUBCHAPTER 2

DESIGN, CONSTRUCTION, AND INSTALLATION

§11-281-11 Performance standards for underground storage tanks and tank systems. (a) In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST or tank system is used to store regulated substances, all owners and operators of hazardous substance USTs or tank systems installed after December 22, 1988, must meet the requirements of this subchapter.

(b) In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST or tank system is used to store regulated substances, all owners and operators of petroleum USTs or tank systeme installed after December 22, 1988, but before the effective date of these rules must meet all the requirements of this subchapter except for section 11-281-17.

(c) In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST or tank system is used to store regulated substances, all owners and operators of petroleum USTs or tank systems installed on or after the effective date of these rules must meet the requirements of this subchapter. [Eff] (Auth: HRS §§342L-32) (Imp: 40 C.F.R. §280.20)

§11-281-12 Tank requirements. Each UST must be properly designed, constructed, and installed, and

any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below. All USTs must meet one of the following requirements:

(1) The UST is constructed of fiberglass-reinforced plastic; or

NOTE: The following industry codes may be helpful in complying with paragraph (1):

A. Underwriters Laboratories Standard 1316, "Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products" ;

B. Underwriter's Laboratories of Canada CAN4-S615-M83; "Standard for Reinforced Plastic Underground Tanks for Petroleum Products";

C. American Society of Testing and Materials Standard D4021-86 "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks.".

(2) The UST is constructed of steel and shall be cathodically protected in the following manner:

(A) The UST shall be coated with a suitable dielectric material;

(B) Field-installed cathodic protection systems must be designed by a corrosion expert;

(C) Impressed current systems shall be designed to allow determination of current operating status as required in section 11-281-42; and

(D) Cathodic protection systems shall be operated and maintained in accordance with section 11-281-42; or

NOTE: The following codes and standards may be helpful in complying with paragraph (2):

A. Steel Tank Institute "Specification for

STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks";

B. Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks";

C. Underwriters Laboratories of Canada CAN4-S603-M85, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids", CAN4-G03.1-M85, "Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids", and CAN4-S631-M84, "Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems"; or

D. National Association of Corrosion Engineers Standard RP0285-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems", and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids".

(3) The UST is constructed of a steel-fiberglass-reinforced-plastic composite; or

NOTE: The following industry codes may be helpful in complying with paragraph (3):

A. Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks"; or

B. Association for Composite Tanks ACT-100, "Specification for the Fabrication of FRP Clad Underground Storage Tanks".

(4) The UST is constructed of metal without additional corrosion protection measures provided that:

(A) The UST is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its

operating life; and

(B) The owners and operators maintain records that document and demonstrate compliance with the requirements of subparagraph (4)(A) for the remaining life of the UST;

or

(5) USTs that do not comply with paragraph (1), (2), (3), or (4) may be used if the department determines that the UST construction and corrosion protection are designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the standards provided in paragraphs (1) through (4). [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.20)

§11-281-13 Piping requirements. The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below. All piping must meet one of the following requirements:

(1) The piping is constructed of fiberglass-reinforced plastic; or

NOTE: The following codes and standards may be helpful in complying with paragraph (1):

A. Underwriters Laboratories Subject 971, "UL Listed Non-Metal Pipe";

B. Underwriters Laboratories Standard 567, "Pipe Connectors for Flammable and Combustible and LP Gas";

C. Underwriters Laboratories of Canada Guide ULC-107, "Glass Fiber Reinforced Plastic Pipe and Fittings for Flammable Liquids"; and

D. Underwriters Laboratories of Canada Standard CAN 4-S633-M81, "Flexible

Underground Hose Connectors".

(2) The piping is constructed of steel and cathodically protected in the following manner:
(A) The piping shall be coated with a suitable dielectric material;
(B) Field-installed cathodic protection systems must be designed by a corrosion expert;
(C) Impressed current systems shall be designed to allow determination of current operating status as required in section 11-281-42; and
(D) Cathodic protection systems shall be operated and maintained in accordance with section 11-281-42;
or

NOTE: The following codes and standards may be helpful in complying with paragraph (2):
A. National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code";
B. American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage Systems";
C. American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; and
D. National Association of Corrosion Engineers Standard RP0169-92, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems".

(3) The piping is constructed of metal without additional corrosion protection measures provided that:
(A) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and

(B) The owners and operators maintain records that demonstrate compliance with the requirements of subparagraph (3)(A) for the remaining life of the piping.

NOTE: The following codes and standards may be helpful in complying with paragraph (3):
A. National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; and
B. National Association of Corrosion Engineers Standard RP0169-92, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems".

(4) Piping that does not comply with paragraph (1), (2), or (3) may be used if the department determines that the piping construction and corrosion protection are designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in paragraphs (1) through (3). [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.20)

§11-281-14 Spill and overfill prevention equipment. (a) Except as provided in subsection (b), to prevent spilling and overfilling associated with product transfer to an UST or tank system, owners and operators must use the following spill and overfill prevention equipment:
(1) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and
(2) Overfill prevention equipment that will:
(A) Automatically shut off flow into the UST when the UST is more than ninety-five percent full;
(B) Alert the transfer operator when the UST

is more than ninety percent full by restricting the flow into the UST or triggering a high-level alarm; or

(C) Restrict flow thirty minutes prior to overfilling, or alert the operator with a high-level alarm one minute before overfilling, or automatically shut off flow into the UST so that none of the fittings located on top of the UST are exposed to product due to overfilling.

(b) Owners and operators are not required to use the spill and overfill prevention equipment specified in subsection (a) if:

(1) Alternative equipment is used that is determined by the department to be no less protective of human health and the environment than the equipment specified in subsection (a); or

(2) The UST or tank system is filled by transfers of no more than twenty-five gallons at one time.

(c) Spill and overfill prevention methods that rely on the use of alarms must have the alarms clearly labeled and located where the delivery person can clearly see or hear the alarm in order to immediately stop delivery of the product. [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.20)

§11-281-15 Installation. All USTs and piping must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

NOTE: UST and piping system installation practices and procedures described in the following codes may be helpful in complying with the requirements of this section:

A. American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System"; or

B. Petroleum Equipment Institute Publication

RP100-94, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or

C. American National Standards Institute Standard B31.3, "Petroleum Refinery Piping," and American National Standards Institute Standard B31.4 "Liquid Petroleum Transportation Piping System." [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.20)

§11-281-16 Certification of installation. (a) All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with section 11-281-15:

(1) The installer has been certified by the UST and piping manufacturers;

(2) The installation has been inspected and certified by a licensed professional engineer with education and experience in UST or tank system installation;

(3) All work listed in the manufacturer's installation checklists have been completed and the checklists maintained; or

(4) The owner or operator has complied with another method for ensuring compliance with section 11-281-15 that is determined by the department to be no less protective of human health and the environment.

(b) All owners and operators shall certify compliance with subsection (a) by completing and submitting to the department one of the following forms:

(1) Notification for Underground Storage Tanks (Appendix I entitled "Notification for Underground Storage Tanks", dated June 1999, which is made a part of this chapter and attached at the end of this chapter);

(2) Certification of Underground Storage Tank Installation (Appendix III entitled "Certification of Underground Storage Tank Installation", dated June 1999, which is made

a part of this chapter and attached at the end of this chapter). [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.20)

§11-281-17 Secondary containment. (a) Secondary containment systems must be designed, constructed, and installed to:

(1) Contain regulated substances released from the UST or tank system until they are detected and removed;

(2) Prevent the release of regulated substances to the environment at any time during the operational life of the UST or tank system; and

(3) For hazardous substance USTs or tank systems installed after December 22, 1988, be checked for evidence of a release at least every thirty calendar days; and for petroleum USTs or tank systems installed on or after the effective date of these rules, provide release detection as required in section 11-281-51(e).

(b) Double-walled USTs must be designed, constructed, and installed to:

(1) Contain a release from any portion of the inner UST within the outer wall until removed; and

(2) Detect the failure of the inner and outer walls.

(c) External liners (including vaults) must be designed, constructed, and installed to:

(1) Contain one hundred percent of the capacity of the largest UST within its boundary;

(2) Prevent precipitation or ground water intrusion from interfering with the ability to contain or detect a release of regulated substances; and

(3) Surround the UST completely to effectively prevent lateral and vertical migration of regulated substances in the event of a release.

(d) Underground piping must be equipped with

secondary containment (e.g., trench liners, double-walled pipes, etc.) that meets the requirements of subsection (a). In addition, pressurized piping must be equipped with an automatic line leak detector that complies with section 11-281-53. [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.42)

§11-281-18 Upgrading of existing underground storage tanks and tank systems. (a) Not later than the effective date of these rules, all existing USTs or tank systems must comply with one of the following requirements:

(1) Performance standards established in sections 11-281-11 through 11-281-16;

(2) The upgrading requirements in subsections (b) through (d); or

(3) Change-in-service or closure requirements under subchapter 8, including applicable requirements for release response actions under subchapter 7.

(b) Not later than the effective date of these rules, existing steel USTs or UST systems must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

(1) An UST may be upgraded by internal lining if:

(A) The lining is installed in accordance with the requirements of section 11-281-44, and

(B) Within ten years after the installation of the lining, and every five years thereafter, the lined UST is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

(2) An UST may be upgraded by cathodic protection if the cathodic protection system meets the requirements of sections 11-281-12(2)(B), (C) and (D), and the integrity of the UST is ensured using one of the following methods:

(A) The UST is internally inspected and assessed to ensure that the UST is structurally sound and free of corrosion holes prior to installing the cathodic protection system;

(B) The UST has been installed for less than ten years and is monitored monthly for releases in accordance with section 11-281-52;

(C) The UST has been installed for less than ten years and is assessed for corrosion holes by conducting two tightness tests that meet the requirements of section 11-281-52. The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three and six months following the first operation of the cathodic protection system; or

(D) The UST is assessed for corrosion holes by a method that is determined by the department to prevent releases in a manner that is not less protective of human health and the environment than subparagraphs (b)(2)(A) through (C).

(3) An UST may be upgraded by both internal lining and cathodic protection if:

(A) The lining is installed in accordance with the requirements of section 11-281-44; and

(B) The cathodic protection system meets the requirements of section 11-281-12(2)(B) through (D).

NOTE: The following codes and standards may be helpful in complying with subsection (b):

A. American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks";

B. National Leak Prevention Association Standard 631, "Entry, Cleaning, Interior Inspection, Repair and Lining of Underground Storage

Tanks";

C. National Association of Corrosion Engineers Standard RP0285-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"; and

D. American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems."

(c) Not later than the effective date of these rules, all existing UST metal pipings that routinely contain regulated substances and are in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements in sections 11-281-13(2)(B) through (D).

NOTE: The following codes and standards may be helpful in complying with subsection (c):

A. National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code";

B. American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage Systems";

C. American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; and

D. National Association of Corrosion Engineers Standard RP0169-92, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems".

(d) To prevent spilling and overfilling associated with product transfer to the UST or tank system, all existing USTs or tank systems must comply with the performance standard for spill and overfill prevention equipment as specified in section 11-281-14 no later than the effective date of these rules.

(e) Any existing UST or UST system that fails to meet any of the requirements of subsections (b) through (d) must comply with paragraph (a)(1) or (a)(3) no

later than the effective date of these rules. [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.21)

§§11-281-19 to 11-281-20 (Reserved)

SUBCHAPTER 3

NOTIFICATION, PERMITS, AND VARIANCES

§11-281-21 Notification requirements for tanks brought into use before the effective date of these rules. As to tanks that were brought into use before the effective date of these rules:

(1) Any person who acquires ownership of an UST or tank system that has not been permanently closed pursuant to subchapter 8 shall, within thirty days of acquiring ownership, submit to the department an amendment to the notification submitted by the previous owner to the department pursuant to section 342L-30, HRS. The amendment shall be on the form prescribed in Appendix I entitled "Notification for Underground Storage Tanks", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter.

(2) Within thirty days following a change of operator of an UST or tank system, the owner shall submit to the department an amendment to the notification previously submitted pursuant to section 342L-30, HRS. The amendment shall be on the form prescribed in Appendix I entitled "Notification for Underground Storage Tanks", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter.

(3) For any other changes in information submitted to the department on the notification form, the owner shall submit an amended notification within thirty days following the change, except that

notifications of permanent closures and changes in service under subchapter 8 must be received by the department at least thirty days before commencement of the closure or change in service. The amendment shall be on the form prescribed in Appendix I entitled "Notification for Underground Storage Tanks", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter. Other changes in information shall include but not be limited to:

(A) Permanent or temporary closures, including the return to currently-in-use status;
(B) Changes in service under subchapter 8;
(C) Repairs as defined in section 11-281-03;
(D) Changes in piping;
(E) Changes in type of regulated substances stored;
(F) Changes in corrosion protection mechanism;
(G) Changes in secondary containment;
(H) Changes in product dispensing method;
(I) Changes in financial responsibility mechanism;
(J) Changes in leak detection method; and
(K) Changes in spill and overfill prevention method. [Eff] (Auth: HRS §342L-3) (Imp: HRS §342L-30)

§11-281-22 Notification requirements for tanks brought into use on or after the effective date of these rules. As to tanks that were brought into use on or after the effective date of these rules, the owners may satisfy the notification requirements of section 342L-30, HRS by complying with the permit requirements of sections 11-281-23 through 11-281-31 and 11-281-34 through 11-281-35. [Eff] (Auth: HRS §342L-3) (Imp: HRS §342L-30)

§11-281-23 Permit required. (a) No person shall install or operate an UST or tank system, brought into

use after the effective date of these rules, without first obtaining a permit from the director.

(b) The director shall approve an application for a permit only if the applicant has submitted sufficient information to the satisfaction of the director that the technical, financial, and other requirements of this chapter are or can be met and the installation and operation of the UST or tank system will be done in a manner that is protective of human health and the environment.

(c) A permit shall be issued only in accordance with chapter 342L, HRS and this chapter, and it shall be the duty of the permittee to ensure compliance with the law in the installation and operation of the UST or tank system.

(d) Issuance of a permit shall not relieve any person of the responsibility to comply fully with all applicable laws.

(e) Only one permit can be issued for each location which has any UST or tank system requiring a permit under this subchapter. The permit shall be issued to the owner or operator of the UST or tank system. [Eff] (Auth: HRS §342L-3) (Imp: HRS §342L-31)

§11-281-24 Application for a permit. (a) Every application for a permit shall be submitted to the department on forms prescribed in Appendix II entitled "Application for an Underground Storage Tank Permit", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter.

(b) A permit fee in accordance with section 11-281-35 shall accompany each application for a permit.

(c) The applicant shall submit sufficient information to enable the director to make a decision on the application. Information submitted shall include but not be limited to the following:

(1) General information on involved parties, including the landowner, UST owner, and UST operator; identification of location of the UST or tank system; and basic description of the UST or tank system;

(2) Age, size, location, and uses of the UST or

tank system;

(3) Other information required in Appendix II entitled "Application for an Underground Storage Tank Permit", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter, and

(4) Other information as the department may require.

(d) Every application shall be signed by the owner and the operator and shall constitute an acknowledgement that the applicant(s) assumes responsibility for the installation and operation of the UST or tank system in accordance with this chapter and the conditions of the permit, if issued. Each signatory shall be:

(1) In the case of a corporation, a principal executive officer of at least the level of vice president, or a duly authorized representative if that representative is responsible for the overall operation of the UST or tank system;

(2) In the case of a partnership, a general partner;

(3) In the case of a sole proprietorship, the proprietor; or

(4) In the case of a county, state, or federal entity, either a principal executive officer, ranking elected official, or other duly authorized employee. (Eff) (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-31)

§11-281-25 Permit. (a) Upon approval of an application for a permit to install and operate an UST or tank system, the director shall issue a permit for a term of five years except as noted in subsection (b).

(b) The owner or operator shall have one year from the issuance of the permit to install an UST or tank system. If the installation is not completed within one year, the permit expires and the owner or operator must apply for a new permit.

(c) The owner or operator must inform the department at least seven days prior to performing the

actual installation. The information shall include the permit number, name and address of the UST or tank system, the contact person, the contact person's phone number, and date and time of actual installation.

(d) The owner or operator must notify the department within thirty days after the installation of the UST or tank system. The notification shall be submitted on the form prescribed in Appendix III entitled "Certification of Underground Storage Tank Installation", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter. If information submitted on the form prescribed in Appendix II entitled "Application for an Underground Storage Tank Permit" dated June, 1999, which is made a part of this chapter and attached at the end of this chapter, has changed since the original application, Part IV of Appendix III entitled "Certification of Underground Storage Tank Installation", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter, must be completed and submitted. [Eff] (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-31)

§11-281-26 Permit renewals. (a) On application, a permit may be renewed for a term of five years.

(b) A renewal fee in accordance with section 11-281-35 shall accompany each application for renewal of a permit.

(c) An application for a renewal shall be received by the department at least one hundred and eighty days prior to the expiration of the existing permit and shall be submitted on forms prescribed in Appendix IV entitled "Application for Renewal of an Underground Storage Tank Permit", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter. [Eff] (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-31)

§11-281-27 Action on and timely approval of an application for a permit. (a) The director need not act upon nor consider any incomplete application

for a permit. An application shall be deemed complete only when:

(1) All required and requested information, including the application form, plans, specifications, and other information required by this subchapter have been submitted in a timely fashion;
(2) All fees have been paid as prescribed in section 11-281-35; and
(3) The director determines that the application is complete.

(b) The director shall approve, approve with conditions, or deny a complete application for a permit to install or operate an UST or tank system or a permit renewal, modification, or transfer, required under this chapter. The director shall notify the applicant of his or her decision, within one hundred and eighty days of receipt of a complete application per subsection (a). Otherwise, the application is deemed approved on the one hundred and eightieth day. [Eff] (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-31, Act 164, Haw. Sess. Laws)

§ 11-281-28 Permit conditions. The director may impose conditions on a permit that the director deems reasonably necessary to ensure compliance with this chapter and any other relevant state requirement, including conditions relating to equipment, work practice, or operation. Conditions may include, but shall not be limited to, the requirement that devices for measurement or monitoring of regulated substances be installed (including the requirements of section 11-281-25) and maintained and the results reported to the director, all costs and expenses to be borne by the applicant. [Eff] (Auth: HRS § 342L-3) (Imp: HRS §§ 342L-4, 342L-31)

§11-281-29 Modification of permit and notice of change. (a) The director may modify a permit if there is a change that requires a modification to an existing permit. Changes requiring a permit modification shall include but not be limited to:

(1) Changes in service under subchapter 8;
(2) Repairs as defined in section 11-281-3;
(3) Changes in piping;
(4) Changes in type of regulated substance stored;
(5) Changes in corrosion protection mechanism; and
(6) Changes in secondary containment.

(b) The following changes do not require a permit modification but do require a written notice to the department:

(1) Changes in product dispensing method;
(2) Changes in financial responsibility mechanism;
(3) Changes in leak detection method;
(4) Changes in spill and overfill prevention method; and
(5) Temporary and permanent closures.

(c) The holder of a permit shall apply to the department for modification of the permit if plans to renovate or modify an UST or tank system would cause the holder to be out of compliance with the permit.

(d) An application for modification of a permit shall be made in writing to the department and shall be accompanied by sufficient information on the planned renovation or modification to the UST or tank system to assist the director in making a determination as to whether the application for modification should be denied or granted.

(e) Applications for a permit modification shall be received by the department no later than thirty days following the occurrence of the event that prompted the application except that applications for change in service must be received by the department at least thirty days before the owner or operator begins the change in service. Applications shall be submitted on forms prescribed in Appendix II entitled "Application for an Underground Storage Tank Permit", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter.

(f) Written notices under subsection (b) shall be received by the department no later than thirty days following implementation of the change except that notices of permanent closures must be received by the

department at least thirty days before the owner or operator begins the closure under section 11-281-82.

(g) Owners and operators shall submit a permit application to add USTs or tank systems to an existing permit. If the director approves the addition, the existing permit shall be terminated, and a new permit shall be issued which covers the additional USTs as well as the already-permitted USTs. The term of the new permit shall be for the remaining term of the original permit. [Eff] (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-31)

§11-281-30 Revocation or suspension of permit. The director may revoke or suspend a permit if the director finds any one of the following:

(1) There is a release or threatened release of regulated substances that the department deems to pose an imminent and substantial risk to human health or the environment;
(2) The permittee violated a condition of the permit; or
(3) The permit was obtained by misrepresentation, or failure to disclose fully all relevant facts. [Eff] (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-31)

§11-281-31 Change in owner or operator for a permit. (a) No permit to install, own, or operate an UST or tank system shall be transferable unless approved by the department. Request for approval to transfer a permit from one owner to another owner must be made by the new owner. Request for approval to transfer a permit from one operator to another operator must be made by the owner.

(b) The transferred permit will be effective for the remaining life of the original permit.

(c) An application for the transfer shall be received by the department at least 30 days prior to the proposed effective date of the transfer and shall be submitted on forms prescribed in Appendix V entitled "Application for Transfer of an Underground Storage Tank Permit", dated June, 1999, which is made a part of

this chapter and attached at the end of this chapter. [Eff] (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-31)

§11-281-32 Variances allowed. Provisions of chapter 342L, Hawaii Revised Statutes, and the rules in this chapter relating to USTs or tank systems which are more stringent than the federal rules and regulations promulgated by the U.S. Environmental Protection Agency under Subtitle I of the federal Resource Conservation and Recovery Act of 1976, Public Law 94-580, as amended, may be varied by the director in accordance with sections 342L-5 and 342L-6, HRS and this chapter. No variance may be less stringent than the federal requirements. [Eff] (Auth: HRS §342L-3) (Imp: HRS §342L-5)

§11-281-33 Variance applications. (a) Every application for a variance shall be submitted to the department on forms prescribed in Appendix VI entitled "Application for an Underground Storage Tank Variance", dated June, 1999, which is made a part of this chapter and attached at the end of this chapter.

(b) A variance fee in accordance with section 11-281-35 shall accompany each application for a variance.

(c) Every application shall be signed by the owner and operator, and the signature shall be by one of the following:

(1) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a duly authorized representative if that representative is responsible for the overall operation of the UST or tank system;
(2) In the case of a partnership, by a general partner;
(3) In the case of a sole proprietorship, by the proprietor; or
(4) In the case of a county, state, or federal entity, by a principal executive officer, ranking elected official, or other duly authorized employee.

(d) The director shall approve, approve with conditions, or deny a complete application for a variance or variance renewal or modification as required under this chapter and sections 342L-5 and 342L-6, HRS. The director shall notify the applicant of his or her decision, within one hundred and eighty days of receipt of a complete application. Otherwise, the application is deemed approved on the one hundred and eightieth day. [Eff] (Auth: HRS §342L-3) (Imp: HRS §342L-6, Act 164, Haw. Sess. Laws)

§11-281-34 Maintenance of permit or variance.

(a) Permits and variances, including application documents, shall be maintained at the location of the UST or tank system for which the permit was issued and shall be made available for inspection upon request of any duly authorized representative of the department.

(b) No person shall wilfully deface, alter, forge, counterfeit, or falsify any permit or variance. [Eff] (Auth: HRS §342L-3) (Imp: HRS §§342L-4, 342L-6, 342L-31).

§11-281-35 Fees. (a) Every applicant for a permit or a variance, or applicant for modification or renewal of a permit or variance, or applicant for a transfer of a permit, shall pay the applicable fees as set forth below:

Type of Application	Permit	Variance
Permit or variance application	$150	$200
Application to modify	$100	$150
Application for renewal	$ 50	$100
Application for transfer	$ 25	NA

(b) Fees shall be submitted with the application

and are nonrefundable.

(c) Fees shall be made payable to the State of Hawaii.

(d) If more than one type of application is combined, the highest applicable fee will be assessed. However, a permit application and a variance application shall not be combined under one fee. [Eff] (Auth: HRS §342L-3) (Imp: HRS §342L-14)

§§11-281-36 to 11-281-40 (Reserved)

SUBCHAPTER 4

GENERAL OPERATING REQUIREMENTS

§11-281-41 Spill and overfill control. (a) Owners and operators must ensure that releases due to spilling or overfilling do not occur. Owners and operators must ensure that the volume available in the UST is greater than the volume of product to be transferred to the UST before the transfer is made and that the transfer operation is monitored constantly to prevent spilling and overfilling.

NOTE: The transfer procedures described in National Fire Protection Association Publication 385 may be helpful in complying with subsection (a). Further guidance on spill and overfill prevention appears in American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets", and National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code".

(b) Owners and operators must report, investigate, and clean up any spills and overfills in accordance with section 11-281-64. [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.30)

§11-281-42 Operation and maintenance of corrosion protection systems. (a) All owners and operators of steel USTs or tank systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST or tank system is used to store regulated substances:

(1) All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the UST and piping that routinely contain regulated substances and are in contact with the ground.

(2) All USTs or tank systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

(A) Frequency. All cathodic protection systems must be tested within six months of installation and at least every three years thereafter; and

(B) Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association; and

NOTE: National Association of Corrosion Engineers Standard RP0285-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems" may be helpful in complying with subparagraph (a)(2)(B).

(3) USTs or tank systems with impressed current cathodic protection systems must also be inspected every sixty days to ensure the equipment is operating properly.

(b) For USTs or tank systems using cathodic protection, records of the operation of the cathodic

protection must be maintained by the owners and operators in accordance with section 11-281-45 to demonstrate compliance with the performance standards in this section. These records must provide the following:

(1) The results of the last three inspections required in paragraph (a)(3); and

(2) The results of testing from the last two inspections required in paragraph (a)(2).

[Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.31)

§11-281-43 Compatibility. Owners and operators must use an UST or tank system made of or lined with materials that are compatible with the substance stored in the UST or tank system.

NOTE: Owners and operators storing alcohol blends may find it helpful to use the following codes to comply with the requirements of this section:

A. American Petroleum Institute Publication 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations"; and

B. American Petroleum Institute Publication 1627, "Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations". [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.32)

§11-281-44 Repairs. (a) Owners and operators of USTs or tank systems must ensure that repairs will prevent releases due to structural failure or corrosion for as long as the UST or tank system is used to store regulated substances.

(b) UST or tank system repairs must meet the following requirements:

(1) Repairs to USTs and tank systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent

testing laboratory.

NOTE: The following codes and standards may be helpful in complying with paragraph (b)(1):

A. National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code";

B. American Petroleum Institute Publication 2200, "Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines";

C. American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks";

D. National Leak Prevention Association Standard 631, "Entry, Cleaning, Interior Inspection, Repair and Lining of Underground Storage Tanks".

(2) Repairs to fiberglass-reinforced plastic USTs may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(3) Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

(4) Repaired USTs and piping must be tightness tested in accordance with sections 11-281-52(3) and 11-281-53(2) within thirty days following the date of the completion of the repair, except as provided in subparagraphs (b)(4)(A) to (b)(4)(B):

(A) The repaired UST is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory; or

(B) The repaired portion of the UST or tank

system is monitored monthly for releases in accordance with a method specified in section 11-281-52(4) through (8).

(5) Within six months following the repair of any cathodically protected UST or tank system, the cathodic protection system must be tested in accordance with sections 11-281-42(a)(2) and (3) to ensure that it is operating properly.

(c) UST or tank system owners and operators must maintain records of each repair for the remaining operating life of the UST or tank system to demonstrate compliance with the requirements of this section. [Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.33)

§11-281-45 Reporting and recordkeeping. (a) Owners and operators of USTs or tank systems must cooperate fully with inspections, monitoring, and testing conducted by the department, as well as requests by the department for document submission, monitoring and testing by owners or operators in accordance with chapter 342L, Hawaii Revised Statutes.

(b) Owners and operators must submit the following information to the department:

(1) Notifications for all USTs or tank systems as required by section 342L-30, HRS and sections 11-281-21 and 11-281-22. When appropriate, notification shall include certification of installation for USTs or tank systems required under section 11-281-16;

(2) Reports of all releases including suspected releases as required in section 11-281-61, spills and overfills as required in section 11-281-64, and confirmed releases as required in section 11-281-72;

(3) Release response actions planned or taken including immediate response actions as required in section 11-281-72, posting of signs as required in section 11-281-73, initial abatement measures and site assessment as required in section 11-281-74, initial site characterization as required in

section 11-281-75, free product removal as required in section 11-281-76, soil and ground water investigations as required in section 11-281-77, site cleanup as required in section 11-281-78, notification of confirmed release as required in section 11-281-78.1, corrective action plan as required in section 11-281-79, documentation of public participation as required in section 11-281-80, and ninety-day report and quarterly progress reports as required in section 11-281-80.1; and

(4) Notification before permanent closure or change-in-service of an UST or tank system as required in section 11-281-82.

(c) Owners and operators must keep and maintain records of the following information for the remaining operating life of the UST or tank system unless otherwise specified:

(1) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used as allowed for under sections 11-281-12 and 11-281-13;

(2) Documentation of operation of corrosion protection equipment as required in section 11-281-42;

(3) Documentation of UST or tank system repairs as required in section 11-281-44(c);

(4) Record of compliance with release detection requirements as specified and according to the timeframes in section 11-281-54;

(5) Record of compliance with change-in-service or permanent closure requirements, including results of the site assessment, under subchapter 8, for at least three years after completion of permanent closure or change-in-service;

(6) Permits or variances or both, including all documentation, as specified in section 11-281-34(a); and

(7) Proof of current financial assurance mechanisms used to demonstrate financial responsibility as required by subchapter 9.

(d) Owners and operators must keep records at the

following locations:

(1) All documents, except the permanent closure records specified in paragraph (c)(5), shall be made immediately available for inspection by the department by:
  (A) Being maintained at the UST site; or
  (B) Another method as approved by the director.

(2) The permanent closure records specified in paragraph (c)(5) may be maintained at a readily available alternative site and shall be provided for inspection to the department upon request; or

(3) In the case of permanent closure records required under section 11-281-85, owners and operators may submit closure records to the department if they cannot be kept at the site or an alternative site as indicated above.

[Eff] (Auth: HRS §§342L-3, 342L-32) (Imp: 40 C.F.R. §280.34)

§§11-281-46 to 11-281-50 (Reserved)

SUBCHAPTER 5

RELEASE DETECTION

§11-281-51 General requirements for all underground storage tanks or tank systems. (a) Owners and operators of new and existing USTs or tank systems must provide a method, or combination of methods, of release detection that:

(1) Can detect a release from any portion of the UST and the connected underground piping that routinely contains product;

(2) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability either every twelve months or in a timeframe specified by the manufacturer, whichever is more frequent; and

(3) Meets the performance requirements in section 11-281-52 or section 11-281-53. Owners and operators must also provide the department with the equipment manufacturer's or installer's written documentation of any performance claims and their manner of determination. In addition, methods used after December 22, 1990, except for inventory control or methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in section 11-281-52 (2), (3), or (4) or section 11-281-53(1) or (2) with a minimum probability of detection (Pd) of 0.95 and a maximum probability of false alarm (Pfa) of 0.05.

(b) When a release detection method operated in accordance with the performance standards in section 11-281-52 and section 11-281-53 indicates a release may have occurred, owners and operators must notify the department in accordance with subchapter 6.

(c) Owners and operators of all USTs or tank systems must comply with the release detection requirements of this subchapter.

(d) Owners and operators of any UST or tank system that cannot apply a method of release detection that complies with the requirements of this subchapter must comply with change-in-service or closure procedures in subchapter 8.

(e) Owners and operators of USTs or tank systems must provide release detection for USTs and piping as follows:

(1) Tanks. USTs must be monitored at least every thirty days for releases using one of the methods listed in sections 11-281-52(4) through (8) except that:
  (A) USTs or tank systems that meet the performance standards in subchapter 2, and the monthly inventory control requirements in section 11-281-52(1) or (2), may use tank tightness testing (conducted in accordance with section 11-281-52(3)) at least:
    (i) Every five years until December 22,

1998;

(ii) Until ten years after the tank is installed; or

(iii) For tank or tank systems that meet the upgrading requirements of sections 11-281-18(b), (c), and (d), until ten years after the tank is upgraded under section 11-281-18(b),

whichever is latest.

(B) USTs or tank systems that do not meet the performance standards in subchapter 2 may use monthly inventory controls (conducted in accordance with section 11-281-52(1) or (2)) and tank tightness testing (conducted every twelve months and in accordance with section 11-281-52(3)) until December 22, 1998, when the tank must be upgraded under section 11-281-18 or permanently closed under section 11-281-82.

Hazardous substance USTs or tank systems installed after December 22, 1988, must meet the requirements of section 11-281-17(a)(3); and

(2) Piping. Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

(A) Pressurized piping. Underground piping that conveys regulated substances under pressure must:

(i) Be equipped with an automatic line leak detector in accordance with section 11-281-53(1); and

(ii) Have a line tightness test conducted every twelve months and in accordance with section 11-281-53(2) or have monthly monitoring conducted in accordance with section 11-281-53(3).

(B) Suction piping. Underground piping that conveys regulated substances under suction must either have a line

tightness test conducted at least every three years and in accordance with section 11-281-53(2), or use a monthly monitoring method conducted in accordance with section 11-281-53(3). No release detection is required for suction piping that is designed and constructed to meet the following standards:

(i) The below-grade piping operates at less than atmospheric pressure;

(ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

(iii) Only one check valve is included in each suction line;

(iv) The check valve is located directly below and as close as practical to the suction pump; and

(v) A method is provided that allows compliance with clauses (e)(2)(B)(ii) through (iv) to be readily determined.

Hazardous substance USTs or tank systems installed after December 22, 1988, must meet the requirements of only subparagraph (A)(i) and section 11-281-17(d). [Eff] (Auth: HRS §§342L-3, 342L-33) (Imp: 40 C.F.R. §§280.40 and 280.41)

§11-281-52 Methods of release detection for tanks. Each method of release detection for tanks used to meet the requirements of section 11-281-51(e) must be conducted in accordance with the following:

(1) Inventory control. Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least one per cent of flow-through plus one hundred thirty gallons on a monthly basis in the following manner:

(A) Inventory volume measurements for regulated substance inputs,

withdrawals, and the amount still remaining in the tank are recorded each operating day;

(B) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(C) If a manual measuring device is used (e.g. a gauge stick), the measurements must be made through a drop tube and one that extends to within one foot of the tank bottom. Level measurements shall be to the nearest one-eighth of an inch;

(D) The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

(E) Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

(F) Product dispensing is metered and recorded within the state standards for meter calibration; or for non-retail enterprises, calibrated to an accuracy of six cubic inches for every five gallons of product withdrawn (in both cases, the meter must be calibrated every twelve months); and

(G) The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

NOTE: Practices described in the American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," may be helpful where applicable, in meeting the requirements of paragraph (1).

(2) Manual tank gauging. Manual tank gauging must meet the following requirements:

(A) Tank liquid level measurements are taken at the beginning and ending of a period

of at least 36 hours during which no liquid is added to or removed from the tank (of the period defined in the table below for the size of the tank);

(B) If a manual measuring device is used (e.g. a gauge stick), the measurements must be made through a drop tube that extends to within one foot of the tank bottom. Level measurements shall be to the nearest one-eighth of an inch and shall be based on the average of two consecutive gauge stick readings at both the beginning and ending of the period;

(C) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(D) A leak is suspected and subject to the requirements of subchapter 6 if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity (in gallons)	Tank Dimensions	Weekly Standard (in gallons)	Monthly Standard (in gallons)	Minimum Test Duration
550	N/A	10	5	36 hrs.
551 - 1,000	N/A	13	7	36 hrs. *
1,000	64" dia. X 73" L	9	4	44 hrs.
1,000	48" dia. X 128" L	12	6	58 hrs.
1,001 - 2,000	N/A	26	13	36 hrs. *

* Must be combined with tank-tightness testing

(E) Measurements shall be conducted each week of the month. If the month has five measurement periods, the weekly test with the smallest discrepancy shall

not be used in calculating the average.

(F) Tanks of 1,000 gallons or less nominal capacity may use manual tank gauging as the sole method of release detection when using the standards in the above table except that where an asterisk is indicated tank tightness testing is required. Tanks of 551 gallons to 2,000 gallons may use manual tank gauging in place of inventory control in section 11-281-52(2) when using the standards in the above table that indicate with an asterisk that tank tightness testing is also required. Tanks of greater than 2,000 gallons nominal capacity may not use manual tank gauging to meet the requirements of this subchapter.

(3) Tank tightness testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table at the time of the tank tightness test.

(4) Automatic tank gauging. Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

(A) The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; and

(B) Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of section 11-281-52(1). Inventory control is required only when the automatic tank gauging is not third party certified for detecting a release of 0.2 gallons per hour with a ninety-five per cent

probability of detection and five per cent probability of false alarm and was installed prior to December 22, 1990.

(5) Vapor monitoring. Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:

(A) The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

(B) The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

(C) The measurement of vapors by the monitoring device is not rendered inoperative by the ground water, rainfall, soil moisture, or other known interferences so that a release could go undetected for more than thirty days;

(D) The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

(E) The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

(F) In the tank system excavation zone, the site is assessed with written documentation to ensure compliance with the requirements in subparagraphs (5)(A) through (D) and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the

tank that routinely contains product; and

(G) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(6) Ground water monitoring. Testing or monitoring for liquids on the ground water must meet the following requirements:

(A) The regulated substance stored is immiscible in water and has a specific gravity of less than one;

(B) Ground water is never more than twenty feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST or tank system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravel, coarse to medium sands, coarse silts or other permeable materials);

(C) The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low ground water conditions;

(D) Monitoring wells shall be sealed from the ground surface to the top of the filter-pack;

(E) Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

(F) The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of one inch of free product on top of the ground water in the monitoring wells;

(G) Within and immediately below the tank system excavation zone, the site is assessed with written documentation to ensure compliance with the requirements in subparagraphs (6)(A) through (E) and to establish the number and positioning

of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

(H) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(7) Interstitial monitoring. Interstitial monitoring between the tank system and a secondary barrier immediately around or beneath it may be used, but only if the monitoring system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

(A) For double-walled tank systems, the sampling or testing method can deteot a release through the inner wall in any portion of the tank that routinely contains product.

NOTE: The provisions outlined in the Steel Tank Institute's "Standard for Dual Wall Underground Steel Storage Tanks" may be helpful for aspects of the design and construction of underground steel double-walled tanks.

(B) For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

(8) Other methods. Any other type of release detection method, or combination of methods, can be used if:

(A) It can detect a 0.2 gallon per hour leak rate or a release of one hundred fifty gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05;

(B) The owners and operators demonstrate to the department that the method can

detect a release as effectively as any of the methods allowed in paragraphs (3) through (7), and the department approves the method. In comparing methods, the department shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, owners and operators must comply with any conditions imposed by the department on its use to ensure the protection of human health and the environment; or

(C) For hazardous substance tanks, the owners and operators:

(i) Provide information to the department on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and

(ii) Obtain approval from the department to use the alternate release detection method. [Eff] (Auth: HRS §§342L-3, 342L-33) (Imp: 40 C.F.R. §280.43)

§11-281-53 Methods of release detection for piping. Each method of release detection for piping used to meet the requirements of section 11-281-51(e) must be conducted in accordance with the following:

(1) Automatic line leak detectors. Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping may be used only if they detect leaks of three gallons per hour at ten pounds per square inch line pressure within one hour. A test every twelve months of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

(2) Line tightness testing. A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

(3) Applicable tank methods. Any of the methods in sections 11-281-52(5) through (8) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances. [Eff] (Auth: HRS §§342L-3, 342L-33) (Imp: 40 C.F.R. §280.44)

§11-281-54 Release detection recordkeeping. (a) All owners and operators of USTs or tank systems must keep and maintain records in accordance with section 11-281-45 demonstrating compliance with all applicable requirements of this subchapter.

(b) These records must be kept at least one year, unless otherwise specified, and shall include but is not limited to the following:

(1) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be kept and maintained for the lifetime of the equipment;

(2) All results of any sampling, testing, or monitoring;

(3) Written documentation of the last twelve months of all calibration, maintenance (including testing required by section 11-281-51(a)(2)), and repair of release detection equipment permanently located on-site. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for the lifetime of the equipment;

(4) All records of the last twelve months of release detection, the most recent tank and line tightness tests, and test results of the automatic line leak detectors, except tank and line tightness test records must be maintained until the next test. These

records shall include all of the testing data, not just the pass or fail determination;

(5) Operating manuals for all currently installed leak detection equipment for the remaining operating life of the UST or tank system; and

(6) Documentation of the site assessment, as required by sections 11-281-52(5)(F) and (6)(G), for three years after change-in-service or permanent closure of the UST or tank system. [Eff] (Auth: HRS §§342L-3, 342L-33) (Imp: 40 C.F.R. §280.45)

§§11-281-55 to 11-281-60 (Reserved)

SUBCHAPTER 6

RELEASE REPORTING, INVESTIGATION, AND CONFIRMATION

§11-281-61 Reporting of suspected releases. Owners and operators of USTs or tank systems must notify the department within twenty-four hours, and follow the procedures in section 11-281-63, for any of the following conditions:

(1) The discovery by any person of evidence of regulated substances which may have been released at the UST or tank system site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water);

(2) Unusual UST or tank system operating conditions observed or experienced by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST or tank system, or an unexplained presence of water in the tank), unless a component of the UST or tank system is found to be defective but not leaking, and is immediately repaired or replaced; or

(3) Monitoring results from a release detection method required under section 11-281-51(e) indicate a release may have occurred unless:

(A) The monitoring device is found to be defective, and is immediately repaired, recalibrated, or replaced, and additional monitoring results do not confirm the initial result; or

(B) In the case of inventory control monthly reconciliation, two consecutive months of data do not confirm the initial result. [Eff] (Auth: HRS §§342L-3, 342L-34) (Imp: 40 C.F.R. §280.50)

§11-281-62 Investigation of off-site impacts. When required by the department, owners and operators of USTs or tank systems must follow the procedures in section 11-281-63 to determine if the UST or tank system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters) that have been observed by the department or brought to the department's attention by any person. [Eff] (Auth: HRS §§342L-3, 342L-34) (Imp: 40 C.F.R. §280.51)

§11-281-63 Release investigation and confirmation steps. (a) Unless release response action is initiated in accordance with subchapter 7, owners and operators must immediately investigate and confirm all suspected releases of regulated substances that require reporting under section 11-281-61 within seven days following the discovery of the suspected release, unless a written request for extension of time is granted by the director.

(b) Investigations and confirmations required in subsection (a) must use the following steps:

(1) System test. Owners and operators must conduct tests (according to the requirements for tightness testing in sections 11-281-

52(3) and 11-281-53(2)) to determine whether a leak exists in that portion of the UST that routinely contains product, or the attached delivery piping, or both.

(A) Owners and operators must repair, replace, or upgrade the UST or tank system, and begin release response action in accordance with subchapter 7 if the test results for the UST system, UST, or delivery piping indicate that a leak exists.

(B) Further investigation is not required if the test results for the UST system, UST, and delivery piping do not indicate that a leak exists and if the discovery of environmental contamination subject to the reporting requirements of section 11-281-61(1) is not the basis for suspecting a release.

(C) Owners and operators must conduct a site assessment as described in paragraph (b)(2) if the test results for the UST system, UST, and delivery piping do not indicate that a leak exists but the discovery of environmental contamination subject to the reporting requirements of section 11-281-61(1) is the basis for suspecting a release.

(2) Site assessment. Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST or tank system site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the types of backfill and surrounding soil, the depth and flow of ground water, and other factors as appropriate for identifying the presence and source of a release.

(A) If the test results for the excavation zone, or the UST or tank system site, indicate that a release has occurred,

owners and operators must begin release response action in accordance with subchapter 7;

(B) If the test results for the excavation zone, or the UST or tank system site, do not indicate that a release has occurred, further investigation is not required.

(c) If it is determined that a release has not occurred, owners and operators must report the results of the investigation in writing to the department within thirty days following discovery of the suspected release. The report shall include, but not be limited to, results of the tests pursuant to subsection (b) as well as performance claims pursuant to section 11-281-51(a)(3). [Eff] (Auth: HRS §§342L-3, 342L-34) (Imp: 40 C.F.R. §280.52)

§11-281-64 Reporting and cleanup of spills and overfills. (a) Owners and operators of USTs or tank systems must contain and immediately clean up all spills and overfills in a manner which is protective of human health and the environment as set forth in section 11-281-78.

(b) Owners and operators must notify the department within twenty-four hours and begin release response action in accordance with subchapter 7 in the following cases:

(1) Spill or overfill of petroleum that results in a release to the environment that exceeds twenty-five gallons or that causes a sheen on nearby surface waters; and

(2) Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity as determined in compliance with section 11-451-6 (determination of reportable quantities).

(c) If the owners and operators cannot, within twenty-four hours, contain and complete the cleanup of a spill or overfill of petroleum that is less than twenty-five gallons, or a spill or overfill of a hazardous substance that is less than the reportable

quantity, then the owners and operators must immediately notify the department of the incident and continue cleaning up the spill or overfill. Owners and operators must also complete and submit to the department a written report of the actions taken in response to the spill or overfill within ninety days of the spill or overfill. [Eff] (Auth: HRS §§342L-3, 342L-34) (Imp: 40 C.F.R. §280.53)

§§11-281-65 to 11-281-70 (Reserved)

SUBCHAPTER 7

RELEASE RESPONSE ACTION

§11-281-71 General. (a) Owners and operators of USTs or tank systems must comply with the requirements of this subchapter in responding to releases of regulated substances from USTs or tank systems.

(b) For purposes of complying with this subchapter, the date of confirmation of a release shall be as follows:

(1) For releases confirmed on or after the effective date of these rules, the date of confirmation shall be the date the release is confirmed in accordance with section 11-281-63.

(2) For releases confirmed before the effective date of these rules, the date of confirmation shall be the effective date of the State rules. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.60)

§11-281-72 Immediate response actions. (a) Upon confirmation of a release in accordance with section 11-281-63, or after a release from the UST or tank system is identified in any other manner, owners and operators must perform the following immediate response actions within twenty-four hours following the confirmation:

(1) Report the release to the department (e.g., by telephone or fax);

(2) Identify and mitigate any safety hazards (such as fire, explosion, and vapor hazards) posed by the release of the regulated substance; and

(3) Take necessary actions to prevent any further release of the regulated substance into the environment, including removal of as much of the regulated substance from the UST or tank system as possible; and

(4) Take necessary action to minimize the spread of contamination.

(b) Within seven days of confirmation, owners and operators must submit to the department a written notice of confirmation. The notice shall include, but not be limited to, the following information: source of the release, method of discovery and confirmation, estimated quantity of substance released, type of substance released, immediate hazards, release impact, migration pathways, and actions taken. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.61)

§11-281-73 Posting of signs. (a) If the department determines that posting of signs is appropriate, owners and operators shall post signs around the perimeter of the site informing passersby of the potential hazards. In this instance, "site" means an area where contamination poses an immediate health risk or an area where contaminated media is exposed to the surface.

(b) Signs shall be placed at each entrance to the site and at other locations in sufficient numbers to be seen from any approach to the site.

(c) Signs shall be legible and readable from a distance of at least twenty-five feet. The sign legend shall read, "Caution - Petroleum/Hazardous Substance Contamination - Unauthorized Personnel Keep Out". Other sign legends may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the site and that entry onto the site may be dangerous. A contact person and telephone

number shall be listed on the sign.

(d) The sign may be removed upon determination by the department that no further release response action is necessary or that posting of signs is no longer appropriate. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: HRS §342L-35)

§11-281-74 Initial abatement measures and site assessment. (a) After a release has been confirmed, owners and operators must perform the following release abatement and control measures:

(1) Continue to remove as much of the regulated substance from the UST or tank system as is necessary to prevent further release to the environment;

(2) Visually inspect the area around the UST or tank system for evidence of any aboveground releases or exposed below ground releases and continue to take necessary actions to minimize the spread of contamination and to prevent further migration of the released substance into surrounding soils, air, surface water, and ground water;

(3) Continue to monitor and mitigate any safety hazards (such as fire, explosion, and vapors) posed by the release that have migrated from the UST or tank system excavation zone and entered into subsurface structures (such as sewers or basements);

(4) Remedy hazards (such as dust and vapors and the potential for leachate generation) posed by contaminated soils and debris that are excavated or exposed as a result of release confirmation activities undertaken pursuant to subchapter 6 or release response actions undertaken pursuant to this subchapter;

(5) Investigate to determine the possible presence of free product, and begin free product removal in accordance with section 11-281-76;

(6) Remove or remediate contaminated soil at the site to the extent necessary to prevent the spread of free product;

(7) Conduct an assessment of the release by measuring for the presence of a release where contamination is most likely to be present at the UST or tank system site, unless the presence and source of the release have been confirmed in accordance with the site assessment required by section 11-281-63(b)(2) or the site assessment required for change-in-service or permanent UST or tank system closures in section 11-281-83. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the types of backfill and surrounding soil, depth and flow of ground water, and other factors as appropriate for identifying the presence and source of a release; and

(8) If any of the remedies in this section include treatment or disposal of contaminated soils, owners or operators must comply with all applicable local, state and federal requirements.

(b) Initial site assessment and abatement shall be completed within ninety days of confirmation of a release or sooner if directed by the department. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.62)

§11-281-75 Initial site characterization. (a) While carrying out release response actions under this subchapter, owners and operators must concurrently assemble necessary information about the characteristics of the site and the nature of the release in order to adequately assess the impact or potential impact the release has on human health and the environment.

(b) The information assembled pursuant to subsection (a) must include, but is not limited to, the following:

(1) Data on the nature and estimated quantity of release;

(2) Data from available sources or site

investigations or both concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological data, and land use;

(3) Results of the site assessment required under section 11-281-74(a)(7);

(4) Results of the free product investigations required under section 11-281-74(a)(5) to be used by the owners and operators to determine whether free product must be recovered under section 11-281-76; and

(5) Any other information, as appropriate, which may relate to the impact of the release on human health and the environment.

(c) Initial site characterization shall be completed within ninety days of confirmation of a release or sooner as determined by the department. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.63)

§11-281-76 Free product removal. (a) At sites where investigations indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable, as determined by the department, while continuing, as necessary, actions initiated under sections 11-281-62 and 11-281-63, or preparing for actions required under sections 11-281-71 through 11-281-78. In meeting the requirement of this section, owners and operators must:

(1) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, state, and federal regulations;

(2) Use abatement of free product migration as a minimum objective for the design of the free

product removal system;

(3) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

(4) Prepare and submit to the department, included in the first quarter progress report required pursuant to section 11-281-80.1(a), information that provides at least the following:

(A) The name of the person(s) responsible for implementing the free product removal measures;

(B) The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;

(C) The type of free product recovery system used;

(D) Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

(E) The type of treatment applied to, and the effluent quality expected from, any discharge;

(F) The steps that have been or are being taken to remove free product including steps to obtain any necessary permits for any discharges;

(G) The disposition of the recovered free product; and

(H) Schedule for completion of free product removal.

(b) Owners and operators shall initiate free product removal as soon as practicable but no later than ninety days following confirmation of a release or sooner if directed by the department. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.281)

§11-281-77 Investigation of soil and ground water contamination. (a) For releases confirmed in accordance with section 11-281-63, owners and operators

must determine the extent and location of the soil contaminated by the release and the presence and concentrations of dissolved product contamination in the ground water and must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release.

(b) Owners and operators must submit information collected under this section with the quarterly reports required pursuant to sections 11-281-80.1(a) and (b). [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.65)

§11-281-78 Site cleanup criteria. (a) For releases confirmed in accordance with section 11-281-63, owners and operators must remediate soil, water, and materials contaminated by releases from USTs or tank systems in a manner which is protective of human health and the environment and achieves cleanup as described in subsection (b).

(b) Owners and operators must remediate contaminated soil and water at the site to residual levels which meet one of the following criteria:

(1) Default tier 1 action levels as presented in Table 1-1a (Tier 1 Action Levels for Soil and Groundwater: Rainfall ≤ 200cm/yr), section 11-281-80.1 and in Table 1-1b (Tier 1 Action Levels for Soil and Groundwater: Rainfall > 200cm/yr), section 11-281-80.1; or

(2) Site-specific action levels as approved by the department. Site-specific action levels must take into account the following factors:

(A) For systemic toxicants, acceptable levels shall represent concentration levels to which the human population, including sensitive subgroups, may be exposed without adverse effect during a lifetime or part of a lifetime, incorporating an adequate margin of safety;

(B) For known or suspected carcinogens, acceptable levels are generally concentration levels that represent an excess upper bound lifetime cancer risk

to an individual of between 10^{-4} and 10^{-6} using information on the relationship between dose and response. The 10^{-6} excess risk level shall be used as the point of departure for determining acceptable levels for alternatives when chemical specific state or federal requirements are not available or are not sufficiently protective because of the presence of multiple contaminants at the site or multiple pathways of exposure;

(C) Impacts to ecological receptors; and

(D) Other applicable requirements, if available;

NOTE: Owners and operators should consult with the department on how the standards in section 11-281-78(b) can be met. Owners and operators should also consult the department for forms to be used that will be helpful in expediting the department's review of the owners' and operators' reports.

(c) The department may require the owners and operators to modify cleanup activities being undertaken at a site if the department determines that the activities are not being carried out in accordance with this subchapter, or are not achieving cleanup levels which are protective of human health and the environment. The department may impose modifications to cleanup activities by written notice to the owners and operators, and the owners and operators must implement necessary changes to the cleanup activities in response to the department's notice by a time schedule established by the department.

(d) A schedule for completion of site cleanup shall be included in the fourth quarter report required pursuant to section 11-281-80.1(b). [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: HRS §342L-35)

§11-281-78.1 Notification of confirmed releases. (a) Within ninety days following confirmation of

a release pursuant to section 11-281-63, the owner and operator shall notify those members of the public directly affected by a release and the proposed response to the release. Members of the public directly affected by the release shall include:

(1) Persons who own, hold a lease for, or have easements at, any property on which the regulated substance released from the UST was discovered; and

(2) Other persons as identified by the director.

(b) The owner and operator shall send a letter to all members of the public directly affected by the release. Model language for the letter shall be provided by the department and shall include at least the following information:

(1) Name and address of the UST or UST system;

(2) Statement that a release of regulated substance has been confirmed at the UST or UST system;

(3) Name of a contact person at the department; and

(4) Reference to an attached factsheet pursuant to subsection (c).

(c) The letter to the members of the public directly affected by the release shall include a factsheet which contains the following information:

(1) Name and address of the UST or UST system;

(2) Name and address of the owner and operator of the UST or UST system;

(3) Date of the confirmed release;

(4) Nature and extent of the confirmed release;

(5) Summary of measures taken to assess the release and extent of contamination; and

(6) Summary of the proposed response to the release.

The factsheet shall be updated on a quarterly basis and sent to all members of the public directly affected by the release. If additional members of the public directly affected by the release are identified in the course of release response actions, then the owner and operator shall provide those persons with all previous and future letters and factsheets.

(d) The owner and operator shall include in the quarterly report required pursuant to section 11-281-80.1 the following information:

(1) Copy of the letter pursuant to subsection (b);

(2) List of the members of the public directly affected by the release and to whom the letter was sent; and

(3) Copies of the factsheet and amended factsheets pursuant to subsection (c). [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: HRS §342L-35)

§11-281-79 Corrective action plan. (a) The department may require that the owner and operator submit a written corrective action plan for responding to a release, if one or more of the following minimum threshold criteria is met:

(1) Actual or probable release to ground water which is a drinking water supply;

(2) Actual or probable release to surface water which is a drinking water supply;

(3) Actual or probable release to air that poses a threat to public health;

(4) Actual or probable release to and extensive contamination of soil that poses a direct contact hazard due to uncontrolled access;

(5) Actual or probable existence of uncontrolled regulated substances that pose a direct contact hazard due to uncontrolled access;

(6) Actual or probable adverse impact to natural resources;

(7) Actual or probable imminent danger of fire or explosion; or

(8) A determination by the director that a release poses a substantial endangerment to public health or welfare, the environment, or natural resources.

(b) Such plans must be submitted to the department within thirty days of the department's request unless an extension of time is granted by the department.

(c) Owners and operators must make necessary modifications to the corrective action plan when directed to do so by the department.

(d) Corrective action plans which are required to be submitted to the department shall be subject to the review and discretionary approval of the department in accordance with the procedures set forth in this section.

NOTE: Forms such as those in the TGM may be helpful in fulfilling the requirements of this section.

(e) The department will approve written corrective action plans only after owners and operators demonstrate to the satisfaction of the department that implementation of the plan will be safe and will adequately protect human health and the environment in accordance with section 11-281-78. In making this determination, the department will consider the following factors:

(1) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;

(2) The hydrogeologic characteristics of the facility and the surrounding area;

(3) The proximity, quality, and current and future uses of nearby surface water and ground water;

(4) The potential effects of residual contamination on nearby surface water and ground water;

(5) An exposure assessment; and

(6) Any other information assembled in compliance with this subchapter.

(f) The public participation procedures set forth in section 11-281-80 apply to all corrective action plans submitted under this section.

(g) Upon approval of a corrective action plan, owners and operators must implement the plan, including any modifications to the plan made by the department.

(h) Owners and operators must monitor, evaluate, and report quarterly to the department the results of implementing the corrective action plan pursuant to this section and section 11-281-80.1.

(i) Owners and operators who have been requested by the department to submit a corrective action plan

may, in the interest of minimizing environmental contamination and promoting effective and timely cleanups, begin cleanup of contaminated soils, water, and materials before the plan is approved by the department provided that they:

(1) Notify the department of their intention to begin cleanup;

(2) Ensure that cleanup measures undertaken are consistent with the cleanup actions required pursuant to section 11-281-78;

(3) Comply with any conditions imposed by the department, including halting cleanup or mitigating adverse consequences from cleanup activities; and

(4) Incorporate self-initiated cleanup measures in the corrective action plan. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.66)

§11-281-80 Public participation for corrective action plans. (a) The department shall conduct public participation activities as outlined in subsections (e) through (j) where:

(1) A corrective action plan required pursuant to section 11-281-79(a) has been submitted and the department has made a tentative decision concerning the proposed plan; or

(2) Implementation of any previously approved corrective action plan has not achieved the cleanup levels established in the plan and termination of the plan is under consideration by the department.

(b) Costs for all public participation activities described in subsections (e) through (j) shall be borne by the owner and operator of the UST or UST system, including the costs of making copies of materials to the public under subsection (h).

(c) The department will provide notice to the public of the release and the applicable response by means designed to reach those members of the public directly affected by the release and the cleanup actions planned.

(d) Members of the public directly affected by

the release shall include the following:

(1) Those individuals defined in sections 11-281-78.1(a); and

(2) The general public.

(e) Notice to those individuals defined in paragraph (d)(1) shall be in the form of a letter from the department and shall include at least the following information:

(1) Name and address of the UST or UST system;

(2) Name and address of the owner and operator of the UST or UST system;

(3) Summary of the release information and the proposed or previously approved corrective action plan;

(4) The department's tentative decision concerning the proposed corrective action plan or concerning the termination of the previously approved corrective action plan;

(5) Announcement that an informational meeting will be held in accordance with subsection (i);

(6) Request for comments on the corrective action plan and the department's tentative decision; and

(7) Availability of information on the release and the department's tentative decision.

(f) Notice to those individuals defined in paragraph (d)(2) shall be in the form of a notice in a local newspaper and shall include at least the same information as in subsection (e).

(g) Comments shall be received by the department no later than thirty days after the notice provided in subsections (e) and (f) or after the end of the public meeting, if held, pursuant to subsection (i), whichever occurs later.

(h) Information on the release, the proposed corrective action plan, and the department's tentative decision on the plan shall be made available to the public for inspection upon request.

(i) Before approving a corrective action plan, the department may conduct a public meeting to provide information and receive comments on the proposed plan. A meeting will be held if there is sufficient public interest. Public interest shall be indicated by written request to the department.

(j) At the director's discretion, a notice of final decision may be issued. [Eff] (Auth: HRS §§342L-3, 342L-35) (Imp: 40 C.F.R. §280.67)

§11-281-80.1 Reporting and recordkeeping. (a) No later than ninety days following the confirmation of a release in accordance with section 11-281-63, owners and operators must submit to the department a written report of:

(1) All release response actions taken pursuant to this subchapter during the first ninety-day period (first quarter); and

(2) A plan for future release response actions to be taken.

(b) Beginning one hundred eighty days following confirmation of a release, owners and operators must submit written quarterly progress reports to the department describing:

(1) All response actions taken pursuant to this subchapter after the last reported date;

(2) A plan for future release response actions to be taken; and

(3) Information required pursuant to section 11-281-78.1.

(c) A quarterly progress report is not required if:

(1) Response actions have met the requirements of section 11-281-78; and

(2) A final quarterly report has been submitted.

NOTE: The report contents and format in the TGM may be helpful in complying with this section. [Eff] (Auth. HRS §§342L-3, 342L-35) (Imp: HRS §342L-35)

TABLE 1-1a.Tier 1 Action Levels for Soil and Groundwater: Rainfall < 200cm/year (6/99)

RAINFALL ≤200CM/YEAR				
Contaminant	DRINKING WATER SOURCE THREATENED		DRINKING WATER SOURCE NOT THREATENED	
	Groundwater (mg/l)	Soil (mg/kg):	Groundwater (mg/l)	Soil (mg/kg):
Benzene	0.005	0.05	1.7	1.7
Toluene	1.0	16	2.1	84
Ethylbenzene	(0.14)	0.50	0.14	0.50
Xylene	10	23	[10]	23
Benzo(a)pyrene	0.0002	1.0de	[0.0002]	1.0de
Acenaphthene	(0.32)	18sat	0.32	18sat
Fluoranthene	(0.013)	11sat	0.013	11sat
Naphthalene	0.24	41sat	0.77	41sat
PCE	0.005	0.29	0.145	5.0de
1,1 DCE	0.046	0.47de	3.2	0.47de
Vinyl Chloride	0.002	0.18de	[0.002]	0.18de
TCE	0.005	0.01	0.70	1.5
1,1,1 TCA	0.20	0.10	6.0	3.0
PCBs (all)	0.0005	1de	0.002	1de
Lead (total)	(0.0058)	400de	0.0058	400de
Cadmium (total)	0.005	38de	0.008	38de
TPH-residual fuels	NS	5,000	NS	5,000
TPH-middle distillates	NS	5,000	NS	5,000
TPH-gasolines	NS	2,000	NS	2,000

TABLE 1-1b.Tier 1 Action Levels for Soil and Groundwater: Rainfall > 200cm/year (6/99)

RAINFALL >200CM/YEAR				
Contaminant	DRINKING WATER SOURCE THREATENED		DRINKING WATER SOURCE NOT THREATENED	
	Groundwater (mg/l)	Soil (mg/kg):	Groundwater (mg/l)	Soil (mg/kg):
Benzene	0.005	0.05	1.7	0.68
Toluene	1.0	2.8	2.1	5.5
Ethylbenzene	(0.14)	0.13	0.14	0.13
Xylene	10	8	[10]	8
Benzo(a)pyrene	0.0002	1.0de	[0.0002]	1.0de
Acenaphthene	(0.32)	18sat	0.32	18sat
Fluoranthene	(0.013)	11sat	0.013	11sat
Naphthalene	0.24	41sat	0.77	41sat
PCE	0.005	0.04	0.145	1.1
1,1 DCE	0.046	0.47de	3.2	0.47de
Vinyl Chloride	0.002	0.18de	[0.002]	0.18de
TCE	0.005	0.004	0.70	0.58
1,1,1 TCA	0.20	0.08	6.0	1.9
PCBs (all)	0.0005	1de	0.002	1de
Lead (total)	(0.0058)	400de	0.0058	400de
Cadmium (total)	0.005	38de	0.008	38de
TPH-residual fuels	NS	5,000	NS	5,000
TPH-middle distillates	NS	5,000	NS	5,000
TPH-gasolines	NS	2,000	NS	2,000

TABLE 1-1 (cont.). Tier 1 Action Levels for soil and groundwater: Notes

ANNOTATIONS:

unmarked criteria: groundwater-protection concerns dominate
da: direct-exposure concerns dominate
sat: saturation concentration, groundwater-protection concerns dominate
(): Same as surface water; surface water standard more stringent than drinkingwater standard.
[]: Same as drinking water; surface water standards not set.
NS: no standard, no drinking water or surface water criteria set.
PCE: tetrachloroethylene, DCE: dichloroethylene, TCE: trichloroethylene, TCA: trichloroethane, PCBs: polychlorinated biphenyls, TPH: total petroleum hydrocarbons

NOTES:

1. Determination of groundwater utility should be determined based on the DOH policy *Determination of Groundwater Utility at Leaking Underground Storage Tank Sites (September 13, 1995)*. (HIDOH, 1995b)
2. TPH criteria as presented in *Reporting, Remediation, and Management of Petroleum-Contaminated Soil (December, 1995)*. (HIDOH, 1995d). Gasolines: characterized by a predominance of alkyl benzenes and straight-chain, branched, and cyclo- alkanes and alkenes with carbon ranges of C6 to C12. Middles distillates (e.g., kerosene, diesel fuel, home heating fuel, jet fuel, etc.): characterized by a predominance of straight-chain alkanes and polynuclear aromatic hydrocarbons with carbon ranges of C12 to C24. Residual fuels: characterized by long chain alkanes (carbon range >C24) and less predominent aromatics that include phenathrenes, benzopyrenes, and other poly-nuclear aromatic hydrocarbons.
3. The facility should contact DOH for further guidance when laboratory practical quantification limits exceed the recommended groundwater criteria.
4. Lowermost limit on soil action levels for benzene leachate concerns set at 0.05mg/kg based on field experience rather than adhering to SESOIL results. (See Chapter 1 of the TGM.)
5. Soil action levels set for leachate-impact concerns (SALs not annotated with "sat" or "da") assume depth to groundwater is two meters or less and assume no dilution of leachate in groundwater (i.e., Dilution Attenuation Factor (DAF) = 1. Not applicable to TPH criteria. See Chapter 2 and Table 1 in Appendix F of the TGM.).
6. Refer to Tier 2 discussion (Chapter 2 of the TGM) for guidance on adjustment of Tier 1 leachate-impact SALs with respect to depth to groundwater from the base of the impacted soil and site-specific DAFs.

GROUNDWATER-IMPACT MODEL (refer to the TGM)

Climate data: Standard rainfall models: Ahuimanu Loop station data adjusted to 200cm annual rainfall.

High rainfall models: Honomū Mauka station data adjusted to 400cm annual rainfall.

Geologic model: Sand or very permeable saprolite/soil overlying fractured, porous basalt.

DIRECT-EXPOSURE MODEL (refer to the TGM)

Assumes long-term residential exposure to impacted soil through inhalation, ingestion, and dermal absorption.

SUBCHAPTER 8

CLOSURE AND CHANGE-IN-SERVICE

§11-281-81 Temporary closure. (a) An UST or tank system is considered temporarily closed if owners and operators do not deposit regulated substance into the UST or tank system or dispense regulated substance from the UST or tank system during a time period of twelve months or less except as provided for in subsection (e).

(b) When an UST or tank system is temporarily closed, owners and operators must continue operation and maintenance of any corrosion protection system in accordance with section 11-281-42, and any release detection method in accordance with subchapter 5. However, release detection is not required as long as the UST or tank system is empty. The UST or tank system is empty when all materials have been removed using practices commonly recognized by the industry so that no more than 2.5 centimeters (one inch) of residue, or residue that is no more than 0.3 percent by weight of the total capacity of the UST or tank system, remains in the UST or tank system.

(c) Owners and operators must comply with subchapters 6 and 7 if a release is suspected or confirmed.

(d) When an UST or tank system is temporarily closed for three months or more, owners and operators must also comply with the following requirements:

(1) Leave vent lines open and functioning; and

(2) Cap and secure all other lines, pumps, manways, and ancillary equipment.

(e) When an UST or tank system is temporarily closed for more than twelve months, owners and operators must permanently close the UST or tank system if it does not meet the performance standards in sections 11-281-11 through 11-281-18 or the upgrading requirements in section 11-281-18, except that the spill and overfill equipment requirements do not have to be met. However, after December 22, 1998, an UST or tank system filled by transfers of more than twenty-five gallons at one time, must meet spill and overfill prevention equipment requirements and owners and

operators who fail to meet such requirements must permanently close the UST or tank system. Permanent closure must be conducted in accordance with sections 11-281-82 through 11-281-85, unless the department grants an extension of the twelve month temporary closure period. Owners and operators must complete a site assessment in accordance with section 11-281-83 before such an extension can be requested. [Eff] (Auth: HRS §§342L-3, 342L-37) (Imp: 40 C.F.R. §280.70)

§11-281-82 Permanent closure and change-in-service. (a) In permanently closing or changing the service of an UST or tank system, owners and operators must comply with the requirements of this section.

(b) At least thirty days before beginning either permanent closure or a change-in-service of an UST or tank system, owners and operators must notify the department in writing of their intent to permanently close or make the change-in-service, unless such action is in response to a confirmed release.

NOTE: A form such as that in the TGM may be helpful in fulfilling the notification requirements of subsection (b).

(c) At least seven days before a permanent closure or change-in-service action, owners or operators must notify the department of the exact date(s) that the activity will occur.

(d) To permanently close an UST or tank system, owners and operators must:

(1) Empty the UST and tank system by removing all liquid contents and accumulated sludges from the UST and tank system;
(2) Remove the UST or tank system from the ground, or leave the UST or tank system in-place and fill the UST or tank system with an inert solid material in accordance with local agency requirements; and
(3) Conduct a site assessment of the area beneath and around the UST or tank system in accordance with section 11-281-83.

(e) Continued use of an UST or tank system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must:

(1) Empty the UST and tank system by removing all liquid contents and accumulated sludges from the UST and tank system; and
(2) Conduct a site assessment of the area beneath and around the UST or tank system in accordance with section 11-281-83.

NOTE: The following cleaning and closure procedures may be helpful in complying with this section:

A. American Petroleum Institute Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks";
B. American Petroleum Institute Publication 2015, "Cleaning Petroleum Storage Tanks";
C. American Petroleum Institute Recommended Practice 1631, "Interior Lining of Underground Storage Tanks," may be used as guidance for compliance with this section; and
D. The National Institute for Occupational Safety and Health "Criteria for a Recommended Standard . . . Working in Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks. [Eff] (Auth: HRS §§342L-3, 342L-37) (Imp: 40 C.F.R. §280.71)

§11-281-83 Site assessment. (a) Owners and operators must perform a site assessment in permanently closing or changing the service of an UST or tank system.

(b) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release of regulated substance where contamination is most likely to be present at the UST or tank system site.

(c) In selecting sample types, sample locations,

and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the types of backfill and surrounding soil, the depth and flow of ground water, and other factors appropriate for identifying the presence of a release.

(d) If a release of regulated substance is discovered in carrying out the requirements of this section, or by any other means, owners and operators must respond to the release in accordance with the requirements of subchapter 7. [Eff] (Auth: HRS §§342L-3, 342L-37) (Imp: 40 C.F.R. §280.72)

§11-281-84 Previously-closed underground storage tanks or tank systems. (a) Owners and operators of USTs or tank systems which have been removed before December 22, 1988, or were left in-place but have not been in operation on or after December 22, 1988, must comply with the requirements of this subchapter, and subchapter 7, if contaminated soil, contaminated ground water, or free product as a vapor or liquid is discovered by any means in or around the location or former location of the UST or tank system.

(b) Upon discovery of contamination, owners and operators must comply with the suspected release response requirements of subchapter 6. [Eff] (Auth: HRS §§342L-3, 342L-37) (Imp: 40 C.F.R. §280.73)

§11-281-85 Closure records. (a) Owners and operators permanently closing or changing the service of an UST or tank system must submit to the department a revised written notification form pursuant to section 11-281-21 or submit a written notice pursuant to section 11-281-29(b), whichever is appropriate.

(b) Owners and operators must keep and maintain records in accordance with section 11-281-45(c)(5). These records must be capable of demonstrating compliance with the requirements of this subchapter.

(c) Records of compliance with permanent closure or change-in-service requirements, including the

results of the site assessment required in section 11-281-83, must be kept and maintained for at least three years after completion of permanent closure or change-in-service. These results must be kept and maintained in one of the following ways:

(1) By owners and operators who permanently closed or changed the service of the UST or tank system;

(2) By current owners and operators of the UST or tank system site; or

(3) By submitting these records to the department if they cannot be maintained at the facility or site. [Eff] (Auth: HRS §§342L-3, 342L-37) (Imp: 40 C.F.R. §280.74)

§§11-281-86 to 11-281-90 (Reserved)

SUBCHAPTER 9

FINANCIAL RESPONSIBILITY

§11-281-91 Applicability. (a) This subchapter applies to all owners and operators of petroleum USTs or tank systems except as otherwise provided in this section.

(b) (Reserved)

(c) State and federal government entities whose debts and liabilities are the debts and liabilities of the United States, the State of Hawaii, or any other state, are exempt from the requirements of this subchapter.

(d) The requirements of this subchapter do not apply to owners and operators of any UST or tank system described in section 11-281-01(b) or (c).

(e) If owners and operators of a petroleum UST or tank system are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in the event of noncompliance. [Eff] (Auth: HRS §§342L-3, 342L-36) (Imp: 40 C.F.R. §280.90)

Appendix II - **APPLICATION FOR AN UNDERGROUND STORAGE TANK PERMIT** Form No. II (6/99)

Solid and Hazardous Waste Branch, 919 Ala Moana Blvd., Room 212, Honolulu, Hawaii 96814

TYPE OF PERMIT APPLICATION (Check all that apply)

___ Installation and operation ($150) ___ Modification ($100 except for temporary & permanent closure)

STATE USE ONLY

Facility ID Number _____ Permit # _____
Date Received _____ Permit Fee _____
Date Entered into Computer _____ Date Paid _____
Receipt # _____

Comments:

Please type or print in ink all items except "signature" in sections XIV and XV. For tanks not requiring a permit submit Notification for Underground Storage Tanks (Form # I).

I. LOCATION OF TANKS(S)

Facility Name or Company Site identifiers, as applicable Contact Person at Location

Location Address (P.O. Box not acceptable Location Phone # (w/ area code) Fax # (w/ area code)

City State Zip Code Island Tax Map Key #

II. CONTACT PERSON IN CHARGE OF TANK(S)

Name Job Title Address

Phone # (with area code) Fax # (with area code)

III. OWNER OF TANK(S) (If same as Section I, check here ___)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Mailing Address

City State Zip Code Phone # (w/ area code) Fax # (w/ area code)

IV. OPERATOR OF TANK(S) (If same as Section I, check here ___)

Operator Name (Corporation, Individual, Public Agency, or Other Entity)

Mailing Address

City State Zip Code Phone # (w/ area code) Fax # (w/ area code)

V. CONTRACTOR

Company Name Contact Person

Mailing Address Phone # (w/ area code) Fax # (w/ area code)

City State Zip Code

VI. TYPE OF OWNER

___ Federal Government--Military ___ Federal Government--Non-Military ___ State Government
___ Local Government ___ Marketer ___ Non-Marketer

VII. TYPE OF FACILITY (Select the appropriate facility description)

___ Airline ___ Auto Dealership ___ Baseyard ___ Car Rental ___ Cleaner/Laundromat ___ Communication Sites
___ Contractor ___ Farm ___ Fire Station ___ Gas Station ___ Golf Course ___ Hospital ___ Petroleum Distributor
___ Police Station ___ Residential ___ Resort/Hotel ___ School ___ Service Centers/Auto Repair/Maintenance
___ Trucking/Transporter ___ Utilities ___ Wastewater Treatment Plants ___ Wholesaler/Retailer
___ Other (Explain) _____

VIII. FINANCIAL RESPONSIBILITY (Check all that apply)

___ Self Insurance ___ Commercial Insurance ___ Risk Retention Group ___ Guarantee ___ Surety Bond ___ Letter of Credit ___
Trust Fund ___ Exempt: State or Federal Agency ___ Other Method Allowed (Specify) _____

IX. DESCRIPTION OF TANK(S) (Complete for each at this location)

Tank Number	Tank No.__	Tank No.__	Tank No.__	Tank No.__	Tank No.__
1. Status of Tank (Mark only one)					
A. Currently in Use					
B. Temporarily Out of Use (Also complete Section X)					
C. Permanently Out of Use (Also complete Section X)					
D. Installed prior to _____ but not yet brought into use					
E. To be installed					
2. Proposed Date of Activity (Installation, Modification, Closure, etc.) (mo./day/year)					
3. Estimated Total Capacity (gallons)					
4. Substance Stored					
A. Gasoline					
B. Diesel					
C. Gasohol					
D. Kerosene					
E. Used Oil					
F. JP-4					
G. Non-Petroleum Hazardous Substance (CERCLA name and/or CAS #)					
H. Mixture of Substances, Please specify					
I. Other, Please specify					
5. Substance Compatible with Tank and Piping (Y/N)					
6. Tank (Mark all that apply)					
A. Primary Containment Material					
i. Fiberglass reinforced plastic (FRP)					
ii. Steel					
iii. Other, Please specify					
B. Secondary Containment Material					
i. Double walled					
a. FRP					
b. Steel					
c. Other, Please specify					
ii. Other secondary containment					
a. FRP					
b. Other, Please specify					
C. Corrosion Protection (except FRP tanks)					
i. Fiberglass coated steel					

ii. Double walled steel										
iii. Impressed current system										
iv. Sacrificial anode system										
v. Corrosion expert determination										
vi. Other, Please specify										
7. Piping (Mark all that apply)										
A. Primary Containment Material										
i. Rigid fiberglass										
ii. Flex piping										
iii. Other										
B. Type of Secondary Containment										
i. Lined trench										
ii. Rigid double walled piping										
iii. Flex double walled piping										
iv. Other										
C. Corrosion Protection (except FRP piping)										
i. Fiberglass coated steel										
ii. Impressed current system										
iii. Sacrificial anode system										
iv. Corrosion expert determination										
v. Other, Please specify										
8. Method of Product Dispensing										
A. Suction										
B. Safe Suction										
C. Pressure										
D. Not Applicable										
9. Spill and Overfill Prevention										
A. Overfill device installed										
i. Automatic shutoff device										
ii. Overfill alarm										
iii. Ball float valve										
B. Spill device installed										
10. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA
B. Tank tightness testing		NA		NA		NA		NA		NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring										

H. Statistical inventory reconciliation										
I. Automatic line leak detectors	NA		NA		NA		NA		NA	
J. Line tightness testing	NA		NA		NA		NA		NA	
K. Other method approved by the department. Please specify										
11. Tank or Pipe Repaired (Y/N)										
A. Date										
B. Description of repair										

X. TANK(S) OUT OF USE OR CHANGE IN SERVICE

Tank Number	Tank No. __	Tank No. __	Tank No. __	Tank No. __	Tank No. __
1. Closing of Tank A. Estimated date last used (mo./day/year)					
B. Estimated date tank closed (mo./day/year)					
C. Tank was removed from ground					
D. Tank was closed in ground					
E. Tank filled with inert material Describe					
F. Change in service					
2. Site Assessment Completed (Y/N)					
3. Evidence of a Leak Detected (Y/N)					

XI. FACILITY DRAWING

Include a drawing showing the general layout of the facility. This drawing should be no larger than 11 by 17 inches and preferably to scale. This drawing should show the following:

A. The property boundaries of the facility;
B. Identification of streets, roads and nearby bodies of water;
C. Identification of nearby facilities;
D. Tax Map Key (TMK) Numbers;
E. Location of buildings at the facility;
F. The approximate dimensions of the property boundaries and major buildings;
G. Location of all USTs (identified by number consistent with the tank numbers in Sections IX - X), dispenser pumps, and associated pipings; and
H. Indication of North/South direction.

XII. LOCATION MAP

Include a map showing the location of the facility with respect to nearby landmarks. The map should indicate roads and landmarks to a level of detail such that the site would be easily located.

XIII. NEW OR UPGRADED TANKS

Tank Number	Tank No. __	Tank No. __	Tank No. __	Tank No. __	Tank No. __
1. Tank A. Manufacturer/Model					
B. Underwriter Laboratory (UL) #					
C. Leak Detection Permanently Installed Equipment Manufacturer/Model					

2. Piping A. Primary containment i. Manufacturer/Model					
ii. Diameter in inches					
iii. UL #					
B. Secondary containment i. Manufacturer/Model					
ii. Diameter in inches					
iii. UL #					
C. Leak Detection Permanently Installed Equipment Manufacturer/Model					
D. Dispenser drip pan. Make/Model					
3. Tank Pump. Manufacturer/Model					
4. Risers A. Spill containment bucket i. Manufacturer/Model					
ii. Capacity in gallons					
B. Overfill device i. Mechanical. Make/model					
ii. Electronic. Make/model					

XIV. OPERATOR'S CERTIFICATION (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name of operator or operator's authorized representative (Print or Type) Official Title

Signature Date Signed

Status of Signatory (Mark as appropriate)–

1. Corporation: ___ principal executive officer
   ___ duly authorized representative
2. Partnership: ___ general partner
3. Sole proprietorship: ___ proprietor
4. Government entity: ___ principal executive officer
   ___ ranking elected official
   ___ duly authorized employee

XV. OWNER'S CERTIFICATION (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name of owner or owner's authorized representative (Print or Type) Official Title

Signature Date Signed

Status of Signatory (Mark as appropriate)–

1. Corporation: ___ principal executive officer
   ___ duly authorized representative
2. Partnership: ___ general partner
3. Sole proprietorship: ___ proprietor
4. Government entity: ___ principal executive officer
   ___ ranking elected official
   ___ duly authorized employee

APPENDIX III

CERTIFICATION OF UNDERGROUND STORAGE TANK INSTALLATION Form No. III (6/99)

Facility Name ID # Permit No.

Part I. CERTIFICATION OF COMPLIANCE FOR NEW AND MODIFIED TANKS (Complete for each at this location)

Tank Number	Tank No. __	Tank No. __	Tank No. __	Tank No. __	Tank No. __
1. Installation					
A. Installation certified by tank and piping manufacturers					
B. Installation inspected by a registered engineer					
C. Installation inspected and approved by the department					
D. Manufacturer's installation checklists have been completed and documented					
E. Another method allowed by the department. Please specify					

Part II. INSTALLER'S CERTIFICATION

I certify the information concerning installation that is provided in section I is true to the best of my belief and knowledge.

Installer Name Signature Date

Position Company

Part III. OPERATOR'S AND OWNER'S CERTIFICATION FOLLOWING INSTALLATION

Were any changes made to the original installation plans? _____ No _____ Yes - Complete and Submit Part IV

I have received the manufacturer's operations manual, the certification of performance on all permanently installed leak detection equipment (if applicable), and other documentation regarding the equipment that has been installed. Y/N (Operator) _____ OR Y/N (Owner) _____

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Operator's Name Operator's Signature

Owner's Name Owner's Signature

Part IV. CHANGES TO ORIGINAL INSTALLATION PLANS (Complete this Part only if changes were made to the original installation plans)

FINANCIAL RESPONSIBILITY (Check all that apply)
___ Self Insurance ___ Commercial Insurance ___ Risk Retention Group ___ Guarantee ___ Surety Bond ___ Letter of Credit ___ Trust Fund ___ Exempt: State or Federal Agency ___Other Method Allowed (Specify)

DESCRIPTION OF TANK(S) (Complete for each at this location)

Tank Number	Tank No.__	Tank No.__	Tank No.__	Tank No.__	Tank No.__
1. Status of Tank (Mark only one)					
A. Currently in Use					
B. Temporarily Out of Use (Also complete Section X)					
C. Permanently Out of Use (Also complete Section X)					
D. Installed prior to _____ but not yet brought into use					
E. To be installed					
2. Proposed Date of Activity (Installation, Modification, Closure, etc.) (mo./day/year)					
3. Estimated Total Capacity (gallons)					
4. Substance Stored					
A. Gasoline					
B. Diesel					
C. Gasohol					
D. Kerosene					
E. Used Oil					
F. JP-4					
G. Non-Petroleum Hazardous Substance (CERCLA name and/or CAS #)					
H. Mixture of Substances, Please specify					
I. Other, Please specify					
5. Substance Compatible with Tank and Piping (Y/N)					
6. Tank (Mark all that apply)					
A. Primary Containment Material					
i. Fiberglass reinforced plastic (FRP)					
ii. Steel					
iii. Other, Please specify					
B. Secondary Containment Material					
i. Double walled					
a. FRP					
b. Steel					
c. Other, Please specify					

ii. Other secondary containment										
a. FRP										
b. Other, Please specify										
C. Corrosion Protection (except FRP tanks)										
i. Fiberglass coated steel										
ii. Double walled steel										
iii. Impressed current system										
iv. Sacrificial anode system										
v. Corrosion expert determination										
vi. Other, Please specify										
7. Piping (Mark all that apply)										
A. Primary Containment Material										
i. Rigid fiberglass										
ii. Flex piping										
iii. Other										
B. Type of Secondary Containment										
i. Lined trench										
ii. Rigid double walled piping										
iii. Flex double walled piping										
iv. Other										
C. Corrosion Protection (except FRP piping)										
i. Fiberglass coated steel										
ii. Impressed current system										
iii. Sacrificial anode system										
iv. Corrosion expert determination										
v. Other, Please specify										
8. Method of Product Dispensing										
A. Suction										
B. Safe Suction										
C. Pressure										
D. Not Applicable										
9. Spill and Overfill Prevention										
A. Overfill device installed										
i. Automatic shutoff device										
ii. Overfill alarm										
iii. Ball float valve										
B. Spill device installed										
10. Release Detection (Mark all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
A. Manual tank gauging		NA		NA		NA		NA		NA

B. Tank tightness testing		NA		NA		NA		NA		NA
C. Inventory control		NA		NA		NA		NA		NA
D. Automatic tank gauging		NA		NA		NA		NA		NA
E. Vapor monitoring										
F. Groundwater monitoring										
G. Interstitial monitoring										
H. Statistical inventory reconciliation										
I. Automatic line leak detectors	NA		NA		NA		NA		NA	
J. Line tightness testing	NA		NA		NA		NA		NA	
K. Other method approved by the department. Please specify										
11. Tank or Pipe Repaired (Y/N)										
A. Date										
B. Description of repair										

FACILITY DRAWING

Include a drawing showing the general layout of the facility. This drawing should be no larger than 11 by 17 inches and preferably to scale. This drawing should show the following:

A. The property boundaries of the facility;
B. Identification of streets, roads and nearby bodies of water;
C. Identification of nearby facilities;
D. Tax Map Key (TMK) Numbers;
E. Location of buildings at the facility;
F. The approximate dimensions of the property boundaries and major buildings;
G. Location of all USTs (identified by number consistent with the tank numbers in Sections IX - X), dispenser pumps, and associated pipings; and
H. Indication of North/South direction.

NEW OR UPGRADED TANKS

Tank Number	Tank No. __	Tank No. __	Tank No. __	Tank No. __	Tank No. __
1. Tank A. Manufacturer/Model					
B. Underwriter Laboratory (UL) #					
C. Leak Detection Permanently Installed Equipment Manufacturer/Model					
2. Piping A. Primary containment i. Manufacturer/Model					
ii. Diameter in inches					
iii. UL #					
B. Secondary containment i. Manufacturer/Model					
ii. Diameter in inches					
iii. UL #					
C. Leak Detection Permanently Installed Equipment Manufacturer/Model					
D. Dispenser drip pan. Make/Model					
3. Tank Pump. Manufacturer/Model					

4. Risers A. Spill containment bucket i. Manufacturer/Model					
ii. Capacity in gallons					
B. Overfill device i. Mechanical. Make/model					
ii. Electronic. Make/model					

Appendix E

Portions of CFR Title 40, Part 112
(related to Spill Prevention Control and Countermeasures Plans)

AUTHORITY: 33 U.S.C. 1251 *et seq.*; 33 U.S.C. 2720; E.O. 12777 (October 18, 1991), 3 CFR, 1991 Comp., p. 351.

SOURCE: 38 FR 34165, Dec. 11, 1973, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to part 112 appear at 65 FR 40798, June 30, 2000.

§ 112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in section 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of § 112.6.

(d) This part does not apply to:

(1) Facilities, equipment or operations which are not subject to the jurisdiction of the Environmental Protection Agency, as follows:

(i) Onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of manmade features such as dikes, equipment or other structures which may serve to restrain, hinder, contain, or otherwise prevent a discharge of oil from reaching navigable waters of the United States or adjoining shorelines; and

(ii) Equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Those facilities which, although otherwise subject to the jurisdiction of the Environmental Protection Agency, meet both of the following requirements:

(i) The underground buried storage capacity of the facility is 42,000 gallons or less of oil, and

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

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with § 112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12657, Mar. 26, 1976]

§ 112.2 Definitions.

For the purposes of this part:

Adverse weather means the weather conditions that make it difficult for response equipment and personnel to cleanup or remove spilled oil, and that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height as specified in Appendix E to this part, as appropriate, ice conditions, temperatures, weather-related visibility, and currents within the area in which the systems or equipment are intended to function.

Animal fat means a non-petroleum oil, fat, or grease of animal, fish, or marine mammal origin.

Complex means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act.

Contract or other approved means: (1) A written contractual agreement with an oil spill removal organization(s) that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or

(2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or

(3) Active membership in a local or regional oil spill removal organization(s) that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic areas; and/or

(4) Other specific arrangements approved by the Regional Administrator upon request of the owner or operator.

Discharge includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term *discharge* shall not include any discharge of oil which is authorized by a permit issued pursuant to section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 *et seq.*, 33 U.S.C. 1251 *et seq.*).

Fish and wildlife and sensitive environments means areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats such as: aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.

Maximum extent practicable means the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non-transportation-related facilities in adverse weather. It considers the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in § 112.20 or in a specific plan approved by the Regional Administrator.

The term *navigable waters* of the United States means *navigable waters* as defined in section 502(7) of the FWPCA, and includes:

(1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) Interstate waters;

(3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.

Navigable waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Non-petroleum oil means oil of any kind that is not petroleum-based, including but not limited to: Fats, oils, and greases of animal, fish, or marine mammal origin; and vegetable oils, including oils from seeds, nuts, fruits, and kernels.

Offshore facility means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

Oil means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

Oil Spill Removal Organization means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Onshore facility means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

Owner or operator means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

Person includes an individual, firm, corporation, association, and a partnership.

Petroleum oil means petroleum in any form, including but not limited to crude oil, fuel oil, mineral oil, sludge, oil refuse, and refined products.

Regional Administrator, means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

Spill event means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR part 110.

Transportation-related and *non-transportation-related*, as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

Vegetable oil means a non-petroleum oil or fat of vegetable origin, including but not limited to oils and fats derived from plant seeds, nuts, fruits, and kernels.

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions as determined using the worksheets in Appendix D to this part.

[38 FR 34185, Dec. 11, 1973, as amended at 58 FR 45039, Aug. 25, 1993; 59 FR 34097, July 1, 1994; 65 FR 40798, June 30, 2000]

EFFECTIVE DATE NOTE: At 65 FR 40798, June 30, 2000, § 112.2 was amended by adding definitions for "Animal fat", "Non-petroleum oil", "Petroleum oil", and "Vegetable oil" in alphabetical order, effective July 31, 2000.

§ 112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in writing and in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with § 112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Owners or operators of onshore and offshore mobile or portable facilities, such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owners or operators of such facility need not prepare a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan may be a general plan, prepared in accordance with § 112.7, using good engineering practice. When the mobile or portable facility is moved, it must be located and installed using the spill prevention practices outlined in the SPCC Plan for the facility. No mobile or portable facility subject to this regulation shall operate unless the SPCC Plan has been implemented. The SPCC Plan shall only apply while the facility is in a fixed (non-transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with § 112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraph (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) *Extensions of time.* (1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraph (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f)(1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f)(2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of §112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of §112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12657, Mar. 26, 1976]

§112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with §112.3, whenever a facility subject to §112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to §112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is necessary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

[38 FR 34165, Dec. 11, 1973, as amended at 41 FR 12658, Mar. 26, 1976]

§112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to §112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with §112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shore lines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to §112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with §112.3(d).

§112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items

should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) Onshore facilities:

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil;

(ii) Curbing;

(iii) Culverting, gutters or other drainage systems;

(iv) Weirs, booms or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds;

(vii) Sorbent materials.

(2) Offshore facilities:

(i) Curbing, drip pans;

(ii) Sumps and collection systems.

(d) When it is determined that the installation of structures or equipment listed in § 112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under § 112.7(c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).* (i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraphs (e)(2)(iii)(B), (C) and (D) of this section before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever

techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).* (i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an inplant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR part 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct-vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).* (i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).* (i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore)*—(i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.* (A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under § 112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraphs (e)(2)(iii) (B), (C), and (D) of this section. Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.* (A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in § 112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).* (A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be examined often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore).* (i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore).* (i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and

sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage of surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such procedures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any well-head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shut-in valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).* (i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.* (i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

§ 112.20 Facility response plans.

(a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response plan to the Regional Administrator, according to the following provisions:

(1) For the owner or operator of a facility in operation on or before February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101–380, 33 U.S.C. 2701 *et seq.*) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.

(i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.

(ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.

(2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.

(i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.

(ii) For a newly constructed facility that commences operation after August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iii) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.

(3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.

(4) *Preparation and submission of response plans—Animal fat and vegetable oil facilities.* The owner or operator of any non-transportation-related facility that handles, stores, or transports animal fats and vegetable oils must prepare and submit a facility response plan as follows:

(i) *Facilities with approved plans.* The owner or operator of a facility with a facility response plan that has been approved under paragraph (c) of this section by July 31, 2000 need not prepare or submit a revised plan except as otherwise required by paragraphs (b), (c), or (d) of this section.

(ii) *Facilities with plans that have been submitted to the Regional Administrator.* Except for facilities with approved plans as provided in paragraph (a)(4)(i) of this section, the owner or operator of a facility that has submitted a response plan to the Regional Administrator prior to July 31, 2000 must review the plan to determine if it meets or exceeds the applicable provisions of this part. An owner or operator need not prepare or submit a new plan if the existing plan meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must prepare and submit a new plan by September 28, 2000.

(iii) *Newly regulated facilities.* The owner or operator of a newly constructed facility that commences operation after July 31, 2000 must prepare and submit a plan to the Regional Administrator in accordance with paragraph (a)(2)(ii) of this section. The plan must meet or exceed the applicable provisions of this part. The owner or operator of an existing facility that must prepare and submit a plan after July 31, 2000 as a result of a planned or unplanned change in facility characteristics that causes the facility to become regulated under paragraph (f)(1) of this section, must prepare and submit a plan to the Regional Administrator in accordance with paragraphs (a)(2)(iii) or (iv) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.

(iv) *Facilities amending existing plans.* The owner or operator of a facility submitting an amended plan in accordance with paragraph (d) of this section after July 31, 2000, including plans that had been previously approved, must also review the plan to determine if it meets or exceeds the applicable provisions of this part. If the plan does not meet or exceed the applicable provisions of this part, the owner or operator must revise and resubmit revised portions of an amended plan to the Regional Administrator in accordance with paragraph (d) of this section, as appropriate. The plan must meet or exceed the applicable provisions of this part.

(b)(1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Administrator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.

(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of the facility in writing and:

(1) Promptly review the facility response plan;

(2) Require amendments to any response plan that does not meet the requirements of this section;

(3) Approve any response plan that meets the requirements of this section; and

(4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.

(d)(1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

(i) A change in the facility's configuration that materially alters the information included in the response plan;

(ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;

(iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil described in paragraph (h)(5) of this section;

(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and

(v) Any other changes that materially affect the implementation of the response plan.

(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.

(3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.

(4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have the potential to cause significant and substantial harm to the environment.

(e) If the owner or operator of a facility determines pursuant to paragraph (e)(2) of this section that the facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B), or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

(f)(1) A facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (a)(2) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in Attachment C-1 to Appendix C to this part:

(i) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or

(ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

(A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;

(B) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act;

(C) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake; or

(D) The facility has had a reportable oil discharge in an amount greater than or equal to 10,000 gallons within the last 5 years.

(2)(i) To determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the Regional Administrator shall consider the following:

(A) Type of transfer operation;

(B) Oil storage capacity;

(C) Lack of secondary containment;

(D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;

(E) Proximity to drinking water intakes;

(F) Spill history; and

(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.

(ii) Any person, including a member of the public or any representative from a Federal, State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.

(3) To determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

(i) Frequency of past discharges;

(ii) Proximity to navigable waters;

(iii) Age of oil storage tanks; and

(iv) Other facility-specific and Region-specific information, including local impacts on public health.

(g)(1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans prepared pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.

(3) The owner or operator shall review and update the facility response plan periodically to reflect changes at the facility.

(h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless an equivalent response plan has been prepared to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs

(h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in Appendix F to this part:

(i) *Emergency response action plan.* The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:

(i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;

(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;

(iii) A description of information to pass to response personnel in the event of a reportable discharge;

(iv) A description of the facility's response equipment and its location;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of discharged oil; and

(viii) A diagram of the facility.

(2) *Facility information.* The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.

(3) *Information about emergency response.* The response plan shall include:

(i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);

(ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;

(iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

(iv) A description of information to pass to response personnel in the event of a reportable discharge;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;

(vii) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(viii) A diagram of evacuation routes; and

(ix) A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:

(A) Activate internal alarms and hazard communication systems to notify all facility personnel;

(B) Notify all response personnel, as needed;

(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;

(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;

(E) Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;

(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);

(G) Assess and implement prompt removal actions to contain and remove the substance released;

(H) Coordinate rescue and response actions as previously arranged with all response personnel;

(I) Use authority to immediately access company funding to initiate cleanup activities; and

(J) Direct cleanup activities until properly relieved of this responsibility.

(4) *Hazard evaluation.* The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(5) *Response planning levels.* The response plan shall include discussion of specific planning scenarios for:

(i) A worst case discharge, as calculated using the appropriate worksheet in Appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;

(ii) A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and

(iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.

(6) *Discharge detection systems.* The response plan shall describe the procedures and equipment used to detect discharges.

(7) *Plan implementation.* The response plan shall describe:

(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;

(ii) A description of the equipment to be used for each scenario;

(iii) Plans to dispose of contaminated cleanup materials; and

(iv) Measures to provide adequate containment and drainage of discharged oil.

(8) *Self-inspection, drills/exercises, and response training.* The response plan shall include:

(i) A checklist and record of inspections for tanks, secondary containment, and response equipment;

(ii) A description of the drill/exercise program to be carried out under the response plan as described in § 112.21;

(iii) A description of the training program to be carried out under the response plan as described in § 112.21; and

(iv) Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.

(9) *Diagrams.* The response plan shall include site plan and drainage plan diagrams.

(10) *Security systems.* The response plan shall include a description of facility security systems.

(11) *Response plan cover sheet.* The response plan shall include a completed response plan cover sheet provided in Section 2.0 of Appendix F to this part.

(f)(1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(3) After a request for reconsideration under paragraph (f)(1) or (f)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.

[59 FR 34098, July 1, 1994, as amended at 65 FR 40798, June 30, 2000]

EFFECTIVE DATE NOTE: At 65 FR 40798, June 30, 2000, § 112.20 was amended by adding paragraph (a)(4); by revising the phrase "section 10" to read "section 13" in the second sentence of paragraph (f)(1)(ii)(B); by revising the word "spills" to read "discharges" in paragraph (f)(3)(i); and by revising the words "spill" and "spilled" to read "discharge" and "discharged", respectively, wherever they appear in paragraph (h), effective July 31, 2000.

§ 112.21 Facility response training and drills/exercises.

(a) The owner or operator of any facility required to prepare a facility response plan under § 112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in § 112.20(h)(8).

(b) The facility owner or operator shall develop a facility response training program to train those personnel

Appendix F

The Hawai'i Guide to Alternatives & Disposal of Household Hazardous Wastes: Automobile

Hawaii DOH Fact Sheet on Used Lead Acid Battery Management

EPA's Fact Sheet for Generators and Transporters of Hazardous Waste

EPA Form 8700-12 "Notification of Regulated Waste Activity"

Portions of HAR §11-262 Hazardous Waste Management;
Standards Applicable to Generators of Hazardous Waste

Portions of HAR §11-263 Hazardous Waste Management;
Standards Applicable to Transporters of Hazardous Waste

THE HAWAI'I GUIDE TO ALTERNATIVES & DISPOSAL OF HOUSEHOLD HAZARDOUS WASTES

State of Hawai'i
Department of Health
Environmental Health Administration

AUTOMOBILE

Used Motor Oil

Problem: Used motor oil may contain toxins. Disposing of motor oil on the ground, into storm drains, sewers, streams, septic tanks or cesspools, can cause contamination of drinking water and the ocean. Used oil has been found to cause cancer in laboratory animals. Keep your hands clean by wearing gloves.

Maintenance: Fix your car's oil leak! People who would never pour oil down a storm drain allow their cars to leak oil onto the street. When it rains, the oil is quickly transported into storm drains. Have your oil changed professionally; then it will be recycled and you won't have to worry about it!

Alternatives:

** Buy re-refined, recycled oil. Ask your auto supply shop to carry recycled motor oil. This will improve the market for waste oil and recycling opportunities, and will help decrease reliance on virgin oil products. Re-refined motor oil is high quality and will match the performance of virgin motor oil. Be advised, however, that many new car warranties do not cover the use of re-refined oil.

Disposal: Never dispose of used oil on the ground, in your rubbish, in storm drains, sewers, septic tanks, streams, or cesspools! You may take used oil to some gas stations or oil recyclers. When going to a recycler, transport used oil by placing it in a clean plastic milk bottle or similar container. Never mix other products with the oil because it makes recycling very difficult. To dispose of used oil in the rubbish, solidify it by pouring it into a plastic or plastic-lined container with enough kitty-litter, sawdust, or shredded newspaper to fully absorb the oil (an Oil-Eater™ box, available at most drug, grocery, and auto supply stores, also works). After oil is fully absorbed, put the container into the garbage.

Air Conditioners

Problem: If your car's air conditioning system needs a Freon recharge, the system is leaking and needs to be repaired immediately: you are contributing to the depletion of the earth's ozone layer! Find a garage that is certified to operate Freon recovery equipment and that uses certified equipment. To prevent leaking systems, use your air conditioning regularly. If you do not, the seals become brittle and may break.

Alternatives:

*** All 1995 model cars sold in the United States should be equipped with non-ozone depleting air conditioning systems.

* Older models may be retrofitted; the customer should weigh the cost of repairing an old system, upgrading it to a non-Freon system or doing away with air conditioning in the car.

Disposal: You should not have to dispose of Freon. See **pages 5-6** for more information about household hazardous waste collections.

Antifreeze

Problem: Highly toxic ethylene glycol, the main ingredient in antifreeze, has a sweet smell and taste that is attractive to children and pets. A small amount can poison a person. Clean up spills immediately and never leave antifreeze in open, unattended containers. Pouring antifreeze down storm drains delivers the ethylene glycol and metal particles, including lead from your radiator, into streams and the ocean. Remember to store antifreeze in a well-ventilated area away from children and pets.

Disposal: Never pour antifreeze down sewers, into septic systems, cesspools, streams, storm drains, or on the ground. Avoid creating puddles of antifreeze since animals and children could be poisoned by this liquid. Drain used antifreeze into an oil change pan (be sure oil residue is wiped out!). Collect two gallons from your radiator plus two additional gallons of flush water. This will capture most of the metal particles toxic to fish. Contact your local gas station to see if they will accept your used antifreeze for recycling. See **pages 5-6** for more information about household hazardous waste collections. If you can't recycle it, absorb the antifreeze. Pour antifreeze into a plastic or plastic-lined container with enough kitty litter, sawdust, or shredded newspaper to fully absorb the liquid (an Oil-Eater™ box, available at most drug, grocery, and auto supply stores, also works). After antifreeze is fully absorbed, put the container into the garbage.

Car Wash

Problem: Chemicals in soaps and detergents used to wash cars are toxic to fish and other marine life. If the dirty, soapy water from your car wash goes into storm drains or streams it can kill some marine animals.

Alternatives:

*** Take your car to a commercial car wash. Their wastewater either goes to a wastewater treatment plant or is recycled at the car wash.

*** Use only water to wash your car; detergent can damage the paint.

** Use a soap that biodegrades quickly, or a dry wash product.

** Create your own cleaning mixture with 2 tablespoons of mild dish detergent or 1/4 cup soap flakes in 2 gallons of warm water.

** For chrome polish: apply a paste of baking soda and water with a sponge. Let the paste set for a few minutes, then rinse and wipe dry with a soft cloth.

Disposal: Never allow soapy wash water to go down storm drains. If you wash your car near a storm drain, use only water. Wash your car in the yard so that the water goes into the soil. This way, the soap may be filtered by the soil and biodegrade, and the lawn will get watered!

Degreasers

Problem: Auto part degreasers are usually made of solvents that evaporate quickly. The fumes are often toxic and flammable. Use these products outside or in a well-ventilated area with a fan and open windows. Always wear gloves to keep hands clean, and consider use of a respirator.

Other safety tips: Never smoke while using degreasers. Never use gasoline to clean auto parts; evaporating gas contributes to air pollution and is highly flammable.

Alternatives:

*** Use citrus-based degreasers and hand cleaners. (Test product on your skin before using; some people react to citrus-based products.) Avoid products that contain methylene chloride which is known to cause cancer in laboratory animals.

*** Rub greasy hands with baby oil, clean off with a dry cloth, then wash with soap and water.

*** Steam clean your engine at a car wash equipped with coin-operated equipment.

*** D99 by Tiodize™ is a good degreaser that won't harm the environment.

*** Rather than degreasers to absorb grease and oil spills on concrete floors, sprinkle cornmeal, sawdust, fuller's earth (can be purchased at drugstores and building supply centers), or kitty litter; allow to sit for several hours, then sweep into a plastic bag and place in rubbish.

Disposal: Never dispose of degreasers down the sewer or storm drains. Use up the product or see if your local service station, auto shop class, or neighbor can use up the product. See **page 6** for information on household hazardous waste collections.

Oil Filters

Problem: Used oil filters contain some waste oil. The oil may drain out and cause environmental contamination when disposed of in landfills.

Alternatives:

*** Purchase a permanent oil filter.

Disposal: Some local service stations recycle oil filters. If you can't find one that does, drain filters into the used oil pan for 24 hours and place filter in a plastic bag and put in the rubbish.

Gasoline

Problem: Gasoline is flammable and toxic, and can be one of the most dangerous products found in the house. If children sniff gasoline, they could develop lung and central nervous system damage. Avoid breathing gas fumes, and never use gasoline to clean auto parts or hands.

Storage: If you must store gas, use only containers designed for this and leave a couple of

inches for vapor expansion. Store the container in a secure, well-ventilated area, away from potential sources of heat, sparks or flame. Keep out of reach of children. If left over sox months, gas can go stale and should not be used in engines.

Alternatives:

Car:

*** Sell your car! Watch for new developments in electrical and solar-powered cars. (Two companies in Hawai'i may soon produce these cars for commercial use!)

*** Walk, bike, car pool, or use public transit.

** Drive a fuel-efficient car and keep it tuned. Plan vehicle trips efficiently ("cold engine" starts really pollute).

** Modify your engine to use propane, methanol, natural gas, or electricity. They run cleaner than gasoline.

Gasoline Powered Mowers:

*** Buy a manual mower. There are no fuel costs, no pollution, and you get exercise!

* Only put in as much gas as you will need on a given job.

Disposal: Never pour gasoline onto ground, into storm drains, sewers, or streams. Use up gasoline or give it to someone who will. See **pages 5-6** for information on household hazardous waste collections.

Windshield Washer Solution

Problem: Commercial products contain alcohol to prevent freezing, and a detergent. The alcohol contributes to air pollution and is poisonous. In our mild climate, the alcohol is not necessary.

Maintenance: Never use a vinegar mixture. It may damage the windshield washer pump.

Alternatives:

*** Use plain water, or water with a touch of liquid soap.

* Use a solution of 3:1 (water:fluid) of the average ready-to-use commercial windshield washer solution.

Disposal: Use it up or give it to someone else who can. If you must, pour fluid into an Oil Eater™ box or pour into a container with enough kitty-litter or other material to absorb all the liquid, then dispose of in the rubbish.

Automotive Batteries

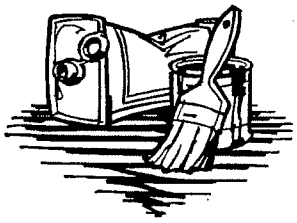
Problem: Automotive batteries, also known as lead-acid batteries, contain sulfuric acid and lead, both of which are highly toxic. Lead can contaminate groundwater, and acid can severely burn skin and cause blindness. Be careful not to spill or drain the fluid from the battery. Improperly disposing of batteries contaminates soil with lead. Children who play in lead-contaminated soil may have serious brain and central nervous system damage.

Adults may experience kidney damage, peripheral nervous system damage, anemia, and stomach pain.

Maintenance: Use a paste of baking soda and water to clean away corrosion; after reconnecting the clamps to the terminals, coat with petroleum jelly to prevent future corrosion.

Disposal: It is illegal to dispose of automotive batteries in the rubbish. Trade in your old battery when purchasing a new one, or turn it in to a local retailer or recycler. Anyone who sells batteries in Hawai'i is required to take your old battery when you buy a new one. See **pages 5-6** for information on household hazardous waste collections.

PAINT PRODUCTS



Paint

Problem: Most household paints are either water-based (latex) or oil-based. Oil-based paints contain solvents that are flammable and can harm marine life if they get into the ocean. The labels of oil-based paints will say, "combustible - keep away from heat and flame," "clean up with mineral spirits," "contains petroleum distillate," or "harmful or fatal if swallowed." Latex paints are safer and require only water for clean-up. When planning a painting project, get help in estimating the amount of paint you will need to avoid having leftover paint.

Safety: Especially when using oil-based paints, paint in a well-ventilated area, or paint outside. The fumes from oil-base paints are toxic and flammable.

Alternatives:

*** Buy only as much paint as you need for a job. Patronize stores that will give you expert help. Many paint stores will take back unopened cans of standard colors (custom colors may not be returned.)

*** Choose water-based (latex) paints.

*** Use whitewash for fences and house foundations. Recipe for whitewash for wood, glass, or metal surfaces: Dissolve 15 pounds of salt or 5 pounds of dry calcium chloride in 5 gallons of water. In a separate container soak 50 pounds of hydrated lime in 6 gallons of water. Combine the mixtures, stir and thin with water until it is the consistency of whole milk. Yields 10 gallons (proportions can be reduced.)

Disposal: Never pour paint down the sewer, storm drains, into streams, on the ground, or into the rubbish. If you have leftover paint, find a local theater group, school, or friend to use it up. Suggestion: list on HIMEX (see **page 5**).

Latex: If you can't give it away or use it up, paint latex on cardboard or let small amounts (less than I pint) evaporate outdoors. When the paint is hard, wrap the container in

newspaper and dispose of in the rubbish.

Oil-based: If you can't give it away or use up, see **pages 5-6** for more information on household hazardous waste collections. If no program is available, you may solidify small amounts of oil-based paints. Solidify paint by pouring it into a plastic or plastic-lined container with enough kitty-litter, sawdust, or shredded newspaper to fully absorb the paint (an Oil-Eater box, available at most drug, grocery, and auto supply stores, also works). After paint is fully absorbed, put the container into the rubbish.

Paint Thinners

Problems: Paint thinners are necessary when you use oil-based paints. Turpentine and mineral spirits are commonly used in thinning and cleaning up paints and varnishes. Both are flammable and toxic, although mineral spirits are less toxic. Wear a respirator with organic vapor cartridges, goggles, and heavy rubber or nitrile gloves. Use paint thinners in well-ventilated areas, and take plenty of fresh air breaks. If it gets onto skin, wash off immediately with soap and water. Store thinners in well-ventilated area, away from sources of ignition and children and pets.

Alternatives:

*** Use latex paints instead of oil-based paints; they require only water for clean up. Avoid using oil-based paints that require solvent thinners for thinning and clean up.

** Buy environmentally safer thinners like AFM™, Livos™ and Bio Shield™.

Disposal: Never dispose of paint thinner into the sewer, storm drains, streams, on the ground, or into the rubbish. If you have leftover paint thinner, recycle it (see below) or find a local theater group, school, or friend to use it up. See **page 5** for list on HIMEX. If you cannot recycle it, give it away, or use it up. See **page 6** for information about household hazardous waste collections.

Recycling: Recycle dirty paint thinner for reuse by pouring it into a clearly labeled container with a tight seal. Store for several months until the paint sludge settles on the bottom. Carefully pour the clean solvent off the top or pour through cheesecloth; this solvent can be reused. Solidify the paint sludge by putting it into a plastic or plastic-lined container with enough kitty-litter, sawdust, or shredded newspaper to fully absorb the sludge. After sludge is fully absorbed, put the container into the rubbish.

Chemical Paint Strippers

Problem: Solvents used to strip paint may cause serious health effects if they come into contact with the skin or eyes or are inhaled. The most dangerous solvents are halogenated, and are often found in paint strippers, spot removers, and degreasers. Avoid strippers containing methylene chloride, trichlorethylene (TCE), benzene, 1,1,1-trichloroethylene (TCA), xylene, or toluene.

Never eat or drink around solvents. The fumes can be absorbed by food or utensils and

you may ingest them. Never smoke when using solvents, and never use them near sources of ignition (some, not all, may be flammable). Read the label carefully, and follow all precautions. Use heave rubber or nitrile gloves, goggles, and a respirator with organic vapor cartridges. Work in well-ventilated areas or outside when possible. Don's use solvents on hot muggy days.

Alternatives:

** Use water-soluble paint strippers; they contain less-hazardous ingredients.

Disposal: Never dispose of strippers into the sewer, storm drains, streams, on the ground or into the rubbish. If you have leftover paint stripper, find a local theater group, school, or friend to use it up. See list on HIMEX **(page 5)** or **page 6** for information on household hazardous waste collections.

On Oahu: If the stripper is lye based, and you are connected to the public sewer system, you may flush it down your drain with plenty of water. If it is not lye based, see **pages 5-6** for more information about household hazardous waste collections.

All islands except Oahu: If you have a non-halogenated stripper (does not contain any ingredients with 'chlor' in the name), you may solidify small amounts (less than I cup) by pouring it into a plastic or plastic-lined container with enough kitty-litter, sawdust, or shredded newspaper to fully absorb the stripper. After paint-stripper is fully absorbed, put the container into the rubbish. For other paint strippers, store until a household hazardous waste collection is available.

Lead-Based Paints

Problem: Homes built before 1978 are likely to have surfaces painted with lead-based paint. If paint chips or is stripped from these surfaces, you and your family can be exposed to lead. The dust and chips from lead-based paint are dangerous when swallowed or inhaled. Lead is especially dangerous to small children and pregnant women. Hire a professional to remove any lead-based paint from your home. For more information on health effects call the Hawaii Department of Health, Lead Surveillance Program at: (808) **733-9027**. For more information on removal of lead-based paint call the Indoor Air Quality Section at **586-5800**.

Alternatives: (Lead-based paints are no longer available for use for household painting.)

** Rather than stripping old lead-based paint, use sealants and apply to old paint and cracks to contain the lead.

Spray Paints

Problem: Spray paints are contained in aerosol cans. These are pressurized containers that contain paint and propellants (usually petroleum distillates). Aerosols are easily inhaled since the particles are very small. Ozone depleting propellants are no longer used in aerosol products, but many aerosol propellants contribute to air pollution. In laboratory

studies, some propellants have been found to harm the heart and central nervous system. Aerosol cans are hazardous until they are completely empty, so it is best to use up the product. Never heat aerosol cans; they can explode with the force of a bomb. Never smoke while using aerosols.

Alternatives:

*** Use a paint brush.
** Use a manual spray paint gun.

Disposal: Use up all of the product as intended or give to someone who will. If you must dispose of a partially used can, discharge the contents into a deep cardboard box outdoors, allow to dry, and discard. Empty aerosol cans can be disposed in the rubbish.

Wood Preservatives

Problem: Wood preservatives generally combine a solvent and a pesticide. These mixtures are highly toxic and some are flammable. Do not use old products that contain pentachlorophenol (PCP), creosote, tributyltin oxide, chromated copper arsenate, or folpet. Do not burn wood treated with wood preservatives because it releases toxic chemicals into the air.

Alternatives:

*** Water-based preservatives that seal wood and protect it from water rot and insects are available.
*** Use types of wood, like cedar, that are naturally resistant to insects and wood rot.
*** Use wood substitutes, like plastic lumber, in areas where insects and wood rot are problems.
** Use a water sealer or polyurethane to prevent wood rot.
* Buy pressure-treated lumber (preservatives have already been applied). This eliminates the need to handle wood preservatives and reduces exposure to hazardous chemicals.

Disposal: Never dispose of wood preservatives in the sewer, storm drain, stream, on the ground, or in the rubbish. Use up the product as intended or give to someone who can. See **pages 5-6** for more information about household hazardous waste collections.

Wood Stains & Finishes

Problem: Wood stains and finishes are usually oil-based, but water-based products are now available. Oil-based stains contain solvents that are flammable and can harm marine life if they get into the ocean. The labels of oil-based stains will say, "combustible - keep away from heat and flame," "clean up with mineral spirits," "contains petroleum distillate," or "harmful or fatal if swallowed." Water-based stains are safer and require only water for clean up. When planning a staining or finishing project, get help in estimating the amount of product you will need to avoid leftover material.

FACT SHEET

USED LEAD ACID BATTERY MANAGEMENT

State of Hawaii Law

Chapter 342I, HRS prohibits disposal of lead acid batteries in household rubbish, in landfills, or discarded on public and private properties, grounds, or waters. Instead, these batteries must be delivered to battery retailers/wholesalers, or to collection or recycling facilities permitted by the Department of Health.

The law also states that No lead acid battery retailer or wholesaler, or authorized collection or recycling facility, shall accept for disposal any lead acid batteries that have had their electrolyte removed, unless cracks in the battery shell due to aging or accident are in evidence to indicate passive leaking of the electrolyte." Batteries that have had their electrolyte removed are to be disposed as hazardous waste.

Problems from Improper Lead Acid Battery Management

Spent lead acid batteries contain two toxic substances: lead compounds and the acid. When released into the environment, these substances can contaminate air, water, and soil. Lead can be taken up by animals and plants, and eventually find its way into the food stream and drinking water supply. When ingested or contacted by humans, lead and acid can cause both short-term and long-term health damage.

Lead: Lead and lead compounds within the batteries are considered hazardous to human health. The health effects for lead once in the body can cause various brain and kidney complications for both children and adults (ATSDR, 1990).

Acid: Vehicle batteries also contain sulfuric acid, a highly corrosive substance, which can cause severe burns. The acid may also contain dissolved lead.

NOTE: Those who turn in used vehicle batteries for recycling do not need to obtain a solid waste permit, nor report their actions to the Department of Health. However, if batteries or electrolytes are disposed of improperly, the dumpers are subject to penalties and liabilities allowable under state solid waste and/or hazardous waste regulations.

How to Manage Lead Acid Batteries

For Residents, Private Businesses and Government Agencies:
State law prohibits disposal of any lead acid battery. Do not dispose it with household refuse, discard them on unattended properties, or dump it at landfills. Take them to battery retailers/ wholesalers, or battery collection or recycling facilities permitted by the Department of Health.

Lead acid battery retailers/wholesalers are required to accept used lead acid batteries from customers. Many will accept used automotive batteries at no charge without the need to purchase a new one.

Also, take used automotive batteries to a collector or recycler who is permitted under HRS, Chapter 342H by the Department of Health. These authorized battery collection and/or recycling facilities usually charge a nominal fee.

(Residents only) Hold batteries for the next county-wide household hazardous waste (HHW) collection event. Contact your county Solid Waste Division or Recycling Office for details.

For Retailers and Wholesalers:
State law requires lead acid battery retailers/wholesalers to accept used lead acid batteries from customers for recycling. Retailers/wholesalers must accept an amount of used car batteries at least equal to the number of new batteries purchased at the point of sale. Some battery retailers/wholesalers do not accept used lead acid batteries from customers who do not also purchase a new battery.

Written notices must be posted at the point of sale, stating that the battery retailer/wholesaler accepts or takes back lead acid batteries for recovery purposes. Contact the Department of Health, Office of Solid Waste Management at (808) 586-4240 to obtain additional copies of written notices for posting.

Any price advertisements for lead acid batteries must include the statement The price includes disposal of your old battery." It is improper to give customers a discount by deducting disposal costs from the price of a new battery. It is also improper to charge customers an additional fee(s) for disposal of their old battery, or batteries.

Recordkeeping is required for retailers/wholesalers who accept more than five used batteries per day. The minimum recordkeeping requirements are stated in Chapter 342I, HRS. These records may be inspected by the Department staff.

To minimize potential health risks from prolonged accumulation and storage of used batteries, battery wholesalers who accept used batteries in transfer from battery retailers have a time period of ninety (90) days to remove batteries from the retail points of collection.

Used batteries accumulated by battery retailers/wholesalers shall be delivered either to permitted collection facilities, to secondary lead smelters permitted by the United States Environmental Protection Agency, or to hazardous waste recycling facilities permitted by the Department of Health that can neutralize the liquid electrolyte. Facilities that neutralize the liquid electrolyte then deliver the batteries to secondary lead smelters.

For more information, contact the Department of Health, Office of Solid Waste Management, 919 Ala Moana Boulevard, Room 212, Honolulu, Hawaii 96814. Phone: (808) 586-4240. Fax: (808) 586-7509.

Reference: United States. Dept. of Health and Human Services. Agency for Toxic Substances and Disease Registry. Public Health Statement: Lead. Washington: ATSDR, 1990.

Text-Only Version

HOME

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Generate and Transport Waste

What Are Hazardous Waste Generators and Transporters?

Generators are individuals that produce hazardous waste, usually as a result of an industrial process. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. For the regulations about identifying hazardous waste, see 40 CFR 261 [Adobe Acrobat PDF File].

Hazardous waste may be transported to another location to be treated, stored or disposed, or may be managed at the place of generation. When waste is to be transported off-site, the generator prepares a shipping document called a manifest. This tracking form must accompany the waste to its final destination, and is used to track the waste from "cradle-to-grave." For additional information see The Hazardous Waste Manifest.

Regulatory definitions for generators and transporters can be found at 40 CFR 260.10 [Adobe Acrobat PDF File].

Are All Hazardous Waste Generators Regulated in the Same Way?

No, hazardous waste generators are divided into three categories, based on the amount of waste produced, and are subject to different levels of regulation. The three types of hazardous generators are: (Please note that the following provides only brief generator definitions. For more detailed information, refer to the links under each generator type.)

1. Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. For more information about CESQGs, see the CESQG Rule page.
2. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. For more information on SQGs, see Understanding the Hazardous Waste Regulations, a Handbook for Small Businesses.
3. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. For more information on LQG requirements, see Hazardous Waste Requirements for Large Quantity Generators

What Are the Requirements for Hazardous Waste Generators?

- Requirements for CESQGs (Conditionally Exempt Small Quantity Generators) includes: (see also 40 CFR 261.5 [Adobe Acrobat PDF File]).
  - CESQGs must identify all the hazardous waste they generate
  - CESQGs must not accumulate more than 1000 kg of hazardous waste at any time
  - CESQGs must ensure that their hazardous waste is delivered to someone who is authorized to manage their waste.
- Requirements for SQGs (Small Quantity Generators) and LQGs (Large Quantity Generators) include: (see also 40 CFR 262 [Adobe Acrobat PDF File]).
  - Obtaining an EPA identification number (contact state environmental office for number)
  - Handling wastes properly before shipment (packaging, labeling, marking, placarding, accumulation time, etc.)
  - Complying with the manifest system
  - Recordkeeping and reporting requirements
- Some states may have additional requirements for generators. You should contact your state environmental office if you are not familiar with the requirements that may apply to you.

What Are the Requirements for Hazardous Waste Transporters?

Requirements for transporters include: (see also 40 CFR 263 [Adobe Acrobat PDF File]).

- Obtaining an EPA identification number
- Complying with the manifest system
- Responding appropriately to hazardous waste discharges
- Complying with both the RCRA requirements (40 CFR Part 263) & DOT regulations (49 CFR Part 171-179) EXIT EPA

Some states may have additional requirements for generators. You should contact your state environmental office if you are not familiar with the requirements that may apply to you.

The Hazardous Waste Manifest

The Uniform Hazardous Waste Manifest (the manifest) is a form used to track the movement of hazardous waste from the point of generation to the point of ultimate disposition ("cradle to grave"). (For information regarding the manifest requirements, see 40 CFR part 262, subpart B [Adobe Acrobat PDF File]).
RCRA manifests include information such as:

- name and address of the generator, transporter, and the destination facility
- U.S. DOT description of the waste being transported and any associated hazards
- waste quantity
- name and phone number of a contact in case of an emergency
- other information required either by EPA or the state

Visit the "Manifest Automation Pilot" subpage to further explain the manifest system.

Facts & Figures for Nonhazardous and Hazardous Waste Generators and Transporters>
(from the Municipal Solid Waste Characterization Report, 1996 Edition, and the 1995 RCRA Biennial Report)

- In 1996 a total of 209.7 million tons of MSW was generated. This reflects a decrease of nearly 2 million tons from 1995, when MSW generation was 211.5 million tons. Of the MSW generated, 57.3 million tons (27.3 percent) were recovered by recycling or composting, 36.1 million tons (17.2 percent) were combusted at high tempratures, and 116.3 million tons (55.5 percent) were landfilled.
- The per capita generation rate in 1996 was 4.3 pounds per person per day, compared to 4.4 pounds per person per day in 1995.
- The per capita discard rate (after recovery for recycling, including composting) was 3.2 pounds per person per day in 1996, down from 3.3 pounds per person per day in 1995.
- Recycling (including composting) recovered 27 percent (57 million tons) of MSW in 1996, up from 26 percent (55 million tons) in 1995.
- There were nearly 9,000 curbside recycling programs in the United States in 1996, as well as more than 10,000 drop-off centers for recyclables. About 360 materials recovery facilities helped process the recyclables collected. More than 3,000 yard trimmings composting programs were reported.
- Recovery of paper and paperboard reached 41 percent (33 million tons) in 1996, accounting for more than half of the total MSW recovered. In addition, nearly 11 million tons of yard trimmings were recovered for composting in 1996, accounting for the second largest fraction of total recovery. The percentage of yard trimmings composted (38 percent) has more than doubled since 1992.
- Landfills managed 55 percent of MSW generated (116 million tons), down from 57 percent in 1995. Combustion facilities managed 17 percent (36 million tons) of total MSW generated, about the same as in 1995.
- In 1995, 20,873 LQGs produced 214 million tons of hazardous waste regulated by RCRA. This is a decrease of 3,489 LQGs and a decrease of 44 million tons of waste compared to 1993. The five (5) States whose LQGs generated the largest amount of hazardous

waste were Texas (69 million tons), Tennessee (39 million tons), Louisiana (17 million tons), Michigan (13 million tons), and Illinois (13 million tons). Together, the LQGs in these States accounted for 70% of the national total waste generated.
- In 1995, wastewater generation accounted for 95% of the national generation total, while in 1993, wastewater generation accounted for 92% percent of the national generation total.
- Overall, total hazardous waste generation decreased from 258 million tons in 1993 to 214 million tons in 1995. Wastewater generation decreased from 237 million tons in 1993 to 202 million tons in 1995, and non-wastewater generation decreased from 22 million tons in 1993 to over 11 million tons in 1995.

Other Documents Related to Hazardous Waste Generators and Transporters

- Understanding the Hazardous Waste Rules: A Handbook for Small Business
- RCRIS RCRA Regulated Handlers
- BRS Biennial RCRA Hazardous Waste Report (1993)
- 1995 RCRA Biennial Report
- Control of Transfrontier Movements of Wastes destined for Recovery Operations, OECD Council Decision Implementation Final Rule (October 12, 1998)

Municipal Solid (Nonhazardous) Waste Generation and Transport Information

- Municipal Solid Waste Factbook - Reference manual about household waste management practices.
- Municipal Solid Waste Characterization Report, 1996 Edition
- Municipal Solid Waste Characterization Report, 1995 Edition
- Decision Makers Guide to Solid Waste Management
- Flow Control and Municipal Solid Waste - a review of the legal provisions that allow state and local governments to designate the places where municipal solid waste is taken for processing.
- Pay As You Throw: Unit Pricing - residents pay for household waste directly based on the amount of waste they generate.
- Full Cost Accounting for Municipal Solid Waste - a primer for managing the economics of solid waste.

Get Acrobat Reader * Some of the documents provided by EPA are in an Adobe Acrobat PDF (Portable Document Format) file. They can be viewed, and printed, with the use of an Adobe Acrobat Reader. The Adobe Acrobat's Reader is available, free, for Unix,

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...n Approved, OMB No. 2050-0028 Expires 12/31/02
GSA No. 0246-EPA-OT

Notification of Regulated Waste Activity

EPA United States Environmental Protection Agency

Date Received (For Official Use Only)

I. Installation's EPA ID Number (Mark X in the appropriate box)

A. Initial Notification | B. Subsequent Notification (Complete item C) | C. Installation's EPA ID Number

II. Name of Installation (Legal, company, and specific site name)

III. Location of Installation (Physical address; not P.O. Box or Route Number)

Street

Street (continued)

City or Town | State | Zip Code

County Code | County Name

IV. Installation Mailing Address (See instructions)

Street or P.O. Box

City or Town | State | Zip Code

V. Installation Contact (Person to be contacted regarding waste activity at site)

Name (Last) | (First)

Job Title | Phone Number (Area Code and Number)

VI. Installation Contact Address (See instructions)

A. Contact Address (Location / Mailing) | B. Street or P.O. Box

City or Town | State | Zip Code

VII. Ownership (See instructions)

A. Name of Installation's Legal Owner

Street, P.O. Box, or Route Number

City or Town | State | Zip Code

B. Phone Number (Area Code and Number) | B. Land Type | C. Owner Type | D. Change of Owner Indicator (Yes / No) | E. Date Changed (Month / Day / Year)

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I.D. For Official Use Only

VIII. Type Of Regulated Waste Activity (Mark 'X' in the appropriate boxes. Refer to instructions.)

A. Hazardous Waste Activities

1. Generator. See instructions.
   - [ ] a. Greater than 1,000 kg/mo (2,200 lbs.)
   - [ ] b. 100 to 1,000 kg/mo (220-2,200 lbs.)
   - [ ] c. Less than 100 kg/mo (220 lbs.)
2. Transporter. Indicate Mode in boxes 1-5 below.
   - [ ] a. For own waste only
   - [ ] b. For commercial purposes

Mode of Transportation
- [ ] 1. Air
- [ ] 2. Rail
- [ ] 3. Highway
- [ ] 4. Water
- [ ] 5. Other - specify: _____

3. Treator, Storer, Disposer (TSD) Installation. Note: A permit is required for this activity. See instructions.
4. Exempt Boiler and/or Industrial Furnace
   - [ ] a. Smelting, Melting, and Refining Furnace Exemption
   - [ ] b. Small Quantity On-Site Burner Exemption
5. Underground Injection Control

B. Universal Waste Activity

- [ ] Large Quantity Handler of Universal Waste

C. Used Oil Management Activities

1. Used Oil Transporter/Transfer Facility. Indicate type(s) of Activity(ies).
   - [ ] a. Transporter
   - [ ] b. Transfer Facility
2. Used Oil Processor/Re-refiner. Indicate Type(s) of Activity(ies).
   - [ ] a. Processor
   - [ ] b. Re-refiner
3. [ ] a. Off-Specification Used Oil Burner
4. Used Oil Fuel Marketer
   - [ ] a. Marketer Who Directs Shipment of Off-Specification Used Oil to Used Oil Burner
   - [ ] b. Marketer Who First Claims the Used Oil Meets the Specifications

IX. Description Of Hazardous Wastes (Use additional sheets if necessary)

A. Listed Hazardous Wastes. (See 40 CFR 261.31 - 33) See instructions if you need to list more than 12 waste codes.

1	2	3	4	5	6
7	**8**	**9**	**10**	**11**	**12**

B. Characteristics of Nonlisted Hazardous Wastes. (Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. See 40 CFR Part 261.20 - 261.24. See instructions if you need to list more than 4 toxicity characteristic waste codes.)

1. Ignitable (D001)	2. Corrosive (D002)	3. Reactive (D003)	4. Toxicity Characteristic	(List specific EPA hazardous waste number(s) for the toxicity characteristic contaminant(s)) 1	2	3	4

C. Other Wastes. (State regulated or other wastes requiring a handler to have an I.D. number. See instructions.)

1	2	3	4	5	6

X. Certification

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

Signature	Name and Official Title *(Type or print)*	Date Signed

XI. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (See Section V of the booklet for addresses.)

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IX. Description of Hazardous Wastes (Continued, Additional Sheet)

A. Listed Hazardous Wastes (See 40 CFR 261.31) Use this page only if you need to list more than 12 waste codes.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96

B. Toxicity Characteristic Hazardous Wastes (See 40 CFR 261.24) Use this page only if you need to list more than 4 waste codes.

5	6	7	8	9	10
11	12	13	14	15	16
17	18	19	20	21	22

United States
Environmental Protection
Agency

Office of Solid Waste
(5301)
Washington, DC 20460

December 1999

Solid Waste

EPA

Notification of Regulated Waste Activity

United States Environmental Protection Agency Washington, D.C. 20460

Notification of Regulated Waste Activity Forms and Instructions

This booklet is designed to help you determine if you are subject to requirements under the *Resource Conservation and Recovery Act* (RCRA) for notifying the U.S. Environmental Protection Agency (EPA) of your regulated waste activities. Regulated wastes are hazardous wastes as defined by 40 CFR Part 261, universal wastes as defined by 40 CFR Part 273, and used oil as defined by 40 CFR Part 279. The instructions contained in this booklet will assist you in obtaining an EPA Identification Number by completing and submitting EPA Form 8700-12 for initial notifications, or in revising your EPA Form 8700-12 if you are required to submit a subsequent notification. RCRA is a Federal law. If you are regulated but do not comply with the RCRA notification requirements, you may be subject to civil penalties.

Large Quantity Handlers of Universal Waste and Used Oil Handlers have the option of submitting either EPA Form 8700-12 or a letter to notify EPA of their regulated waste activities, including both initial and subsequent notifications. As noted above, the instructions in this booklet refer only to completing and submitting EPA Form 8700-12 (also referred to as the notification form). However, the circumstances under which these handlers must notify EPA of their regulated waste activities, the data they must provide, and the procedures they must follow, as described in this booklet, apply to submitting both EPA Form 8700-12 and a letter.

Note: Although this booklet contains information and instructions for completing a Notification of Regulated Waste Activity, it should not be considered a substitute for the regulations in Title 40 of the Code of Federal Regulations (40 CFR). Rather, this booklet serves as a supplement to the regulations and provides additional information not contained in 40 CFR. As

a handler of regulated wastes, you are responsible for learning and complying with all the requirements that apply to you and your regulated waste activities.

In addition, remember that this booklet and the regulations in 40 CFR address only the Federal hazardous waste program. Many States may have notification requirements that differ from the Federal requirements; those States may use EPA Form 8700-12 or they may use a similar State form that requires information not requested in the EPA form. Again, it is your responsibility to make sure that you have completed and submitted all forms required under the Federal or your State program.

We know that the regulations can be confusing. We are not providing reprints of the 40 CFR regulations with this booklet. However, copies of the federal regulations are readily available from several sources (see below). In addition, in Section IV of these instructions, we have listed the addresses and phone numbers of the contacts in each State who can answer your questions and help you understand the Federal and State requirements that apply to you (see Table 1). In addition, Table 2 in Section IV contains the addresses and phone numbers of contacts in each of the EPA Regional offices.

In addition to those contacts, the following sources are available to help with your questions and provide information on EPA regulations:

A. RCRA, Superfund, and EPCRA Hotline -- 1-800-424-9346
(In the Washington, D.C. area, call (703) 412-9810)

B. EPA Small Business Ombudsman Hotline -- 1-800-368-5888

C. The EPA Web Site at:
www.epa.gov/docs/epacfr40/chapt-I.info/subch-I/

D. Your Trade Association

Initial Notifications

If you do not currently have an EPA Identification Number and you handle regulated waste, you must submit an initial notification. Please refer to information contained in Sections I through III of this booklet to help you determine whether you handle a regulated waste, whether any exemptions or exclusions apply to you, and how you should file EPA Form 8700-12. Circumstances under which you should submit an initial notification include:

1. If you generate, transport, treat, store, or dispose of hazardous wastes. Refer to Section I for further information and a description of exclusions or exemptions; or

2. If you store recyclable materials. (Recyclable materials are defined as hazardous wastes that are recycled.) The recycling process itself is exempt from regulation, but facilities that store recyclable materials prior to recycling them must notify EPA and obtain an EPA Identification Number. Refer to Section I for further information and a description of exemptions; or

3. If you are a large quantity handler of universal waste. Refer to Section II for further information and a description of exemptions. (Notification is required for people who have not previously notified EPA of their hazardous waste activities or who have not already sent a notification to EPA as required by 40 CFR Part 165); or

4. If you transport, process, re-refine, burn, or market off-specification used oil for energy recovery. Refer to Section III for further information and for a description of exemptions. (Notification is required for people who have not previously notified EPA of their hazardous waste activities or have not notified under 40 CFR Part 266, Subpart E, which was replaced by 40 CFR Part 279.)

Subsequent Notifications

Even if you have submitted an initial notification and have received an EPA Identification Number, you may be required to submit a subsequent notification. Please refer to Sections I through III and V of this booklet for information on when and how to complete a subsequent notification. In general, you should submit a subsequent notification under the following circumstances:

1. If your installation moves to another location; or
2. If your installation contact changes; or
3. If the ownership of your installation changes; or
4. If an additional owner has been added or replaced since the installation's initial notification; or
5. If the type of regulated waste activity you conduct changes.

Contents of This Booklet

Following is a list of the sections contained in this booklet and the information covered in those sections.

Section I. How to Determine if You Must Notify EPA of Your Hazardous Waste Activities

Section II. How to Determine if You Must Notify EPA of Your Universal Waste Handling Activities

Section III. How to Determine if You Must Notify EPA of Your Used Oil Management Activities

Section IV. How to File EPA Form 8700-12, "Notification of Regulated Waste Activity" (Information on How and Where to File Your Form; Plus a List of State Contacts Where You Can Get Information, Obtain Forms, and Send Your Completed Forms)

Section V. Line-by-Line Instructions for Completing EPA Form 8700-12 (EPA Form 8700-12 is provided at the end of this booklet.)

Section VI. Definitions (to Help You Understand and Complete EPA Form 8700-12)

Section VII. EPA Hazardous Waste Numbers for Waste Streams Commonly Generated by Small Quantity Generators

Appendix 1: Typical Hazardous Waste Streams Produced by Small Quantity Generators

Appendix 2: Typical Hazardous Waste Streams and EPA Hazardous Waste Numbers

After your completed notification is received, you will be sent a written acknowledgment that will include your EPA Identification Number. You must use this number on all communications with EPA regarding your regulated waste activities.

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I. How to Determine if You Must Notify EPA of Your Hazardous Waste Activities

All persons who generate, transport, treat, store, or dispose of hazardous waste and all persons who store recyclable materials prior to recycling them are required to notify EPA (or their State agency if the State is authorized to operate its own hazardous waste program) of their hazardous waste activities. These persons must obtain an EPA Identification Number unless their solid waste has been excluded from regulation or their hazardous waste has been exempted as outlined below. These respective notification requirements are found in 40 CFR Parts 262, 263, 264, 265, and 266.

In addition to the discussion below, you will need to refer to 40 CFR Part 261 to help you determine if the waste you handle is both a solid waste and a hazardous waste that is regulated under RCRA. If you need help making this determination after reading these instructions, contact the addressee listed for your State in Section IV.C. of these instructions.

To determine if you handle a solid waste that is also a hazardous waste and regulated under RCRA, ask yourself the following questions:

A. Do I Handle a Solid Waste?

40 CFR 261.2 defines "solid waste" as any discarded material that is not excluded under Section 261.4(a) or that is not excluded by variance granted under Sections 260.30 and 260.31. A discarded material is any material which is:

1. Abandoned, as explained in §261.2(b); or
2. Recycled, as explained in §261.2(c); or
3. Considered inherently waste-like as explained in §261.2(d); or
4. A military munition identified as a solid waste in 40 CFR 266.202.

If you do not handle a solid waste, you do not need to notify EPA.

B. Has My Solid Waste Been Excluded from the Regulations under Section 261.4?

The list of general exclusions can be found in 40 CFR 261.4. If the solid waste that you handle has been excluded, either by rule or special variance, then you do not need to notify EPA for that solid waste. If your solid waste was not excluded from regulation, you need to determine if it is a hazardous waste that EPA regulates. EPA regulates a solid waste as hazardous waste in two ways:

1. By specifically listing the solid waste as a hazardous waste and assigning it a unique EPA Hazardous Waste Code Number; or

2. By regulating it because it possesses any of four hazardous waste characteristics and assigning it a generic EPA Hazardous Waste Code Number.

C. Is My Solid Waste Specifically Listed as a Hazardous Waste?

Sections 261.30 through 261.33 of 40 CFR identify certain solid wastes that EPA has specifically listed as hazardous. Persons who handle listed hazardous waste are subject to regulation and must notify EPA of their hazardous waste activities unless they are exempted as discussed below. Refer to these sections of 40 CFR to see if your solid waste is included as a "listed hazardous waste." If you are handling a newly regulated hazardous waste and have already notified EPA prior to that hazardous waste being regulated **and already have an EPA Identification Number,** you do not need to submit a subsequent notification for that newly regulated hazardous waste.

D. Does My Solid Waste Possess a Hazardous Characteristic?

Even if your solid waste is not specifically listed as a hazardous waste, it may still be hazardous because it exhibits certain hazardous characteristics. These characteristics are:

1. Ignitability;
2. Corrosivity;
3. Reactivity; and
4. Toxicity.

Sections 261.20 through 261.24 of 40 CFR explain each of the characteristics and outline the testing procedures you should use to determine if your solid waste meets these characteristics. Persons who handle characteristic hazardous waste that is regulated must notify EPA of their activities unless they are exempted, as discussed below. If you are handling a newly regulated hazardous waste and have already notified EPA prior to that hazardous waste being regulated **and already have an EPA Identification Number,** you do not need to submit a subsequent notification for that newly regulated hazardous waste.

E. Has My Hazardous Waste Been Exempted from the Regulations under Section 261.5 and 261.6(a)(3)?

Sections 261.5 and 261.6(a)(3) of 40 CFR list certain hazardous wastes that are not subject to RCRA regulation. If the hazardous waste that you handle has been exempted, then you do not need to notify EPA for that hazardous waste.

II. How to Determine If You Must Notify EPA of Your Universal Waste Handling Activities

Under 40 CFR Part 273, Subpart C, Large Quantity Handlers of Universal Waste who accumulate a total of 5,000 kilograms or more of universal wastes at any time are required to notify EPA (or their State agency if the State is authorized to operate its own universal waste program) of their universal waste activities and obtain an EPA Identification Number, unless they have previously notified EPA of their hazardous waste activities. In addition, Large Quantity Handlers of Universal Waste who have already sent a notification to EPA as required by 40 CFR Part 165 are not required to notify EPA of their universal waste activities for recalled universal waste pesticides. Large Quantity Handlers of Universal Waste must notify EPA of their universal waste activities and obtain an EPA Identification Number before meeting or exceeding the 5,000 kilogram storage limit.

Small Quantity Handlers of Universal Waste are exempt from these notification requirements.

Note: Please refer to the regulations in 40 CFR Part 273 to ensure that you are aware of all the requirements that apply to your universal waste handling activities.

III. How to Determine if You Must Notify EPA of Your Used Oil Management Activities

Under 40 CFR Part 279, Subparts E, F, G, and H, respectively, persons who transport used oil; process or re-refine used oil; burn off-specification used oil for energy recovery; or market used oil fuel, are required to notify EPA (or their State agency if the State is authorized to operate its own used oil program) and obtain an EPA Identification Number, unless they are exempt as outlined below. Off-specification used oil may be burned for energy recovery in an industrial furnace, boiler, or hazardous waste incinerator subject to regulation under Subpart O of 40 CFR Part 264 or 265.

Used oil transporters; used oil processors/re-refiners; off-specification used oil burners; and used oil fuel marketers who have not previously notified EPA of their hazardous waste activities or notified under 40 CFR Part 266, Subpart E (replaced by 40 CFR Part 279) must notify EPA to identify their used oil management activities.

Note: Please refer to the regulations in 40 CFR Part 279 to ensure that you are aware of all the requirements that apply to your used oil management activities.

Who is exempt from used oil notification requirements?

1. **Persons who burn on-specification used oil fuel:** Used oil that is to be burned for energy recovery and that meets the specification provided under 40 CFR 279.11 is exempt from the regulations. **However, the person who first claims that the used oil meets the specification is subject to notification as a used oil fuel marketer and certain other requirements (see 40 CFR Part 279, Subpart H).** The burner of fuel that meets the specification at 40 CFR 279.11 is not required to notify.
2. **Used oil generators** are not required to notify EPA.
3. **Used oil generators operating used oil-fired space heaters:** Persons who burn only used oil that they generate (or used oil received from household do-it-yourself used oil changers) in used oil-fired space heaters are exempt from the notification requirement provided that the device is vented to the outdoors and the device is not designed to have a capacity greater than 0.5 million BTU/hour.

IV. How to File EPA Form 8700-12, "Notification of Regulated Waste Activity"

Initial Notifications

If you do not currently have an EPA Identification Number and you handle a regulated waste, you must submit an initial notification for your regulated waste activities. Please refer to Sections I through III of this booklet for more information on whether you must notify EPA of these regulated waste activities. You can satisfy this initial notification requirement by completing and signing the enclosed EPA Form 8700-12 and mailing it to the appropriate address listed in Part C of this section.

Per the Hazardous Waste Import Regulations, 40 CFR 262.60, *foreign generators should not apply for an EPA Identification Number.* These regulations state that when filling out a U.S. manifest, you must include the name and address of the foreign generator, and the name, address, and EPA Identification Number of the importer. Please contact the U.S. firms involved with your shipments and determine which firm will serve as the importer.

Subsequent Notifications

Even if you have submitted an initial notification and have received an EPA Identification Number, you may be required to submit a subsequent notification. Please refer to information contained in Sections I through III and Section V of this booklet for instructions on when and how to complete a subsequent notification. In general, you can comply with this subsequent notification requirement by completing specific parts of and signing the enclosed EPA Form 8700-12 and mailing it to the appropriate address in Part C of this section.

A. How Many Forms Should I File?

A person who is subject to the hazardous waste, universal waste and/or used oil management regulations under RCRA should submit one notification per installation. If you conduct hazardous waste, universal waste, and/or used oil management activities at more than one installation, you must submit a separate notification for each installation.

If you only transport regulated wastes and do not generate, treat, store, or dispose of hazardous wastes; qualify as a large quantity handler of universal wastes; or process/re-refine used oil, burn off-specification used oil fuel, or market used oil fuel, you may submit one notification that covers all transportation activities your company conducts. This notification should be sent to the appropriate address (listed in Part C) that serves the State where your company has its headquarters or principal place of business. However, if you are a transporter who also engages in one or more of the regulated waste activities listed above, you must complete and submit a separate notification to cover each installation.

B. Can I Request that this Information Be Kept Confidential?

All information you submit in an initial or subsequent notification can be released to the public, according to the Freedom of Information Act, unless it is determined to be confidential by EPA pursuant to 40 CFR Part 2. Since notification information is very general, EPA believes it is unlikely that any information in your notification could qualify to be protected from release. However, you may make a claim of confidentiality by printing the word "CONFIDENTIAL" on both sides of EPA Form 8700-12 and on any attachments. EPA will take action on the confidentiality claims in accordance with 40 CFR Part 2.

C. Where Should I Send My Completed Form?

Listed alphabetically in Table 1 are the addresses and phone numbers of the proper contacts in each State where you can get additional information and more forms, and where you should mail your completed forms. As shown in Table 1, EPA and many States have arranged for the States to answer your questions and receive completed forms. In a few instances, the workload is shared between EPA and the State, or handled by EPA alone; this workload sharing is indicated on Table 1. For your convenience, Table 2 lists the addresses and phone numbers for EPA Regional contacts; however, you should refer to Table 1 first. *To avoid delay and confusion, follow the directions in Table 1 for your State very carefully.*

Table 1 (continued)

Connecticut
Obtain information or forms from, and mail completed forms to:
Department of Environmental Protection
Bureau of Waste Management
Waste Engineering and Enforcement Division
79 Elm Street
Hartford, Connecticut 06106-5127
(860) 424-3372

Delaware
Obtain information or forms from, and mail completed forms to:
Delaware Department of Natural Resources and Environmental Control
Solid and Hazardous Waste Management Branch
Attn: Tracy Hamburg
89 Kings Highway
Dover, Delaware 19901
(302) 739-3689

District of Columbia
Obtain information or forms from, and mail completed forms to:
Department of Health
Environmental Health Administration
Attn: Mark Hughes
51 N Street, N.E., Third Floor
Washington, D.C. 20002
(202) 535-2285

Florida
Obtain information or forms from, and mail completed forms to:
Hazardous Waste Regulation Section
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(904) 488-0300

Georgia
Obtain information or forms from, and mail completed forms to:
Hazardous Waste Branch
Environmental Protection Division
Georgia Department of Natural Resources
Floyd Towers East, Room 1154
205 Butler Street, S.E.
Atlanta, Georgia 30334
(404) 656-7802

Guam
Obtain information from and mail completed forms to:
Guam Environmental Protection Agency
P.O. Box 22439-GMF
(Calibration Lab Building)
Barrigada, Guam 96921
Obtain forms from:
U.S. EPA Region 9
RCRA Notifications
75 Hawthorne Street, WST-6-Tetratech
San Francisco, California 94105
(415) 495-8895

Hawaii
Obtain information or forms from, and mail completed forms to:
U.S. EPA Region 9
RCRA Notifications
75 Hawthorne Street, WST-6-Tetratech
San Francisco, California 94105
(415) 495-8895

Idaho
Obtain information or forms from, and mail completed forms to:
Idaho Department of Health and Welfare
Division of Environmental Quality
State Waste Management and Remediation Program
Hazardous Waste Notifications
1410 N. Hilton Street
Boise, Idaho 83706
(208) 373-0210

Table 2
U.S. EPA Regional Contacts for the RCRA Notification Form

U.S. EPA Region 1
Office of Ecosystem Protection
Hazardous Waste Program Unit
One Congress Street, Suite 1100
Boston, MA 02114-2023
(617) 918-1640
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

U.S. EPA Region 2
Division of Environmental Planning and Protection
RCRA Programs Branch
290 Broadway Street, 22nd Floor
New York, NY 10007-1866
(212) 637-4106
New Jersey, New York, Puerto Rico, Virgin Islands

U.S. EPA Region 3
Waste and Chemicals Management Division, 3WC11, 1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-3413
Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

U.S. EPA Region 4
Hazardous Waste Management Division
RCRA Permitting Section
61 Forsyth Street
Atlanta, GA 30303
(404) 562-8440
Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

U.S. EPA Region 5
RCRA Activities
77 West Jackson Boulevard
P.O. Box A3587
Chicago, IL 60690
(312) 886-4001
Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

U.S. EPA Region 6
Multimedia Planning and Permitting Division (6PD-I)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733
(214) 665-6750
Arkansas, Louisiana, New Mexico, Oklahoma, Texas

U.S. EPA Region 7
Air, RCRA, and Toxics Division
RCRA Enforcement and State Programs Branch (ARTD/RESP)
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7126
Iowa, Kansas, Missouri, Nebraska

U.S. EPA Region 8
Office of Partnerships and Regulatory Assistance
999 18th Street, Suite 500
Denver, CO 80202-2466
(303) 312-6319
Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

U.S. EPA Region 9
RCRA Notifications
75 Hawthorne Street, WST-6-Tetratech
San Francisco, CA 94105
(415) 495-8895
Arizona, California, Hawaii, Nevada, American Samoa, Guam, Northern Mariana Islands

U.S. EPA Region 10
Office of Waste and Chemicals Management, WCM-126
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-2859
From within Alaska, toll-free:
(800) 550-7272
Alaska, Idaho, Oregon, Washington

V. Line-by-Line Instructions for Completing EPA Form 8700-12

Initial Notification

All persons submitting an initial notification must complete Items I through X in their entirety.

Subsequent Notification

All persons submitting a subsequent notification must complete Items I, II, IV, VI, VII, IX, and X in their entirety. Whether you must complete Items III, V, and VIII depends on the circumstances under which you are required to submit a subsequent notification.

General Instructions

Type or print in black ink all items except Item X, "Signature," leaving a blank box between words. The boxes are spaced at 1/4" intervals which accommodate elite type (12 characters per inch). When typing, hit the space bar twice between characters. If you print, place each character in a box. Abbreviate if necessary to stay within the number of boxes allowed for each item. If you must use additional sheets, indicate clearly the number of the item on EPA Form 8700-12 to which the information on the separate sheet applies.

Item I – Installation's EPA ID Number:

Place an "X" in the appropriate box to indicate whether this is your initial or a subsequent notification *for this installation in this location.* Leave the EPA Identification Number blank if this is your initial notification *for this installation.* If this is a subsequent notification, enter the EPA Identification Number assigned to this installation in the boxes provided.

Items II and III – Name and Location of Installation:

Complete Items II and III. Please note that the address you give for Item III, Location of Installation, must be a physical address, *not a post office box or route number.*

County Code and Name: Give the county code, if known. If you do not know the county code, enter the county name, from which EPA can automatically generate the county code. If the county name is unknown, contact the local Post Office. To obtain a list of county codes, contact the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161 or at (703) 487-4650.. The list of codes is contained in the Federal Information Processing Standards Publication (FIPS PUB) number 6-3.

***Note:** A subsequent notification is required when the location of the installation changes.*

Item IV – Installation Mailing Address:

Please enter the Installation Mailing Address. If the Mailing Address and the Location of Installation (Item IV) are the same, you can print "Same" in the box for Item IV.

Item V – Installation Contact:

Enter the name, title, and business telephone number of the person who should be contacted regarding information submitted in this notification.

***Note:** A subsequent notification is required when the installation contact changes.*

Item VI – Installation Contact Address:

A. **Code:** If the contact address is the same as the location of installation address listed in Item IV or the installation mailing address listed in Item IV, place an "X" in the appropriate box to indicate where the contact may be reached. If the location of installation address, the installation mailing address, and the installation contact address are all the same, mark the "Location" box. If the contact address is *not* the same as those addresses in either Item III or IV, place an "X" in the "Other" box and complete Item VI.B. If an "X" is entered in either the location or mailing box, Item VI.B. should be left blank.

B. **Address:** Enter the contact address *only* if the contact address is different from either the location of installation address (Item IV) or

the installation mailing address (Item IV), and if Item VI.A. was marked "Other."

Item VII - Ownership:

A. **Name:** Enter the name of the legal owner(s) of the installation, including the property owner. Also enter the address and phone number where this individual can be reached. Use the comment section in XI or additional sheets if necessary to list more than one owner.

B. **Land Type:** Using the codes listed below, indicate in VII.B. the code which *best describes* the current legal status of the land on which the installation is located:

F = Federal
S = State
I = Indian
P = Private
C = County
M = Municipal*
D = District
O = Other

** If the Land Type is best described as Indian, County or District, please use those codes. Otherwise, use Municipal.*

C. **Owner Type:** Using the codes listed below, indicate in VII.C. the code which *best describes* the legal status of the current owner of the installation:

F = Federal
S = State
I = Indian
P = Private
C = County
M = Municipal*
D = District
O = Other

** If the Owner Type is best described as Indian, County or District, please use those codes. Otherwise, use Municipal.*

D. **Change of Owner Indicator:** *(If this is your installations initial notification, leave Item VII.D. blank and skip to Item VIII. If this is a subsequent notification, complete Item VII.D. as directed below.)*

A subsequent notification is required when the owner of an installation changes. The new owner must notify EPA of the change, even if the previous owner already received an EPA Identification Number. Because an EPA Identification Number is site-specific, the new owner will keep the existing EPA Identification Number for that location. If the installation moves to another location, the owner/operator must notify EPA of this change. In this instance, a new EPA Identification Number will be assigned, since the installation has changed locations.

If the owner of this installation has changed since the installation's initial notification, place an "X" in the box marked "Yes" and enter the date the owner changed.

If the owner of this installation has not changed since the installation's initial notification, place an "X" in the box marked "No" and skip to Item VIII.

If an additional owner(s) has been added or replaced since the installation's initial notification, place an "X" in the box marked "Yes." Use the comment section in XI to list any additional owners, the dates they became owners, and which owner(s) (if any) they replaced. If necessary, attach a separate sheet of paper.

Item VIII -- Type of Regulated Waste Activity:

A. **Hazardous Waste Activities:** Mark an "X" in the appropriate box(es) to show which hazardous waste activities are being conducted at this installation.

1. **Generator:** If you generate a hazardous waste that is listed in 40 CFR 261.31 through 261.33 or identified by one or more hazardous waste characteristic(s) contained in 40 CFR 261.21 through 261.24, mark an "X" in the appropriate box for the quantity of non-acutely hazardous waste that is generated per calendar month. The regulations for hazardous waste generators are found in 40 CFR Part 262.

Note: If you generate acutely hazardous wastes listed in 40 CFR 261.31, 261.32 or 261.33(e), please refer to 40 CFR 261.5(e) to determine under what circumstances you must notify EPA.

2. **Hazardous Waste Transporter:** If you transport hazardous waste, indicate if it is your own hazardous waste, if you transport it for commercial purposes, or mark both boxes if both classifications apply. Mark an "X" in each appropriate box to indicate the method(s) of transportation you use. Hazardous waste transporters do not have to complete Item IX of the notification, but must sign the certification in Item X. The Federal regulations for hazardous waste transporters are found in 40 CFR Part 263.

3. **Treater/Storer/Disposer:** If you treat, store or dispose of regulated hazardous waste, place an "X" in this box. (Burning hazardous wastes in boilers and industrial furnaces and storing hazardous wastes before recycling them fall into this category as well.) You are reminded to contact the appropriate addressee listed for your State in Section IV.C. of this booklet to request Part A of the RCRA Permit Application. The Federal regulations for owners or operators of hazardous waste installations are found in 40 CFR Parts 264, 265, and 266.

4. **Exempt Boiler and/or Industrial Furnace:** If you burn hazardous wastes in a smelting, melting, or refining furnace solely for metals recovery, as described in 40 CFR 266.100(c), or to recover economically significant amounts of precious metals, as described in 40 CFR 266.100(f), mark an "X" in the box to indicate that you qualify for the smelting, melting and refining furnace exemption.

   If you burn small quantities of hazardous waste in an on-site boiler or industrial furnace in accordance with the conditions in 40 CFR 266.108, place an "X" in the box to indicate that you qualify for the Small Quantity On-Site Burner Exemption.

5. **Underground Injection Control:** If you generate, treat, store, or dispose of hazardous waste and there is an underground injection well located at your installation, place an "X" in the appropriate box. The Federal regulations for owners or operators of underground injection wells are found in 40 CFR Part 148.

B. **Universal Waste Handling Activities:** Mark an "X" in the appropriate box to indicate that universal waste handling activities are taking place **at this installation and will result in the universal waste handler becoming a Large Quantity Handler of Universal Waste.** The Federal regulations for large quantity handlers of universal waste are found in 40 CFR Part 273, Subpart C.

C. **Used Oil Management Activities:** Mark an "X" in the appropriate box(es) to indicate which used oil management activities are taking place **at this installation.** The Federal regulations for used oil management are found in 40 CFR Part 279.

1. **Used Oil Transporter/Transfer Facility:** If you transport used oil and/or own or operate a used oil transfer facility, place an "X" in the appropriate box(es) to indicate this used oil management activity.

2. **Used Oil Processor/Re-Refiner:** If you process and/or re-refine used oil, place an "X" in the appropriate box(es) to indicate this used oil management activity.

3. **Off-Specification Used Oil Burner:** If you burn off-specification used oil fuel, place an "X" in the box to indicate this used oil management activity.

4. **Used Oil Fuel Marketer:** If you market off-specification used oil directly to a burner, mark an "X" in box 1a. If you are the first to claim the used oil meets the used oil specification established in 40 CFR 279.11, mark an "X" in box 1b. If either of these boxes is marked, you must also notify (or have previously notified) as a used oil transporter, used oil processor/re-refiner, or off-specification used oil fuel burner, unless you are a used oil generator. (Used oil generators are not required to notify.)

Note: *A subsequent notification is required when the type of regulated waste activity changes.*

Item IX -- Description of Hazardous Wastes:

Note: *Only persons involved in hazardous waste activities (Item VIII.A.) need to complete this item. Hazardous waste transporters requesting an EPA Identification Number do not need to complete this item, but must sign the "Certification" in Item X.*

You will need to refer to 40 CFR Part 261 in order to complete this Item. Part 261 identifies those solid wastes that EPA defines as hazardous and regulates under RCRA. If you need help completing this section, please contact the appropriate addressee for your State as listed in Section IV.C. of this booklet.

A. **Listed Hazardous Wastes:** If you handle hazardous wastes that are listed in 40 CFR Part 261, Subpart D, enter the appropriate 4-digit code(s) in the boxes provided.

Note: *If you handle more than 12 listed hazardous wastes, please continue listing the hazardous waste codes on the extra sheet provided at the end of this booklet. If you have more waste codes than will fit on the notification and the additional sheet, feel free to photocopy the additional sheet and use that as well. Attach any additional sheets to the rest of EPA Form 8700-12 before mailing it to the appropriate EPA Regional or State office.*

B. **Characteristic Hazardous Wastes:** If you handle hazardous wastes that are not listed in 40 CFR Part 261, Subpart D, but do exhibit a characteristic of hazardous waste as defined in 40 CFR Part 261, Subpart C, you should describe these wastes by the EPA hazardous waste number for the characteristic. Place an "X" in the box next to the characteristic of the wastes that you handle. If you mark "4. Toxicity Characteristic," please list the specific EPA hazardous waste number(s) for the specific contaminant(s) in the box(es) provided. Refer to Section VII to determine the appropriate hazardous waste number(s).

Note: *If you handle more than four Toxicity Characteristic (TC) hazardous wastes, please continue listing the hazardous waste codes on the extra sheet provided at the end of this booklet. If you have more TC waste codes than will fit on the notification and the additional sheet, feel free to photocopy the additional sheet and use that as well. Attach any additional sheets to the rest of EPA Form 8700-12 before mailing it to the appropriate EPA Regional or State office.*

C. **Other Wastes:** If you handle other wastes or State-regulated wastes that have a waste code, enter the appropriate code(s) in the boxes provided.

Item X – Certification:

This certification must be signed by the owner, operator, or an authorized representative of your installation. An "authorized representative" is a person responsible for the overall operation of the installation (i.e., a plant manager or superintendent, or a person of equal responsibility). *All notifications must include this certification to be complete.*

Item XI – Comments:

Use this space for any additional comments and attach additional sheets, if necessary.

VI. Definitions

The following definitions are included to help you to understand and complete EPA Form 8700-12:

Act or RCRA means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. Section 6901 *et seq.*

Authorized Representative means the person responsible for the overall operation of the installation or an operational unit (i.e., part of an installation), e.g., superintendent or plant manager, or person of equivalent responsibility.

Boiler means an enclosed device using controlled flame combustion and having the following characteristics:

1. The unit has physical provisions for recovering and exporting energy in the form of steam, heated fluids, or heated gases;
2. The unit's combustion chamber and primary energy recovery section(s) are of integral design (i.e., they are physically formed into one manufactured or assembled unit);
3. The unit continuously maintains an energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel;
4. The unit exports and utilizes at least 75 percent of the recovered energy, calculated on an annual basis (excluding recovered heat used internally in the same unit, for example, to preheat fuel or combustion air or drive fans or feedwater pumps); or
5. The unit is one which the Regional Administrator has determined, on a case-by-case basis, to be a boiler, after considering the standards in 40 CFR 260.32.

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

EPA Identification (ID) Number means the number assigned by EPA to each hazardous waste generator, hazardous waste transporter, and treatment, storage, or disposal installation; large quantity handler of universal wastes; used oil transporter, used oil processor/re-refiner, off-specification used oil fuel burner, and used oil fuel marketer.

Hazardous Waste means a hazardous waste as defined in 40 CFR 261.3.

Hazardous Waste Generator means any person, by site, whose act or process produces hazardous waste identified or listed in 40 CFR Part 261.

Hazardous Waste Storage means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

Hazardous Waste Transporter means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

Hazardous Waste Treatment means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such hazardous waste, or so as to recover energy or material resources from the hazardous waste, or so as to render such hazardous waste nonhazardous, or less hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. Such term includes any activity or processing designed to change the physical form or composition of hazardous waste so as to render it nonhazardous.

Industrial Furnace means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy: cement kilns; lime kilns; aggregate kilns; phosphate kilns; coke ovens; blast furnaces; smelting, melting and refining furnaces; titanium dioxide chloride process oxidation reactors; methane reforming furnaces; pulping liquor recovery furnaces; combustion devices used in the recovery of sulfur values from spent sulfuric acid; halogen acid furnaces, as defined under industrial furnace in 40 CFR 260.10; and such other devices as the Administrator may add to this list.

Installation means the physical plant or location at which one or more of the following regulated waste activities occurs: the generation, transportation, treatment, storage, or disposal of hazardous wastes; the storage of hazardous wastes before they are recycled; the accumulation of 5,000 kg or more of universal wastes; and the transportation (and temporary storage during transportation), processing/re-refining, burning, or marketing of used oil. An installation may consist of several treatment, storage, or disposal operational units. (For entities that only transport regulated wastes, the term installation refers to the headquarters of that entity's operations.)

Large Quantity Handler of Universal Waste means a universal waste handler (as defined in 40 CFR 273.6) who accumulates 5,000 kilograms or more total of universal waste (batteries, pesticides, or thermostats, collectively) at any time. This designation is retained through the end of the calendar year in which 5,000 kilograms or more of universal wastes are accumulated.

Municipality means a city, village, town, borough, county, parish, district, association, Indian tribe or authorized Indian tribal organization, designated and approved management agency under Section 208 of the Clean Water Act, or any other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes.

Off-Specification Used Oil Burner means an installation where used oil not meeting the specification requirements in 40 CFR 279.11 (off-specification used oil) is burned for energy recovery in devices identified in Section 279.61(a).

Off-Specification Used Oil Fuel means used oil fuel that does not meet the specification provided under 40 CFR 279.11.

On-Specification Used Oil Fuel means used oil fuel that meets the specification provided under 40 CFR 279.11.

Operator means the person responsible for the overall operation of an installation.

Owner means a person who owns an installation or part of an installation, including the property owner.

Small Quantity On-Site Burner Exemption means that persons who burn small quantities of hazardous waste in an on-site boiler or industrial furnace, in accordance with 40 CFR 266.108, are conditionally exempt from regulation for that activity.

Smelting, Melting, and Refining Furnace Exemption means that, under 40 CFR 266.100(c), owners or operators of smelting, melting, and refining furnaces that process hazardous wastes solely for metals recovery are conditionally exempt from regulation, except for 40 CFR 266.101 and 266.112, provided they comply with limited requirements set forth in Section 266.100(c). Similarly, 40 CFR 266.100(f) provides that owners or operators of smelting, melting and refining furnaces that process hazardous wastes for the recovery of precious metals are conditionally exempt from regulation, except for 40 CFR 266.112, provided they comply with limited requirements specified in Section 266.100(f).

Underground Injection Control means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. Underground injection wells are regulated under both the Safe Drinking Water Act and the Resource Conservation and Recovery Act (see 40 CFR Part 148).

Used Oil means any oil that has been refined from crude oil, or any synthetic oil, that has been used, and as a result of such use, is contaminated by physical or chemical impurities.

Used Oil Fuel Marketer means any person who conducts either of the following activities:

1. Directs a shipment of off-specification used oil from their installation to an off-specification used oil burner; or

2. First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in 40 CFR 279.11.

Used Oil Management Activities, for the purposes of EPA Form 8700-12, include used oil transportation; used oil processing and re-refining; burning off-specification used oil fuel; and used oil fuel marketing.

Used Oil Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived products. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation, and re-refining.

Used Oil Processor means an installation that processes on- or off-specification used oil.

Used Oil Re-Refiner means an installation that produces lubricating oils and greases, industrial fuel, asphalt extender, gasoline, and other products from on- or off-specification used oil.

Used Oil Transfer Facility means any transportation-related facility, including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than 24 hours during the normal course of transportation and not longer than 35 days. Transfer facilities that store used oil for more than 35 days are subject to regulation under 40 CFR Part 279, Subpart F.

Used Oil Transporter means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Used oil transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil-derived products or used oil fuel.

VII. EPA Hazardous Waste Numbers for Waste Streams Commonly Generated by Small Quantity Generators

EPA recognizes that generators of small quantities of hazardous waste, many of which are small businesses, may not be familiar with the manner in which hazardous waste materials are identified in the Code of Federal Regulations. In order to aid small quantity generators in determining the EPA Hazardous Waste Numbers for their hazardous wastes that are needed to complete EPA Form 8700-12, two appendices are enclosed.

Appendix 1 lists 18 general industry categories that contain small quantity generators. For each of these categories, commonly generated hazardous wastes are identified. Appendix 2 lists EPA Hazardous Waste Numbers for each hazardous waste stream identified in Appendix 1.

To use these appendices:

1. Locate your industry in Appendix 1 to identify the hazardous waste streams common to your activities.

2. Find each of your hazardous waste streams in Appendix 2, and review the more detailed descriptions of typical hazardous wastes to determine which hazardous waste streams actually result from your activities.

3. If you determine that a hazardous waste stream does apply to you, report the 4-digit EPA Hazardous Waste Number in Item IX.B. of EPA Form 8700-12, "Notification of Regulated Waste Activity."

The industries and hazardous waste streams described here do not provide a comprehensive list but rather serve as a guide to potential small quantity generators in determining which of their solid wastes, if any, are hazardous. Except for the pesticide category, this insert does not include EPA Hazardous Waste Numbers for commercial chemical products that are hazardous when discarded unused. These chemicals and their EPA Hazardous Waste Numbers are listed in 40 CFR 261.33.

If the specific Hazardous Waste Number that should be applied to your hazardous waste stream is unclear, please refer to 40 CFR Part 261. *Copies of Part 261 and other EPA regulations in 40 CFR are available at most libraries and on EPA's Web Site at: www.epa.gov/docs/epacfr40/chapt-I.info/subch-I/*

In those cases where more than one Hazardous Waste Number is applicable, all should be used. If you have any questions, or if you are unable to determine the proper EPA Hazardous Waste Numbers for your hazardous wastes, contact your State hazardous waste management agency as listed in Section IV of this booklet, or the RCRA, Superfund, and EPCRA Hotline at 1-800-424-9346 (or in the Washington, D.C. area at (703) 412-9810).

Appendix 1
Typical Hazardous Waste Streams Produced by Small Quantity Generators

LABORATORIES
Acids/Bases, Heavy Metals/Inorganics, Ignitable Wastes, Reactives, Solvents

PRINTING AND ALLIED INDUSTRIES
Acids/Bases, Heavy Metals/Inorganics, Ink Sludges, Spent Plating Wastes, Solvents

PESTICIDE END USERS AND APPLICATION
Heavy Metals/Inorganics, Services, Pesticides, Solvents

CONSTRUCTION
Acids/Bases, Ignitable Wastes, Solvents

EQUIPMENT REPAIR
Acids/Bases, Ignitable Wastes, Lead Acid Batteries, Solvents

FURNITURE/WOOD MANUFACTURING & REFINISHING
Ignitable Wastes, Solvents

OTHER MANUFACTURING (textiles, plastics, leather)
Heavy Metals/Inorganics, Solvents

LAUNDRIES AND DRY CLEANERS
Dry Cleaning Filtration Residues, Solvents

EDUCATIONAL AND VOCATIONAL SHOPS
Acids/Bases, Ignitable Wastes, Pesticides, Reactives, Solvents

BUILDING CLEANING AND MAINTENANCE
Acids/Bases, Solvents

VEHICLE MAINTENANCE
Acids/Bases, Heavy Metals/Inorganics, Ignitable Wastes, Lead Acid Batteries, Solvents

WOOD PRESERVING
Preserving Agents

MOTOR FREIGHT TERMINALS AND RAILROAD
Acids/Bases, Transportation, Heavy Metals/Inorganics, Ignitable Wastes, Lead Acid Batteries, Solvents

FUNERAL SERVICES
Solvents (formaldehyde)

METAL MANUFACTURING
Acids/Bases, Cyanide Wastes, Heavy Metals/Inorganics, Ignitable Wastes, Reactives, Solvents, Spent Plating Wastes

CHEMICAL MANUFACTURERS
Acids/Bases, Cyanide Wastes, Heavy Metals/Inorganics, Ignitable Wastes, Reactives, Solvents

CLEANING AGENTS AND COSMETICS
Acids/Bases, Heavy Metals/Inorganics, Ignitable Wastes, Pesticides, Solvents

FORMULATORS
Acids/Bases, Cyanide Wastes, Heavy Metals/Inorganics, Ignitable Wastes, Pesticides, Reactives, Solvents

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Appendix 2
Typical Hazardous Waste Streams and EPA Hazardous Waste Numbers

ACIDS/BASES:

Acids, bases or mixtures having a pH less than or equal to 2 or greater than or equal to 12.5, or liquids that corrode steel at a rate greater than 0.25 inches per year, are considered to be corrosive (for a complete description of corrosive wastes, see 40 CFR 261.22, Characteristic of Corrosivity). All corrosive materials and solutions have the EPA Hazardous Waste Number D002. The following are some examples of the more commonly used corrosives:

Examples of Corrosive Waste Streams	
Acetic Acid	Oleum
Ammonium Hydroxide	Perchloric Acid
Chromic Acid	Phosphoric Acid
Hydrobromic Acid	Potassium Hydroxide
Hydrochloric Acid	Sodium Hydroxide
Hydrofluoric Acid	Sulfuric Acid
Nitric Acid	

DRY CLEANING FILTRATION RESIDUES:

Cooked powder residue (perchloroethylene plants only), still residues and spent cartridge filters containing perchloroethylene or valclene are hazardous and have an EPA Hazardous Waste Number of F002. Still residues containing petroleum solvents with a flash point less than 140F are also considered hazardous, and have an EPA Hazardous Waste Number of D001.

HEAVY METALS/INORGANICS:

Heavy Metals and other inorganic waste materials exhibit the characteristic of TCLP Toxicity and are considered hazardous if the extract from a representative sample of the waste has any of the specific constituent concentrations as shown in 40 CFR 261.24, Table 1. This may include dusts, solutions, wastewater treatment sludges, paint wastes, waste inks, and other such materials which contain heavy metals/inorganics (note that wastewater treatment sludges from electroplating operations containing nickel and cyanide are identified as F006). The following are TCLP Toxic:

Waste Stream	EPA Hazardous Waste Number
Arsenic	D004
Barium	D005
Cadmium	D006
Chromium	D007
Lead	D008
Mercury	D009
Selenium	D010
Silver	D011

Appendix 2 (continued)

IGNITABLE WASTES:

Ignitable wastes include any flammable liquids, non-liquids, and contained gases that have a flashpoint less than 140F (for a complete description of ignitable wastes, see 40 CFR 261.21, Characteristic of Ignitability). Examples are spent solvents (see also solvents), solvent still bottoms, ignitable paint wastes (paint removers, brush cleaners and stripping agents), epoxy resins and adhesives (epoxies, rubber cements and marine glues), and waste inks containing flammable solvents. Unless otherwise specified, all ignitable wastes have an EPA Hazardous Waste Number of D001.

Some commonly used ignitable compounds are:

Waste Stream	EPA Hazardous Waste Number
Acetone	F003
Benzene	D001
n-Butyl Alcohol	F003
Chlorobenzene	F002
Cyclohexanone	F003
Ethyl Acetate	F003
Ethylbenzene	F003
Ethyl Ether	F003
Ethylene Dichloride	D001
Methanol	F003
Methyl Isobutyl Ketone	F003
Petroleum Distillates	D001
Xylene	F003

INK SLUDGES CONTAINING CHROMIUM AND LEAD:

This includes solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tube and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. All ink sludges have an EPA Hazardous Waste Number of K086.

LEAD ACID BATTERIES:

Used lead acid batteries should be reported on the notification form only if they are not recycled. Used lead acid batteries that are recycled do not need to be counted in determining the quantity of waste that you generate per month, nor do they require a hazardous waste manifest when shipped off your premises. (Note: Special requirements do apply if you recycle your batteries on your own premises -- see 40 CFR 266.80.).

Waste Stream	EPA Hazardous Waste Number
Lead Dross	D008
Spent Acids	D002
Lead Acid Batteries	D008, D002

Appendix 2 (continued)

ORGANIC WASTES:

See 40 CFR 261.24, Table 1 - Maximum Concentration of Contaminants for the Toxicity Characteristic, for a list of constituents and regulatory levels.

PESTICIDES:

Pesticides, pesticide residues, washing and rinsing solutions and dips which contain constituent concentrations at or above Toxicity Characteristic regulatory levels (see 40 CFR 261.24) are hazardous waste. Pesticides that have an oral LD50 toxicity (rat) < 50 mg/kg, inhalation LC50 toxicity (rat) < 2 mg/L or a dermal LD 50 toxicity (rabbit) < 200 mg/kg, are hazardous materials. The following pesticides would be hazardous waste if they are technical grade, unused and disposed. For a more complete listing, see 40 CFR 261.32-33 for specific listed pesticides, discarded commercial chemical products, and other wastes, wastewaters, sludges, and by-products from pesticide production.

(Note that while many of these pesticides are no longer in common use, they are included here for those cases where they may be found in storage.)

Appendix 2 (continued)

Waste Stream	EPA Hazardous Waste Number
Aldicarb	P070
Aldrin	P004
Amitrole	U011
Arsenic Pentoxide	P011
Arsenic Trioxide	P012
Cacodylic Acid	U136
Carbamic Acid, Methylnitroso-Ethyl Ester	U178
Chlordane	U036
Copper Cyanides	P029
1,2-Dibromo-3-Chloropropane	U066
1,2-Dichloropropane	U083
1,3-Dichloropropene	U084
2,4-Dichlorophenoxy Acetic Acid	U240
DDT	U061
Dieldrin	P037
Dimethoate	P044
Dimethylcarbamoyl Chloride	U097
Dinitrocresol	P047
Dinoseb	P020
Disodium Monomethane arsonate	D004
Disulfoton	P039
Endosulfan	P050
Endrin	P051
Ethylmercuric Chloride	D009
Famphur	P097
Nepthachlor	P059
Hexachlorobenzene	U127
Kepone	U142
Lindane	U129
2-Methoxy Mercuric Chloride	D009
Methoxychlor	D014
Methyl Parathion	P071
Monosodium Methanearsonate	D004
Nicotine	P075
Parathion	P089
Pentachloronitrobenzene	U185
Pentachlorophenol	U242
Phenylmercuric Acetate	D009
Phorate	P094
Strychinine	P108
2,4,5-Trichlorophenoxy Acetic Acid	U232
2-(2,4,5-Trichlorophenoxy)-Propionic Acid	U233
Thallium Sulfate	P115
Thiram	U244
Toxaphene	P123
Warfarin	U248

Appendix 2 (continued)

SOLVENTS:

Spent solvents, solvent still bottoms or mixtures containing solvents are often hazardous. This includes solvents used in degreasing and paint-brush cleaning, and distillation residues from reclamation. The following are some commonly used hazardous solvents (see also Ignitable Wastes for other hazardous solvents, and 40 CFR 261.31 for most listed hazardous waste solvents):

Waste Stream	EPA Hazardous Waste Number
Benzene	D001
Carbon Disulfide	F005
Carbon Tetrachloride	F001
Chlorobenzene	F002
Cresols	F004
Cresylic Acid	F004
O-Dichlorobenzene	F002
Ethanol	D001
Ethylene Dichloride	D001
Isobutanol	F005
Isopropanol	D001
Kerosene	D001
Methyl Ethyl Ketone	F005
Methylene Chloride	F001(Sludges) F002(Still Bottoms)
Naphtha	D001
Nitrobenzene	F004
Petroleum Solvents (Flash-point less than 140F)	D001
Pyridine	F005
1, 1, 1-Trichloroethane	F001(Sludges) F002(Still Bottoms)
Tetrachloroethylene	F001(Sludges) F002(Still Bottoms)
Toluene	F005
Trichloroethylene	F001(Sludges) F002(Still Bottoms)
Trichlorofluoromethane	F002
Trichlorotrifluoroethane	F002
White Spirits	D001

REACTIVES:

Reactive wastes include reactive materials or mixtures which are unstable, react violently with or form explosive mixtures with water, generate toxic gases or vapors when mixed with water (or when exposed to pH conditions between 2 and 12.5 in the case of cyanide- or sulfide-bearing wastes), or are capable of detonation or explosive reaction when irritated or heated (for a complete description of reactive wastes, see 40 CFR 261.23, Characteristic

Appendix 2 (continued)

of Reactivity). Unless otherwise specified, all reactive wastes have an EPA Hazardous Waste Number of D003. The following materials are commonly considered to be reactive:

Waste Stream	EPA Hazardous Waste Number
Acetyl Chloride	D003
Chromic Acid	D003
Cyanides	D003
Organic Peroxides	D003
Perchlorates	D003
Permanganates	D003
Hypochlorites	D003
Sulfides	D003

SPENT PLATING AND CYANIDE WASTES:

Spent plating wastes contain cleaning solutions and plating solutions with caustics, solvents, heavy metals and cyanides. Cyanide wastes may also be generated from heat treatment operations, pigment production and manufacturing of anti-caking agents. Plating wastes are generally Hazardous Waste Numbers F006-F009. Heat treatment wastes are generally Hazardous Waste Numbers F010-F012. See 40 CFR 261.31 for a more complete description of plating wastes.

WOOD PRESERVING AGENTS:

Compounds or mixtures used in wood preserving, including the wastewater treatment sludge from wastewater treatment operations, are considered hazardous wastes. Bottom sediment sludges from the treatment of wastewater from wood preserving processes that use creosote or pentachlorophenol are hazardous, and have an EPA Hazardous Waste Number of K001. In addition, wastewaters, process residuals, preservative drippage, and spent formulations from certain wood preserving processes are also hazardous wastes and carry EPA Hazardous Waste Numbers F032, F034 or F035, depending on the contaminants they contain. Unless otherwise indicated, specific wood preserving components are as follows:

Waste Stream	EPA Hazardous Waste Number(s)
Chromated Copper Arsenate	D004, F035
Creosote	K001, F034
Pentachlorophenol	K001, F032

HAWAII ADMINISTRATIVE RULES

TITLE 11

DEPARTMENT OF HEALTH

CHAPTER 262

HAZARDOUS WASTE MANAGEMENT

STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

SUBCHAPTER A

GENERAL

§11-262-10 Purpose, scope, and applicability. (a) This chapter establishes standards for generators of hazardous waste. Chapters 11-260 through 11-280 govern hazardous waste management in the State. Reference to the other chapters may be necessary, specifically chapters 11-260 and 11-261 which are essential for defining terms and determining if hazardous waste is being generated.

(b) Sections 11-261-5(c) and (d) must be used to determine the applicability of provisions of this chapter that are dependent on calculations of the quantity of hazardous waste generated per month.

(c) A generator who treats, stores, or disposes of hazardous waste on-site must only comply with the following sections and subsections of this chapter with respect to that waste: section 11-262-11 for determining whether or not the generator has a hazardous waste, section 11-262-12 for obtaining an EPA identification number, section 11-262-34 for accumulation of hazardous waste, subsections 11-262-40(c) and (d) for recordkeeping, section 11-262-43 for additional reporting, and if applicable, section 11-262-70 for farmers.

(d) Any person who exports or imports hazardous waste subject to the federal manifesting requirements of 40 CFR Part 262, or subject to the universal waste management standards of 40 CFR Part 273, or subject to chapter 11-273, to or from the countries listed in section 11-262-58(a)(1) for recovery must comply with subchapter H.

(e) Any person who imports hazardous waste from outside of the United States into the State must comply with the standards applicable to generators established in this chapter.

(f) A farmer who generates waste pesticides which are hazardous waste and who complies with all of the requirements of section 11-262-70 is not required to comply with other standards in this chapter, or chapter 11-270, 11-264, 11-265, or 11-268 with respect to such pesticides.

(g) A person who generates a hazardous waste as defined by chapter 11-261 is subject to the compliance requirements and penalties prescribed in sections 342J-7 and 342J-9, HRS if the generator does not comply with the requirements of this chapter.

(h) An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility must comply with the generator standards established in this chapter.

(i) Persons responding to an explosives or munitions emergency in accordance with section 11-264-1(g)(8)(i)(D) or (iv) or section 11-265-1(c)(11)(i)(D) or (iv), and section 11-270-

1(c)(3)(i)(D) or (iii) are not required to comply with the standards of this chapter.

(j) All references in tables and appendices to provisions of the Code of Federal Regulations shall be construed to mean the State rule analogue of the referenced federal regulation (for example, 40 CFR 260.1 shall be construed to mean section 11-260-1 of the Hawaii Administrative Rules).

Note 1: The provisions of section 11-262-34 are applicable to the on-site accumulation of hazardous waste by generators. Therefore, the provisions of section 11-262-34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.

Note 2: A generator who treats, stores, or disposes of hazardous waste on-site must comply with the applicable standards and permit requirements set forth in chapters 11-264, 11-265, 11-266, 11-268, and 11-270.

[Eff 6/18/94; am 3/13/99; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.10)

§11-262-11 Hazardous waste determination. A person who generates a solid waste, as defined in section 11-261-2, must determine if that waste is a hazardous waste using the following method:

(a) He should first determine if the waste is excluded from regulation under section 11-261-4.

(b) He must then determine if the waste is listed as a hazardous waste in subchapter D of chapter 11-261.

(c) For purposes of compliance with chapter 11-268, or if the waste is not listed in subchapter D of chapter 11-261, the generator must then determine whether the waste is identified in subchapter C of chapter 11-261 by either:

(1) Testing the waste according to the methods set forth in subchapter C of chapter 11-261; or

(2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.

(d) If the waste is determined to be hazardous, the generator must refer to chapters 11-261, 11-264, 11-265, 11-266, 11-268, and 11-273 for possible exclusions or restrictions pertaining to management of the specific waste. [Eff 6/18/94; am 3/13/99; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.11)

§11-262-12 EPA identification numbers. (a) A generator must not treat, store, dispose of, transport, or offer for transportation, hazardous waste without having received an EPA identification number from the Administrator or the director:

(b) A generator who has not received an EPA identification number may obtain one by applying to the director using EPA form 8700-12. Upon receiving the request the Administrator or director will assign an EPA identification number to the generator.

(c) A generator must not offer his hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.12)

SUBCHAPTER B

THE MANIFEST

§11-262-20 General requirements. (a) A generator who transports, or offers for transportation, hazardous waste for offsite treatment, storage, or disposal must prepare a Manifest OMB control number 2050-0039 on EPA form 8700-22, and, if necessary, EPA form 8700-22A, according to the instructions included in the Appendix to this chapter.

(b) A generator must designate on the manifest one facility which is permitted to handle the waste described on the manifest.

(c) A generator may also designate on the manifest one alternate facility which is permitted to handle his or her waste in the event an emergency prevents delivery of the waste to the primary designated facility.

(d) If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator must either designate another facility or instruct the transporter to return the waste.

(e) The requirements of this subchapter do not apply to hazardous waste produced by generators of greater than one-hundred kg but less than one-thousand kg in a calendar month where:

(1) The waste is reclaimed under a contractual agreement pursuant to which:
  (i) The type of waste and frequency of shipments are specified in the agreement;
  (ii) The vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste; and
(2) The generator maintains a copy of the reclamation agreement in his or her files for a period of at least three years after termination or expiration of the agreement.

(f) The requirements of this subchapter and section 11-262-32(b) do not apply to the transport of hazardous wastes on a public or private right-of-way within or along the border of

contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way. Notwithstanding section 11-263-10(a), the generator or transporter must comply with the requirements for transporters set forth in sections 11-263-30 and 11-263-31 in the event of a discharge of hazardous waste on a public or private right-of-way. [Eff 6/18/94; am 3/13/99; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.20)

§11-262-21 Acquisition of manifests. (a) If the state to which the shipment is manifested (consignment state) supplies the manifest and requires its use, then the generator must use that manifest.

(b) If the consignment state does not supply the manifest, then the generator must use the State's manifest.

(c) [Reserved] [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.21)

§11-262-22 Number of copies. The manifest consists of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned to the generator. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.22)

§11-262-23 Use of the manifest. (a) The generator must:
(1) Sign the manifest certification by hand; and
(2) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and
(3) Retain one copy, in accordance with subsection 11-262-40(a).

(b) The generator must give the transporter the remaining copies of the manifest.

(c) For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must send three copies of the manifest dated and signed in accordance with this section to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

(d) For rail shipments of hazardous waste within the State which originate at the site of generation, the generator must send at least three copies of the manifest dated and signed in accordance with this section to:

(1) The next non-rail transporter, if any; or

(2) The designated facility if transported solely by rail; or

(3) The last rail transporter to handle the waste in the United States if exported by rail.

(e) For shipments of hazardous waste to a designated facility in an authorized state which has not yet obtained authorization by EPA to regulate that particular waste as hazardous, the generator must assure that the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.23)

SUBCHAPTER C

PRE-TRANSPORT REQUIREMENTS

§11-262-30 Packaging. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must package the waste in accordance with the applicable United States Department of Transportation (DOT) regulations on packaging under 49 CFR Parts 173, 178, and 179. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.30)

§11-262-31 Labeling. Before transporting or offering hazardous waste for transportation off-site, a generator must label each package in accordance with the applicable U.S. Department of Transportation regulations on hazardous materials under 49 CFR Part 172. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.31)

§11-262-32 Marking. (a) Before transporting or offering hazardous waste for transportation off-site, a generator must mark each package of hazardous waste in accordance with the applicable U.S. Department of Transportation regulations on hazardous materials under 49 CFR Part 172.

(b) Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must mark each container of one-hundred and ten gallons or less used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304:

HAZARDOUS WASTE -- Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.
Generator's Name and Address ---------- .

Manifest Document Number ---------- .
[Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.32)

§11-262-33 Placarding. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must placard or offer the initial transporter the appropriate placards according to U.S. Department of Transportation regulations for hazardous materials under 49 CFR Part 172, Subpart F. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.33)

§11-262-34 Accumulation time. (a) Except as provided in subsections (d), (e), and (f), a generator may accumulate hazardous waste on-site for ninety days or less without a permit or without having interim status, provided that:

(1) The waste is placed:

(i) In containers and the generator complies with subchapter I of chapter 11-265; and/or

(ii) In tanks and the generator complies with subchapter J of chapter 11-265, except subsection 11-265-197(c) and section 11-265-200; and/or

(iii) On drip pads and the generator complies with subchapter W of chapter 11-265 and maintains the following records at the facility:

(A) A description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every ninety days; and

(B) Documentation of each waste removal, including the quantity of waste removed from the drip pad and the sump or collection system and the date and time of removal; and/or

(iv) The waste is placed in containment buildings and the generator complies with subchapter DD of chapter 11-265, has placed its professional engineer certification that the building complies with the design standards specified in section 11-265-1101 in the facility's operating record. The professional engineer certification is required prior to operation of the unit. The owner or operator shall maintain the following records at the facility:

(A) A written description of procedures to ensure that each waste volume remains in the unit for no more than ninety days, a written

description of the waste generation and management practices for the facility showing that they are consistent with respecting the ninety day limit, and documentation that the procedures are complied with; or

(B) Documentation that the unit is emptied at least once every ninety days.

In addition, such a generator is exempt from all the requirements in subchapters G and H of chapter 11-265, except for section 11-265-111 and section 11-265-114.

(2) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;

(3) While being accumulated on-site, each container and tank is labeled or marked clearly with the words, ``Hazardous Waste''; and

(4) The generator complies with the requirements for owners or operators in subchapters C and D in chapter 11-265, with section 11-265-16, and with paragraph 11-268-7(a)(4).

(b) A generator who accumulates hazardous waste for more than ninety days is an operator of a storage facility and is subject to the requirements of chapters 11-264 and 11-265 and the permit requirements of chapter 11-270 unless he has been granted an extension to the ninety-day period. Such extension may be granted by the department if hazardous wastes must remain on-site for longer than ninety days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to thirty days may be granted at the discretion of the director on a case-by-case basis.

(c)(1) A generator may accumulate as much as fifty-five gallons of hazardous waste or one quart of acutely hazardous waste listed in subsection 11-261-33(e) in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with subsection (a) of this section provided he:

(i) Complies with sections 11-265-171, 11-265-172, and subsection 11-265-173(a); and

(ii) Marks his containers either with the words ``Hazardous Waste'' or with other words that identify the contents of the containers.

(2) A generator who accumulates either hazardous waste or acutely hazardous waste listed in subsection 11-261-33(e) in excess of the amounts listed in paragraph (c)(1) of this section at or near any point of generation must, with respect to that amount of excess waste, comply within three days with subsection (a) of

this section or other applicable provisions of chapters 11-260 through 11-279. During the three day period the generator must continue to comply with subparagraphs (c)(1)(i) through (ii) of this section. The generator must mark the container holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

(d) A generator who generates greater than one-hundred kilograms but less than one-thousand kilograms of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status provided that:

(1) The quantity of waste accumulated on-site never exceeds six-thousand kilograms;

(2) The generator complies with the requirements of subchapter I of chapter 11-265, except for sections 11-265-176 and 11-265-178;

(3) The generator complies with the requirements of section 11-265-201 in subchapter J of chapter 11-265;

(4) The generator complies with the requirements of paragraphs (a)(2) and (a)(3) of this section, the requirements of subchapter C of chapter 11-265, the requirements of 11-268-7(a)(4); and

(5) The generator complies with the following requirements:

(i) At all times there must be at least one employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures specified in subparagraph (d)(5)(iv) of this section. This employee is the emergency coordinator.

(ii) The generator must post the following information next to the telephone:

(A) The name and telephone number of the emergency coordinator;

(B) Location of fire extinguishers and spill control material, and, if present, fire alarm; and

(C) The telephone number of the fire department, unless the facility has a direct alarm.

(iii) The generator must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

(iv) The emergency coordinator or his or her designee must respond to any emergencies that arise. The applicable responses are as follows:

(A) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;
(B) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;
(C) In the event of a fire, explosion, or other release which could threaten human health outside the facility or when the generator has knowledge that a spill has reached surface water, the generator must immediately notify the federal National Response Center (using their 24-hour toll free number 800/424-8802) and the Hawaii Department of Health's Hazard Evaluation and Emergency Response Office via the State Hospital at (808) 247-2191 after business hours or directly at (808) 586-4249 during business hours. The report must include the following information:
(1) The name, address, and U.S. EPA identification number of the generator;
(2) Date, time, and type of incident (e.g., spill or fire);
(3) Quantity and type of hazardous waste involved in the incident;
(4) Extent of injuries, if any; and
(5) Estimated quantity and disposition of recovered materials, if any.

(e) A generator who generates greater than one-hundred kilograms but less than one-thousand kilograms of hazardous waste in a calendar month and who must transport his waste, or offer his waste for transportation, over a distance of two-hundred miles or more for off-site treatment, storage or disposal may accumulate hazardous waste on-site for two-hundred and seventy days or less without a permit or without having interim status provided that he complies with the requirements of subsection (d) of this section.

(f) A generator who generates greater than one-hundred kilograms but less than one-thousand kilograms of hazardous waste in a calendar month and who accumulates hazardous waste in quantities exceeding six-thousand kilograms or accumulates hazardous waste for more than one-hundred and eighty days (or for more than two-hundred and seventy days if he must transport his waste, or offer his waste for transportation, over a distance of two-hundred miles or more) is an operator of a storage facility and is subject to the requirements of chapters 11-264 and 11-265 and the permit requirements of chapter 11-270 unless he has been

granted an extension to the 180 day (or 270 day if applicable) period. Such extension may be granted by the department if hazardous wastes must remain on-site for longer than 180 days (or 270 days if applicable) due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to thirty days may be granted at the discretion of the director on a case-by-case basis.

(g) Failure to comply with any provision of this section shall constitute a violation of these rules as to which the department may take enforcement action under HRS section 342J-7, including but not limited to 342J-7(a)(1), (a)(2), and (a)(3). [Eff 6/18/94; am 3/13/99; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.34)

SUBCHAPTER D

RECORDKEEPING AND REPORTING

§11-262-40 Recordkeeping. (a) A generator must keep a copy of each manifest signed in accordance with subsection 11-262-23(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

(b) A generator must keep a copy of each Biennial Report and Exception Report for a period of at least three years from the due date of the report.

(c) A generator must keep records of any test results, waste analyses, or other determinations made in accordance with section 11-262-11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

(d) The periods or retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the director. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.40)

§11-262-41 Biennial report. (a) A generator who ships any hazardous waste off-site to a treatment, storage or disposal facility within the United States must prepare and submit a single copy of a Biennial Report to the director by March 1 of each even numbered year. The Biennial Report must be submitted on a form approved by the director, must cover generator activities during the previous year, and must include the following information:

(1) The EPA identification number, name, and address of the generator;
(2) The calendar year covered by the report;
(3) The EPA identification number, name, and address for each off-site treatment, storage, or disposal facility in the United States to which waste was shipped during the year;
(4) The name and EPA identification number of each transporter used during the reporting year for shipments to a treatment, storage or disposal facility within the United States;
(5) A description, EPA hazardous waste number (from chapter 11-261, subchapter C or D), U.S. DOT hazard class, and quantity of each hazardous waste shipped off-site for shipments to a treatment, storage or disposal facility within the United States. This information must be listed by EPA identification number of each such off-site facility to which waste was shipped.
(6) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.
(7) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.
(8) The certification signed by the generator or authorized representative.

(b) Any generator who treats, stores, or disposes of hazardous waste on-site must submit a biennial report covering those wastes in accordance with the provisions of chapters 11-270, 11-264, 11-265, and 11-266. Reporting for exports of hazardous waste is not required on the Biennial Report form. A separate annual report requirement is set forth at section 11-262-56. [Eff 6/18/94; am 3/13/99; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.41)

§11-262-42 Exception reporting.

(a)(1) A generator of greater than one-thousand kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within thirty-five days of the date the waste was accepted by the initial transporter must contact the transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste.

(2) A generator of greater than one-thousand kilograms of hazardous waste in a calendar month must submit an Exception Report to the director if he has not received

a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within forty-five days of the date the waste was accepted by the initial transporter. The Exception Report must include:

(i) A legible copy of the manifest for which the generator does not have confirmation of delivery;
(ii) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

(b) A generator of greater than one-hundred kilograms but less than one-thousand kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within sixty days of the date the waste was accepted by the initial transporter must submit a legible copy of the manifest, with some indication that the generator has not received confirmation of delivery, to the director. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.42)

§11-262-43 Additional reporting. The director, as he deems necessary under HRS section 342J-6, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in chapter 11-261. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.43)

§11-262-44 Special requirements for generators of between 100 and 1000 kilograms per month. A generator of greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month is subject only to the following requirements in this subchapter:

(a) Subsections 11-262-40(a), (c), and (d), recordkeeping;
(b) Subsection 11-262-42(b), exception reporting; and
(c) Section 11-262-43, additional reporting. [Eff 6/18/94; am 3/13/99; comp] (Auth: HRS §§342J-4, 342J-31, 342J-32, 342J-35) (Imp: 40 C.F.R. §262.44)

SUBCHAPTER B

EXPORTS OF HAZARDOUS WASTE

§11-262-50 Applicability. This subchapter establishes requirements applicable to exports of hazardous waste. Except to the extent section 11-262-58 provides otherwise, a primary

HAWAII ADMINISTRATIVE RULES

TITLE 11

DEPARTMENT OF HEALTH

CHAPTER 263

HAZARDOUS WASTE MANAGEMENT

STANDARDS APPLICABLE TO TRANSPORTERS OF HAZARDOUS WASTE

Subchapter A General

Subchapter B Compliance With the Manifest System and Recordkeeping

Subchapter C Hazardous Waste Discharges

SUBCHAPTER A

GENERAL

§11-263-10 Scope. (a) This chapter establishes standards which apply to persons transporting hazardous waste into, within, and out of the State if the transportation requires a manifest

under chapter 11-262.

(b) These rules do not apply to on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities.

(c) A transporter of hazardous waste must also comply with chapter 11-262, Standards Applicable to Generators of Hazardous Waste, if he:

(1) Transports hazardous waste into the United States from abroad; or

(2) Mixes hazardous wastes of different United States Department of Transportation (DOT) shipping descriptions by placing them into a single container.

(d) A transporter of hazardous waste subject to the federal manifesting requirements of 40 CFR Part 262, or subject to the waste management standards of 40 CFR Part 273, or subject to chapter 11-273, that is being imported from or exported to any of the countries listed in 40 CFR 262.58(a)(1) for purposes of recovery is subject to this subchapter and to all other relevant requirements of subchapter H of chapter 11-262, including, but not limited to, section 11-262-84 for tracking documents.

(e) The regulations in this chapter do not apply to transportation during an explosives or munitions emergency response, conducted in accordance with section 11-264-1(g)(8)(i)(D) or (iv) or 11-265-1(c)(11)(i)(D) or (iv), and section 11-270-1(c)(3)(i)(D) or (iii).

(f) Section 11-266-203 identifies how the requirements of this chapter apply to military munitions classified as solid waste under section 11-266-202.

(g) All references in tables and appendices to provisions of the Code of Federal Regulations shall be construed to mean the State rule analogue of the referenced federal regulation (for example, 40 CFR 260.1 shall be construed to mean section 11-260-1 of the Hawaii Administrative Rules). [Eff 6/18/94; am 3/13/99; comp] (Auth: HRS §§342J-4, 342J-31, 342J-33, 342J-35) (Imp: 40 C.F.R. §263.10)

§11-263-11 EPA identification number. (a) A transporter must not transport hazardous wastes without having received an EPA identification number from the Administrator or the director.

(b) A transporter who has not received an EPA identification number may obtain one by applying to the director using EPA Form 8700-12. Upon receiving the request, the Administrator or director will assign an EPA identification number to the transporter. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-33, 342J-35) (Imp: 40 C.F.R. §263.11)

§11-263-12 Transfer facility requirements. A transporter

who stores manifested shipments of hazardous waste in containers meeting the requirements of section 11-262-30 at a transfer facility for a period of ten days or less is not subject to regulation under chapters 11-270, 11-264, 11-265, and 11-268 with respect to the storage of those wastes. [Eff 6/18/94; comp] (Auth: HRS §§342J-4, 342J-31, 342J-33, 342J-35)(Imp: 40 C.F.R. §263.12)

SUBCHAPTER B

COMPLIANCE WITH THE MANIFEST SYSTEM AND RECORDKEEPING

§11-263-20 The manifest system. (a) A transporter may not accept hazardous waste from a generator unless it is accompanied by a manifest signed in accordance with the provisions of section 11-262-20. In the case of exports other than those subject to subchapter H of chapter 11-262, a transporter may not accept such waste from a primary exporter or other person if he or she knows the shipment does not conform to the EPA Acknowledgment of Consent; and unless, in addition to a manifest signed in accordance with the provisions of section 11-262-20, such waste is also accompanied by an EPA Acknowledgment of Consent which, except for shipment by rail, is attached to the manifest (or shipping paper for exports by water (bulk shipment)). For exports of hazardous waste subject to the requirements of chapter 11-262, subchapter H, a transporter may not accept hazardous waste without a tracking document that includes all information required by section 11-262-84.

(b) Before transporting the hazardous waste, the transporter must sign and date the manifest acknowledging acceptance of the hazardous waste from the generator. The transporter must return a signed copy to the generator before leaving the generator's property.

(c) The transporter must ensure that the manifest accompanies the hazardous waste. In the case of exports, the transporter must ensure that a copy of the EPA Acknowledgment of Consent also accompanies the hazardous waste.

(d) A transporter who delivers a hazardous waste to another transporter or to the designated facility must:

(1) Obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the designated facility on the manifest; and

(2) Retain one copy of the manifest in accordance with section 11-263-22; and

(3) Give the remaining copies of the manifest to the accepting transporter or designated facility.

(e) The requirements of subsections (c), (d) and (f) do not apply to water (bulk shipment) transporters if:

(1) The hazardous waste is delivered by water (bulk shipment) to the designated facility; and

(2) A shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator certification, and signatures) and, for exports, an EPA Acknowledgment of Consent accompanies the hazardous waste; and

(3) The delivering transporter obtains the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper; and

(4) The person delivering the hazardous waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility; and

(5) A copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with section 11-263-22.

(f) For shipments involving rail transportation, the requirements of subsections (c), (d) and (e) do not apply and the following requirements do apply:

(1) When accepting hazardous waste from a non-rail transporter, the initial rail transporter must:

(i) Sign and date the manifest acknowledging acceptance of the hazardous waste;

(ii) Return a signed copy of the manifest to the non-rail transporter;

(iii) Forward at least three copies of the manifest to:

(A) The next non-rail transporter, if any; or,

(B) The designated facility, if the shipment is delivered to that facility by rail; or

(C) The last rail transporter designated to handle the waste in the United States;

(iv) Retain one copy of the manifest and rail shipping paper in accordance with section 11-263-22.

(2) Rail transporters must ensure that a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator certification, and signatures) and, for exports an EPA Acknowledgment of Consent accompanies the hazardous waste at all times.

(3) When delivering hazardous waste to the designated facility, a rail transporter must:

(i) Obtain the date of delivery and handwritten signature of the owner or operator of the designated facility on the manifest or the shipping paper (if the manifest has not been received by the facility); and

(ii) Retain a copy of the manifest or signed shipping