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DEPARTMENT OF HEALTH

Compilation of Chapter 11-264
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SUMMARY

1. Chapter 11-264 is compiled.

HAWAII ADMINISTRATIVE RULES

TITLE 11

DEPARTMENT OF HEALTH

CHAPTER 264

HAZARDOUS WASTE MANAGEMENT

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SUBCHAPTER A

GENERAL

§11-264-1 Purpose, scope and applicability. (a) The purpose of this chapter is to establish minimum State standards which are consistent with and at least as stringent as national standards which define the acceptable management of hazardous waste.

(b) The standards in this chapter apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this chapter or chapter 11-261.

(c) The requirements of this chapter apply to a person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Federal Marine Protection, Research, and Sanctuaries Act only to the extent they are included in a hazardous waste management permit by rule granted to such a person under chapter 11-270.

(d) The requirements of this chapter apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an Underground Injection Control (UIC) program approved or promulgated under the Federal Safe Drinking Water Act only to the extent they are required by 40 CFR 144.14.

(e) The requirements of this chapter apply to the owner or operator of a POTW which treats, stores, or disposes of hazardous waste only to the extent they are included in a hazardous waste management permit by rule granted to such a person under chapter 11-270.

(f) [Reserved]

(g) The requirements of this chapter do not apply to:

(1) The owner or operator of a facility permitted, licensed, or registered by the State to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores or disposes

of is excluded from regulation under this chapter by section 11-261-5;

(2) The owner or operator of a facility managing recyclable materials described in paragraphs 11-261-6(a)(2), 11-261-6(a)(3), and 11-261-6(a)(4) (except to the extent they are referred to in chapter 11-279 or subchapters C, F, G, or H of chapter 11-266).

(3) A generator accumulating waste on-site in compliance with section 11-262-34;

(4) A farmer disposing of waste pesticides from his or her own use in compliance with section 11-262-70; or

(5) The owner or operator of a totally enclosed treatment facility, as defined in section 11-260-10.

(6) The owner or operator of an elementary neutralization unit or a wastewater treatment unit as defined in section 11-260-10, provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 High TOC Subcategory defined in section 11-268-40, Table Treatment Standards for Hazardous Wastes), or reactive (D003) waste, to remove the characteristic before land disposal, the owner/operator must comply with the requirements set out in subsection 11-264-17(b).

(7) (Reserved)

(8) (i) Except as provided in subparagraph (g)(8)(ii) of this section, a person engaged in treatment or containment activities during immediate response to any of the following situations:

(A) A discharge of a hazardous waste;

(B) An imminent and substantial threat of a discharge of hazardous waste;

(C) A discharge of a material which, when discharged, becomes a hazardous waste;

(D) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in section 11-260-10.

(ii) An owner or operator of a facility otherwise regulated by this chapter must comply with all applicable requirements of subchapters C and D.

(iii) Any person who is covered by subparagraph (g)(8)(i) and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this chapter and chapters 11-270 and 11-271 for those activities.

(iv) In the case of an explosives or munitions emergency response, if a federal, State, or local official acting within the scope of his or her official responsibilities, or an explosives or munitions emergency response specialist, determines that immediate removal of the material or waste is necessary to protect human health or the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have EPA identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

(9) A transporter storing 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.

(10) The addition of absorbent material to waste in a container (as defined in section 11-260-10) or the addition of waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container; and subsection 11-264-17(b), sections 11-264-171, and 11-264-172 are complied with.

(11) Universal waste handlers and universal waste transporters (as defined in section 11-260-10) handling the wastes listed below. These handlers are subject to regulation under chapter 11-273, when handling the below listed universal wastes.

(i) Batteries as described in section 11-273-2;

(ii) Pesticides as described in section 11-273-3; and

(iii) Thermostats as described in section 11-273-4.

(h) The requirements of this chapter apply to owners or operators of all facilities which treat, store, or dispose of hazardous wastes referred to in chapter 11-268.

(i) Section 11-266-205 identifies when the requirements of this chapter apply to the storage of military munitions classified as solid waste under section 11-266-202. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in chapters 11-260 through 11-270.

(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). [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1)

§11-264-2 [Reserved]

§11-264-3 Relationship to interim status standards. A facility owner or operator who has fully complied with the requirements for interim status -- as defined in HRS section 342J-30(b) and regulations under section 11-270-70 -- must comply with the regulations specified in chapter 11-265 in lieu of the regulations in this chapter, until final administrative disposition of his permit application is made, except as provided under subchapter S of chapter 11-264. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.3)

§11-264-4 Imminent hazard action. Notwithstanding any other provisions of these rules, enforcement actions may be brought pursuant to HRS section 342J-8. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.4)

SUBCHAPTER B

GENERAL FACILITY STANDARDS

§11-264-10 Applicability. (a) The rules in this subchapter apply to owners and operators of all hazardous waste facilities, except as provided in section 11-264-1 and in subsection (b) of this section.

(b) Subsection 11-264-18(b) applies only to facilities subject to regulation under subchapters I through O and subchapter X. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.10)

§11-264-11 Identification number. Every facility owner or operator must apply to the State for an EPA identification number in accordance with State notification procedures. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.11)

§11-264-12 Required notices.

(a)(1) The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the director and the Regional Administrator in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

(2) The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to chapter 11-262, subchapter H must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), United States Environmental Protection Agency, 401 M St., SW., Washington, DC 20460; and to the competent authorities of all other concerned countries within three working days of receipt of the shipment. The original of the signed tracking document must be maintained at the facility for at least three years.

(b) The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.

(c) Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of this chapter and chapter 11-270.

(d) Any person who imports hazardous waste into the State from any state or foreign country must comply with section 11-262-60 or 11-262-61. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.12)

§11-264-13 General waste analysis. (a) Waste analysis.

(1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or non-hazardous wastes if applicable under subsection 11-264-113(d), he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with this chapter and chapter 11-268.

(2) The analysis may include data developed under chapter 11-261, and existing published or documented data on

the hazardous waste or on hazardous waste generated from similar processes.

(3) The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:

(i) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous wastes, or non-hazardous wastes if applicable under subsection 11-264-113(d), has changed; and

(ii) For off-site facilities, when the results of the inspection required in paragraph (a)(4) indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

(4) The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he or she will carry out to comply with subsection (a). He or she must keep this plan at the facility. At a minimum, the plan must specify:

(1) The parameters for which each hazardous waste, or non-hazardous waste if applicable under subsection 11-264-113(d), will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with subsection (a));

(2) The test methods which will be used to test for these parameters;

(3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(i) One of the sampling methods described in Appendix I of chapter 11-261; or

(ii) (Reserved)

(4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and

(5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply.

(6) Where applicable, the methods that will be used to meet the additional waste analysis requirements for specific waste management methods as specified in sections 11-264-17, 11-264-314, 11-264-341, subsections 11-264-1034(d), 11-264-1063(d), and sections 11-264-1083, 11-268-7.

(7) For surface impoundments exempted from land disposal restrictions under subsection 11-268-4(a), the procedures and schedules for:
  (i) The sampling of impoundment contents;
  (ii) The analysis of test data; and,
  (iii) The annual removal of residues which are not delisted under section 11-260-22 or which exhibit a characteristic of hazardous waste and either:
    (A) Do not meet applicable treatment standards of chapter 11-268, subchapter D; or
    (B) Where no treatment standards have been established;
      (1) Such residues are prohibited from land disposal under section 11-268-32 or section 3004(d) of RCRA (42 U.S.C. 6924), as amended; or
      (2) Such residues are prohibited from land disposal under subsection 11-268-33(f).

(8) For owners and operators seeking an exemption to the air emission standards of subchapter CC in accordance with section 11-264-1082--
  (i) If direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption.
  (ii) If knowledge of the waste is used for the waste determination, any information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from off site, that is used as the basis for knowledge of the waste.

(c) For off-site facilities, the waste analysis plan required in subsection (b) must also specify the procedures which will be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

(1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

(2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

(3) The procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container. [Eff 6/18/94; am

3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.13)

§11-264-14 Security. (a) The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, unless he can demonstrate to the director that:

(1) Physical contact with the waste, structures, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and

(2) Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this chapter.

(b) Unless the owner or operator has made a successful demonstration under paragraphs (a)(1) and (a)(2), a facility must have:

(1) A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the active portion of the facility; or

(2) (i) An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff), which completely surrounds the active portion of the facility; and

(ii) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility).

(c) Unless the owner or operator has made a successful demonstration under paragraphs (a)(1) and (a)(2), a sign with the legend, ''Danger -- Unauthorized Personnel Keep Out'', must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend must be written in English and must be legible from a distance of at least 25 feet. Existing signs with a legend other than ''Danger -- Unauthorized Personnel Keep Out'' may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.14)

§11-264-15 General inspection requirements. (a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing --- or may lead to --- (1) release of hazardous waste constituents to the environment or (2) a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

(b) (1) The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

(2) He or she must keep this schedule at the facility.

(3) The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).

(4) The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in sections 11-264-174, 11-264-193, 11-264-195, 11-264-226, 11-264-254, 11-264-278, 11-264-303, 11-264-347, 11-264-602, 11-264-1033, 11-264-1052, 11-264-1053, 11-264-1058, and 11-264-1083 through 11-264-1089, where applicable.

(c) The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

(d) The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.15)

§11-264-16 Personnel training.

(a)(1) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this chapter. The owner or operator must ensure that this program includes all the elements described in the document required under paragraph (d)(3) .

(2) This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

(3) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

(i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

(ii) Key parameters for automatic waste feed cut-off systems;

(iii) Communications or alarm systems;

(iv) Response to fires or explosions;

(v) Response to ground-water contamination incidents; and

(vi) Shutdown of operations.

(b) Facility personnel must successfully complete the program required in subsection (a) within six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired prior to or after the effective date of these rules must not work in unsupervised positions until they have completed the training requirements of subsection (a).

(c) Facility personnel must take part in an annual review of the initial training required in subsection (a).

(d) The owner or operator must maintain the following documents and records at the facility:

(1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

(2) A written job description for each position listed under paragraph (d)(1). This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other

qualifications, and duties of employees assigned to each position;

(3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under paragraph (d)(1);

(4) Records that document that the training or job experience required under subsections (a), (b), and (c) has been given to, and completed by, facility personnel.

(e) Training records on current personnel must be kept until closure of the facility; training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.16)

§11-264-17 General requirements for ignitable, reactive, or incompatible wastes. (a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. ''No Smoking'' signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

(b) Where specifically required by other sections of this chapter, the owner or operator of a facility that treats, stores or disposes ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:

(1) Generate extreme heat or pressure, fire or explosions, or violent reactions;

(2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;

(3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

(4) Damage the structural integrity of the device or facility;

(5) Through other like means threaten human health or the environment.

(c) When required to comply with subsections (a) or (b), the owner or operator must document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses (as specified in section 11-264-13), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.17)

§11-264-18 Location standards. (a) Seismic considerations:

(1) Portions of new facilities where treatment, storage, or disposal of hazardous waste will be conducted must not be located within 61 meters (200 feet) of a fault which has had displacement in Holocene time.

(2) As used in paragraph (a)(1):

(i) ''Fault'' means a fracture along which rocks on one side have been displaced with respect to those on the other side.

(ii) ''Displacement'' means the relative movement of any two sides of a fault measured in any direction.

(iii) ''Holocene'' means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene to the present.

(b) Floodplains:

(1) A facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood, unless the owner or operator can demonstrate to the director's satisfaction that:

(i) Procedures are in effect which will cause the waste to be removed safely, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to flood waters; or

(ii) For existing surface impoundments, waste piles, land treatment units, landfills, and miscellaneous units, no adverse effects on human health or the environment will result if washout occurs, considering:

(A) The volume and physical and chemical characteristics of the waste in the facility;

(B) The concentration of hazardous constituents that would potentially affect surface waters as a result of washout;

(C) The impact of such concentrations on the current or potential uses of and water quality standards established for the affected surface waters; and

(D) The impact of hazardous constituents on the sediments of affected surface waters or the soils of the 100-year floodplain that could result from washout.

(2) As used in paragraph (b)(1):

(i) ''100-year floodplain'' means any land area which is subject to a one percent or greater chance of flooding in any given year from any source.

(ii) ''Washout'' means the movement of hazardous waste from the active portion of the facility as a result of flooding.

(iii) ''100-year flood'' means a flood that has a one percent chance of being equalled or exceeded in any given year.

(c) Salt dome formations, salt bed formations, underground mines and caves. The placement of any non-containerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine or cave is prohibited. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.18)

§11-264-19 <u>Construction quality assurance program.</u> (a) CQA program.

(1) A construction quality assurance (CQA) program is required for all surface impoundment, waste pile, and landfill units that are required to comply with subsections 11-264-221(c), 11-264-221(d), 11-264-251(c), 11-264-251(d), 11-264-301(c) and 11-264-301(d). The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

(2) The CQA program must address the following physical components, where applicable:

(i) Foundations;

(ii) Dikes;

(iii) Low-permeability soil liners;

(iv) Geomembranes (flexible membrane liners);

(v) Leachate collection and removal systems and leak detection systems; and

(vi) Final cover systems.

(b) Written CQA plan. The owner or operator of units subject to the CQA program under subsection (a) must develop and implement a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:

(1) Identification of applicable units, and a description of how they will be constructed.

(2) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.

(3) A description of inspection and sampling activities for all unit components identified in paragraph (a)(2), including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover: Sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials; plans for implementing corrective measures; and data or other information to be recorded and retained in the operating record under section 11-264-73.

(c) Contents of program.

(1) The CQA program must include observations, inspections, tests, and measurements sufficient to ensure:

(i) Structural stability and integrity of all components of the unit identified in paragraph (a)(2);

(ii) Proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit specifications and good engineering practices, and proper installation of all components (e.g., pipes) according to design specifications;

(iii) Conformity of all materials used with design and other material specifications under sections 11-264-221, 11-264-251, and 11-264-301.

(2) The CQA program shall include test fills for compacted soil liners, using the same compaction methods as in the full scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of clauses 11-264-221(c)(1)(i)(B), 11-264-251(c)(1)(i)(B), and 11-264-301(c)(1)(i)(B) in the field. Compliance with the hydraulic conductivity requirements must be verified by using in-situ testing on the constructed test fill. The director may accept an alternative demonstration, in lieu of a test fill, where data are sufficient to show that a constructed soil liner will meet the hydraulic conductivity requirements of clauses 11-264-221(c)(1)(i)(B), 11-264-251-(c)(1)(i)(B), and 11-264-301(c)(1)(i)(B) in the field.

(d) Certification. Waste shall not be received in a unit subject to section 11-264-19 until the owner or operator has submitted to the director by certified mail or hand delivery a certification signed by the CQA officer that the approved CQA plan has been successfully carried out and that the unit meets the requirements of subsection 11-264-221(c) or (d), 11-264-251(c) or (d), or 11-264-301(c) or (d); and the procedure in paragraph 11-270-30(1)(2)(ii) has been completed. Documentation supporting the CQA officer's certification must be furnished to the director upon request. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.19)

SUBCHAPTER C

PREPAREDNESS AND PREVENTION

§11-264-30 Applicability. The rules in this subchapter apply to owners and operators of all hazardous waste facilities, except as section 11-264-1 provides otherwise. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.30)

§11-264-31 Design and operation of facility. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.31)

§11-264-32 Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the director that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

(b) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as

that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.32)

§11-264-33 Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.33)

§11-264-34 Access to communications or alarm system. (a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the director has ruled that such a device is not required under section 11-264-32.

(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless the director has ruled that such a device is not required under section 11-264-32. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.34)

§11-264-35 Required aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the director that aisle space is not needed for any of these purposes. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.35)

§11-264-36 [Reserved]

§11-264-37 Arrangements with local authorities. (a) The owner or operator must attempt to make the following

arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:

(1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(2) Where more than one police and fire department or station might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department or station, and agreements with any others to provide support to the primary emergency authority;

(3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

(4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(b) Where State or county authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. 264.37)

SUBCHAPTER D

CONTINGENCY PLAN AND EMERGENCY PROCEDURES

§11-264-50 Applicability. The rules in this subchapter apply to owners and operators of all hazardous waste facilities, except as section 11-264-1 provides otherwise. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.50)

§11-264-51 Purpose and implementation of contingency plan.

(a) Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

(b) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.51)

§11-264-52 Content of contingency plan. (a) The contingency plan must describe the actions facility personnel must take to comply with sections 11-264-51 and 11-264-56 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.

(b) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with 40 CFR part 112, or 5 CFR part 1510, or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this chapter.

(c) The plan must describe arrangements agreed to by County police departments, fire departments, hospitals, contractors, and State and County emergency response teams to coordinate emergency services, pursuant to section 11-264-37.

(d) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see section 11-264-55), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. For new facilities, this information must be supplied to the director at the time of certification, rather than at the time of permit application.

(e) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(f) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. 264.52)

§11-264-53 Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:

(a) Maintained at the facility; and

(b) Submitted to the appropriate County police departments, fire departments, hospitals, and State and County emergency response teams that may be called upon to provide emergency services. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.53)

§11-264-54 Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

(a) The facility permit is revised;

(b) The plan fails in an emergency;

(c) The facility changes -- in its design, construction, operation, maintenance, or other circumstances -- in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

(d) The list of emergency coordinators changes; or

(e) The list of emergency equipment changes. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.54)

§11-264-55 Emergency coordinator. At all times, there must be at least one employee either on the facility 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. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.55)

§11-264-56 Emergency procedures. (a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

(1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(2) Notify appropriate State or County agencies with designated response roles if their help is needed.

(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).

(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he or she must report his or her findings as follows:

(1) If his or her assessment indicates that evacuation of local areas may be advisable, he or she must immediately notify appropriate State and county authorities. He or she must be available to help appropriate officials decide whether local areas should be evacuated; and

(2) He or she must immediately notify either the government official designated as the on-scene coordinator from 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 or the federal National Response Center (using their 24-hour toll free number (800) 424-8802). The report must include:

(i) Name and telephone number of reporter;

(ii) Name and address of facility;

(iii) Time and type of incident (e.g., release, fire);

(iv) Name and quantity of material(s) involved, to the extent known;

(v) The extent of injuries, if any; and

(vi) The possible hazards to human health, or the environment, outside the facility.

(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

(f) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for

leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The owner or operator must notify the director, and appropriate State and county authorities, that the facility is in compliance with subsection (h) before operations are resumed in the affected area(s) of the facility.

(j) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, he must submit a written report on the incident to the director. The report must include:

(1) Name, address, and telephone number of the owner or operator;

(2) Name, address, and telephone number of the facility;

(3) Date, time, and type of incident (e.g., fire, explosion);

(4) Name and quantity of material(s) involved;

(5) The extent of injuries, if any;

(6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(7) Estimated quantity and disposition of recovered material that resulted from the incident. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342-34, 342J-35) (Imp: 40 C.F.R. §264.56)

SUBCHAPTER E

MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

§11-264-70 Applicability. The rules in this subchapter apply to owners and operators of both on-site and off-site facilities, except as section 11-264-1 provides otherwise. Sections 11-264-71, 11-264-72, and 11-264-76 do not apply to owners and operators of on-site facilities that do not receive

any hazardous waste from off-site sources, and to owners and operators of off-site facilities with respect to waste military munitions exempted from manifest requirements under section 11-266-203(a). Subsection 11-264-73(b) only applies to permittees who treat, store, or dispose of hazardous wastes on-site where such wastes were generated. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.70)

§11-264-71 Use of manifest system. (a) If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or his or her agent, must:

(1) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;

(2) Note any significant discrepancies in the manifest (as defined in subsection 11-264-72(a)) on each copy of the manifest;

(Note: The department does not intend that the owner or operator of a facility whose procedures under section 11-264-13(c) include waste analysis must perform that analysis before signing the manifest and giving it to the transporter. Subsection 11-264-72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.)

(3) Immediately give the transporter at least one copy of the signed manifest;

(4) Within thirty days after the delivery, send a copy of the manifest to the generator; and

(5) Retain at the facility a copy of each manifest for at least three years from the date of delivery.

(b) If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator's certification, and signatures), the owner or operator, or his or her agent, must:

(1) Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received;

(2) Note any significant discrepancies (as defined in subsection 11-264-72(a)) in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper.

(Note: The department does not intend that the owner or operator of a facility whose procedures under section 11-264-13(c) include waste analysis must perform that analysis before signing the shipping paper

and giving it to the transporter. Subsection 11-264-72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.)

(3) Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper (if the manifest has not been received);

(4) Within thirty days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within thirty days after delivery, the owner or operator, or his or her agent, must send a copy of the shipping paper signed and dated to the generator; and (Note: Subsection 11-262-23(c) requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).)

(5) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years from the date of delivery.

(c) Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of chapter 11-262. (Note: The provisions of section 11-262-34 are applicable to the on-site accumulation of hazardous wastes 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.)

(d) Within three working days of the receipt of a shipment subject to chapter 11-262, subchapter H, the owner or operator of the facility must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), United States Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, and to competent authorities of all other concerned countries. The original copy of the tracking document must be maintained at the facility for at least three years from the date of signature. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.71)

§11-264-72 Manifest discrepancies. (a) Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are:

(1) For bulk waste, variations greater than ten percent in weight, and (2) for batch waste, any variation in piece

count, such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

(b) Upon discovering a significant discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within fifteen days after receiving the waste, the owner or operator must immediately submit to the director a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.72)

§11-264-73 Operating record. (a) The owner or operator must keep a written operating record at his facility.

(b) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

(1) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by Appendix I;

(2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross-references to specific manifest document numbers, if the waste was accompanied by a manifest;

(3) Records and results of waste analyses and waste determinations performed as specified in sections 11-264-13, 11-264-17, 11-264-314, 11-264-341, 11-264-1034, 11-264-1063, 11-264-1083, subsection 11-268-4(a), and section 11-268-7.

(4) Summary reports and details of all incidents that require implementing the contingency plan as specified in subsection 11-264-56(j);

(5) Records and results of inspections as required by subsection 11-264-15(d) (except these data need be kept only three years);

(6) Monitoring, testing or analytical data, and corrective action where required by subchapter F and sections 11-264-19, 11-264-191, 11-264-193, 11-264-195, 11-264-222, 11-264-223, 11-264-226, 11-264-252 -- 11-264-254, 11-

264-276, 11-264-278, 11-264-280, 11-264-302 -- 11-264-304, 11-264-309, 11-264-347, 11-264-602, subsections 11-264-1034(c) -- 11-264-1034(f), section 11-264-1035, subsections 11-264-1063(d) -- 11-264-1063(i), section 11-264-1064, and 11-264-1082 through 11-264-1090.

(7) For off-site facilities, notices to generators as specified in subsection 11-264-12(b); and

(8) All closure cost estimates under section 11-264-142, and, for disposal facilities, all post-closure cost estimates under section 11-264-144.

(9) A certification by the permittee no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that he or she generates to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.

(10) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to 40 CFR 268.5 or a petition pursuant to 40 CFR 268.6, and the applicable notice required by a generator under subsection 11-268-7(a);

(Note: Federal approvals granted pursuant to 40 CFR 268.5 or 40 CFR 268.6 do not constitute approvals by the State unless the department adopts the approval by rules. See section 11-268-51.)

(11) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under section 11-268-7 or 40 CFR 268.8;

(12) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under section 11-268-7 or 40 CFR 268.8;

(13) For an off-site land disposal facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under section 11-268-7 and 40 CFR 268.8, whichever is applicable; and

(14) For an on-site land disposal facility, the information contained in the notice required by the generator or owner or operator of a treatment facility under section 11-268-7, except for the manifest number, and the

certification and demonstration if applicable, required under 40 CFR 268.8, whichever is applicable.

(15) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under section 11-268-7 or 40 CFR 268.8; and

(16) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under section 11-268-7 or 40 CFR 268.8. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.73)

§11-264-74 Availability, retention, and disposition of records. (a) All records, including plans, required under this chapter must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the department who is duly designated by the director.

(b) The retention period for all records required under this chapter is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the director.

(c) A copy of records of waste disposal locations and quantities under paragraph 11-264-73(b)(2) must be submitted to the director and county land authority upon closure of the facility. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.74)

§11-264-75 Biennial report. The owner or operator 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 EPA Form 8700-13B (see Appendix X). The report must cover facility activities during the previous calendar year and must include:

(a) The EPA identification number, name, and address of the facility;

(b) The calendar year covered by the report;

(c) For off-site facilities, the EPA identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report must give the name and address of the foreign generator;

(d) A description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information must be listed by EPA identification number of each generator;

(e) The method of treatment, storage, or disposal for each hazardous waste;
(f) [Reserved]
(g) The most recent closure cost estimate under section 11-264-142, and, for disposal facilities, the most recent post-closure cost estimate under section 11-264-144; and
(h) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.
(i) For generators who treat, store, or dispose of hazardous waste on-site, 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 the years prior to 1984.
(j) The certification signed by the owner or operator of the facility or his authorized representative. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.75)

§11-264-76 Unmanifested waste report. If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described in paragraph 11-263-20(e)(2), and if the waste is not excluded from the manifest requirement by section 11-261-5, then the owner or operator must prepare and submit a single copy of a report to the director within fifteen days after receiving the waste. The unmanifested waste report must be submitted on EPA form 8700-13B. Such report must be designated 'Unmanifested Waste Report' and include the following information:
(a) The EPA identification number, name, and address of the facility;
(b) The date the facility received the waste;
(c) The EPA identification number, name, and address of the generator and the transporter, if available;
(d) A description and the quantity of each unmanifested hazardous waste and facility received;
(e) The method of treatment, storage, or disposal for each hazardous waste;
(f) The certification signed by the owner or operator of the facility or his authorized representative; and
(g) A brief explanation of why the waste was unmanifested, if known. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.76)

§11-264-77 Additional reports. In addition to submitting the biennial reports and unmanifested waste reports described in 11-264-75 and 11-264-76, the owner or operator must also report to the director:

(a) Releases, fires, and explosions as specified in subsection 11-264-56(j);

(b) Facility closures specified in section 11-264-115; and

(c) As otherwise required by subchapters F, K through N, AA, BB, and CC. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.77)

SUBCHAPTER F

RELEASES FROM SOLID WASTE MANAGEMENT UNITS

§11-264-90 Applicability. (a) Applicability.

(1) Except as provided in subsection (b), the rules in this subchapter apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in paragraph (a)(2) for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units.

(2) All solid waste management units must comply with the requirements in section 11-264-101. A surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after July 26, 1982 (hereinafter referred to as a ''regulated unit'') must comply with the requirements of sections 11-264-91 through 11-264-100 in lieu of 11-264-101 for purposes of detecting, characterizing and responding to releases to the uppermost aquifer. The financial responsibility requirements of section 11-264-101 apply to regulated units.

(b) The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under this subchapter if:

(1) The owner or operator is exempted under section 11-264-1; or

(2) He operates a unit which the director finds:

(i) Is an engineered structure,

(ii) Does not receive or contain liquid waste or waste containing free liquids,

(iii) Is designed and operated to exclude liquid, precipitation, and other run-on and run-off,

(iv) Has both inner and outer layers of containment enclosing the waste,

(v) Has a leak detection system built into each containment layer,

(vi) The owner or operator will provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and post-closure care periods, and

(vii) To a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the post-closure care period.

(3) The director finds, pursuant to subsection 11-264-280(d), that the treatment zone of a land treatment unit that qualifies as a regulated unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of section 11-264-278 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under this paragraph can only relieve an owner or operator of responsibility to meet the requirements of this subchapter during the post-closure care period; or

(4) The director finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the post-closure care period specified under section 11-264-117. This demonstration must be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator must base any predictions made under this paragraph on assumptions that maximize the rate of liquid migration.

(5) He designs and operates a pile in compliance with subsection 11-264-250(c).

(c) The rules under this subchapter apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the rules in this subchapter:

(1) Do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;

(2) Apply during the post-closure care period under section 11-264-117 if the owner or operator is conducting a detection monitoring program under section 11-264-98; or

(3) Apply during the compliance period under section 11-264-96 if the owner or operator is conducting a

compliance monitoring program under section 11-264-99 or a corrective action program under section 11-264-100.

(d) Regulations in this subchapter may apply to miscellaneous units when necessary to comply with sections 11-264-601 through 11-264-603. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.90)

§11-264-91 Required programs. (a) Owners and operators subject to this subchapter must conduct a monitoring and response program as follows:

(1) Whenever hazardous constituents under section 11-264-93 from a regulated unit are detected at a compliance point under section 11-264-95, the owner or operator must institute a compliance monitoring program under section 11-264-99. Detected is defined as statistically significant evidence of contamination as described in subsection 11-264-98(f);

(2) Whenever the ground-water protection standard under section 11-264-92 is exceeded, the owner or operator must institute a corrective action program under section 11-264-100. Exceeded is defined as statistically significant evidence of increased contamination as described in subsection 11-264-99(d);

(3) Whenever hazardous constituents under section 11-264-93 from a regulated unit exceed concentration limits under section 11-264-94 in ground water between the compliance point under section 11-264-95 and the down-gradient facility property boundary, the owner or operator must institute a corrective action program under section 11-264-100; or

(4) In all other cases, the owner or operator must institute a detection monitoring program under section 11-264-98.

(b) The director will specify in the facility permit the specific elements of the monitoring and response program. The director may include one or more of the programs identified in subsection (a) in the facility permit as may be necessary to protect human health and the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the director will consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.91)

§11-264-92 Ground-water protection standard. The owner or operator must comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under section 11-264-93 detected in the ground water from a regulated unit do not exceed the concentration limits under section 11-264-94 in the uppermost aquifer underlying the waste management area beyond the point of compliance under section 11-264-95 during the compliance period under section 11-264-96. The director will establish this ground-water protection standard in the facility permit when hazardous constituents have been detected in the ground water. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.92)

§11-264-93 Hazardous constituents. (a) The director will specify in the facility permit the hazardous constituents to which the ground-water protection standard of section 11-264-92 applies. Hazardous constituents are constituents identified in Appendix VIII of chapter 11-261 that have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the director has excluded them under subsection (b).

(b) The director will exclude an Appendix VIII constituent from the list of hazardous constituents specified in the facility permit if he finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the director will consider the following:

(1) Potential adverse effects on ground-water quality, considering:

(i) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground-water flow;

(iv) The proximity and withdrawal rates of ground-water users;

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

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

(ix) The persistence and permanence of the potential adverse effects; and

(2) Potential adverse effects on hydraulically-connected surface water quality, considering:

(i) The volume and physical and chemical characteristics of the waste in the regulated unit;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the regulated unit to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

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

(x) The persistence and permanence of the potential adverse effects.

(c) In making any determination under subsection (b) about the use of ground water in the area around the facility, the director will consider any identification of underground sources of drinking water and exempted aquifers made under 40 CFR 144.8. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.93)

§11-264-94 <u>Concentration limits.</u> (a) The director will specify in the facility permit concentration limits in the ground water for hazardous constituents established under section 11-264-93. The concentration of a hazardous constituent:

(1) Must not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit; or

(2) For any of the constituents listed in Table 1, must not exceed the respective value given in that table if the background level of the constituent is below the value given in Table 1; or

Table 1 – Maximum Concentration of Constituents for Ground-water Protection

Constituent	Maximum concentration[1]
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo, endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenylethane)	0.1
Toxaphene ($C_{10}H_{10}Cl_6$, Technical chlorinated camphene, 67-69 percent chlorine)	0.005
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01

FOOTNOTE: [1]Milligrams per liter.

(3) Must not exceed an alternate limit established by the director under subsection (b).

(b) The director will establish an alternate concentration limit for a hazardous constituent if he finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the director will consider the following factors:

(1) Potential adverse effects on ground-water quality, considering:

(i) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground-water flow;

(iv) The proximity and withdrawal rates of ground-water users;

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

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

(ix) The persistence and permanence of the potential adverse effects; and

(2) Potential adverse effects on hydraulically-connected surface-water quality, considering:

(i) The volume and physical and chemical characteristics of the waste in the regulated unit;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the regulated unit to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

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

(x) The persistence and permanence of the potential adverse effects.

(c) In making any determination under paragraph (b) about the use of ground water in the area around the facility the director will consider any identification of underground sources of drinking water and exempted aquifers made under 40 CFR 144.8. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.94)

§11-264-95 Point of compliance. (a) The director will specify in the facility permit the point of compliance at which the ground-water protection standard of section 11-264-92 applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically down-gradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.

(b) The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.

(1) The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.

(2) If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.95)

§11-264-96 Compliance period. (a) The director will specify in the facility permit the compliance period during which the ground-water protection standard of section 11-264-92 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period.)

(b) The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of section 11-264-99.

(c) If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in paragraph (a), the compliance period is extended until the owner or operator can demonstrate that the ground-water protection standard of section 11-264-92 has not been exceeded for a period of three consecutive years. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.96)

§11-264-97 General ground-water monitoring requirements. The owner or operator must comply with the following requirements for any ground-water monitoring program developed to satisfy 11-264-98, 11-264-99, or 11-264-100:

(a) The ground-water monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths to yield ground-water samples from the uppermost aquifer that:

(1) Represent the quality of background water that has not been affected by leakage from a regulated unit;

(i) A determination of background quality may include sampling of wells that are not hydraulically up-gradient of the waste management area where:

(A) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; and

(B) Sampling at other wells will provide an indication of background ground-water quality that is representative or more representative than that provided by the up-gradient wells; and

(2) Represent the quality of ground water passing the point of compliance.

(3) Allow for the detection of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer.

(b) If a facility contains more than one regulated unit, separate ground-water monitoring systems are not required for each regulated unit provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.

(c) All monitoring wells must be cased in a manner that maintains the integrity of the monitoring-well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground-water samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground water.

(d) The ground-water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground-water quality below the waste management area. At a minimum the program must include procedures and techniques for:

(1) Sample collection;

(2) Sample preservation and shipment;

(3) Analytical procedures; and

(4) Chain of custody control.

(e) The ground-water monitoring program must include sampling and analytical methods that are appropriate for ground-water sampling and that accurately measure hazardous constituents in ground-water samples.

(f) The ground-water monitoring program must include a determination of the ground-water surface elevation each time ground water is sampled.

(g) In detection monitoring or where appropriate in compliance monitoring, data on each hazardous constituent specified in the permit will be collected from background wells and wells at the compliance point(s). The number and kinds of samples collected to establish background shall be appropriate for the form of statistical test employed, following generally accepted statistical principles. The sample size shall be as large as necessary to ensure with reasonable confidence that a contaminant release to ground water from a facility will be detected. The owner or operator will determine an appropriate sampling procedure and interval for each hazardous constituent listed in the facility permit which shall be specified in the unit permit upon approval by the director. This sampling procedure shall be:

(1) A sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained, by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants, or

(2) an alternate sampling procedure proposed by the owner or operator and approved by the director.

(h) The owner or operator will specify one of the following statistical methods to be used in evaluating ground-water monitoring data for each hazardous constituent which, upon approval by the director, will be specified in the unit permit. The statistical test chosen shall be conducted separately for each hazardous constituent in each well. Where practical quantification limits (pql's) are used in any of the following statistical procedures to comply with paragraph (i)(5), the pql must be proposed by the owner or operator and approved by the director. Use of any of the following statistical methods must be protective of human health and the environment and must comply with the performance standards outlined in subsection (i).

(1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(4) A control chart approach that gives control limits for each constituent.

(5) Another statistical test method submitted by the owner or operator and approved by the director.

(i) Any statistical method chosen under subsection (h) for specification in the unit permit shall comply with the following performance standards, as appropriate:

(1) The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the

owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experimentwise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals or control charts.

(3) If a control chart approach is used to evaluate ground-water monitoring data, the specific type of control chart and its associated parameter values shall be proposed by the owner or operator and approved by the director if he or she finds it to be protective of human health and the environment.

(4) If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be proposed by the owner or operator and approved by the director if he or she finds these parameters to be protective of human health and the environment. These parameters will be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantification limit (pql) approved by the director under subsection (h) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

(j) Ground-water monitoring data collected in accordance with subsection (g) including actual levels of constituents must be maintained in the facility operating record. The director will specify in the permit when the data must be submitted for review. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.97)

§11-264-98 Detection monitoring program. An owner or operator required to establish a detection monitoring program under this subchapter must, at a minimum, discharge the following responsibilities:

(a) The owner or operator must monitor for indicator parameters (e.g., specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The director will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

(1) The types, quantities, and concentrations of constituents in wastes managed at the regulated unit;

(2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;

(3) The detectability of indicator parameters, waste constituents, and reaction products in ground water; and

(4) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground-water background.

(b) The owner or operator must install a ground-water monitoring system at the compliance point as specified under section 11-264-95. The ground-water monitoring system must comply with paragraph 11-264-97(a)(2), and subsections 11-264-97(b) and (c).

(c) The owner or operator must conduct a ground-water monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to subsection (a) in accordance with 11-264-97(g). The owner or operator must maintain a record of ground-water analytical data as measured and in a form necessary for the determination of statistical significance under subsection 11-264-97(h).

(d) The director will specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit under subsection (a) in accordance with subsection 11-264-97(g). A sequence of at least four samples from each well (background and compliance wells) must be collected at least semi-annually during detection monitoring.

(e) The owner or operator must determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

(f) The owner or operator must determine whether there is statistically significant evidence of contamination for any chemical parameter of hazardous constituent specified in the permit pursuant to subsection (a) at a frequency specified under subsection (d).

(1) In determining whether statistically significant evidence of contamination exists, the owner or operator must use the method(s) specified in the permit under subsection 11-264-97(h). These method(s) must compare data collected at the compliance point(s) to the background ground-water quality data.

(2) The owner or operator must determine whether there is statistically significant evidence of contamination at each monitoring well as the compliance point within a reasonable period of time after completion of sampling. The director will specify in the facility permit what period of time is reasonable, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

(g) If the owner or operator determines pursuant to subsection (f) that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to subsection (a) at any monitoring well at the compliance point, he or she must:

(1) Notify the director of this finding in writing within seven days. The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination;

(2) Immediately sample the ground water in all monitoring wells and determine whether constituents in the list of Appendix IX of chapter 11-264 are present, and if so, in what concentration.

(3) For any Appendix IX compounds found in the analysis pursuant to paragraph (g)(2), the owner or operator may resample within one month and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds found pursuant to paragraph (g)(2), the hazardous constituents found during this initial Appendix IX analysis will form the basis for compliance monitoring.

(4) Within ninety days, submit to the director an application for a permit modification to establish a

compliance monitoring program meeting the requirements of section 11-264-99. The application must include the following information:

(i) An identification of the concentration of any Appendix IX constituent detected in the ground water at each monitoring well at the compliance point;

(ii) Any proposed changes to the ground-water monitoring system at the facility necessary to meet the requirements of section 11-264-99;

(iii) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of section 11-264-99;

(iv) For each hazardous constituent detected at the compliance point, a proposed concentration limit under paragraphs 11-264-94(a)(1) or (a)(2), or a notice of intent to seek an alternate concentration limit under subsection 11-264-94(b); and

(5) Within one-hundred and eighty days, submit to the director:

(i) All data necessary to justify an alternate concentration limit sought under subsection 11-264-94(b); and

(ii) An engineering feasibility plan for a corrective action program necessary to meet the requirement of section 11-264-100, unless:

(A) All hazardous constituents identified under paragraph (g)(2) are listed in Table 1 of section 11-264-94 and their concentrations do not exceed the respective values given in that Table; or

(B) The owner or operator has sought an alternate concentration limit under subsection 11-264-94(b) for every hazardous constituent identified under paragraph (g)(2).

(6) If the owner or operator determines, pursuant to subsection (f), that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to subsection (a) at any monitoring well at the compliance point, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. The owner or operator may make a demonstration under this subsection in addition to, or in lieu of, submitting a permit

modification application under paragraph (g)(4); however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in paragraph (g)(4) unless the demonstration made under this subsection successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this subsection, the owner or operator must:

(i) Notify the director in writing within seven days of determining statistically significant evidence of contamination at the compliance point that he intends to make a demonstration under this subsection;

(ii) Within ninety days, submit a report to the director which demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;

(iii) Within ninety days, submit to the director an application for a permit modification to make any appropriate changes to the detection monitoring program facility; and

(iv) Continue to monitor in accordance with the detection monitoring program established under this section.

(h) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this section, he or she must, within ninety days, submit an application for a permit modification to make any appropriate changes to the program. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.98)

§11-264-99 <u>Compliance monitoring program.</u> An owner or operator required to establish a compliance monitoring program under this subchapter must, at a minimum, discharge the following responsibilities:

(a) The owner or operator must monitor the ground water to determine whether regulated units are in compliance with the ground-water protection standard under section 11-264-92. The director will specify the ground-water protection standard in the facility permit, including:

(1) A list of the hazardous constituents identified under section 11-264-93;

(2) Concentration limits under section 11-264-94 for each of those hazardous constituents;

(3) The compliance point under section 11-264-95; and

(4) The compliance period under section 11-264-96.

(b) The owner or operator must install a ground-water monitoring system at the compliance point as specified under section 11-264-95. The ground-water monitoring system must comply with paragraph 11-264-97(a)(2) and subsections 11-264-97(b) and (c).

(c) The director will specify the sampling procedures and statistical methods appropriate for the constituents and the facility, consistent with subsections 11-264-97(g) and (h).

(1) The owner or operator must conduct a sampling program for each chemical parameter or hazardous constituent in accordance with subsection 11-264-97(g).

(2) The owner or operator must record ground-water analytical data as measured and in form necessary for the determination of statistical significance under subsection 11-264-97(h) for the compliance period of the facility.

(d) The owner or operator must determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in the permit, pursuant to subsection (a), at a frequency specified under subsection (f).

(1) In determining whether statistically significant evidence of increased contamination exists, the owner or operator must use the method(s) specified in the permit under subsection 11-264-97(h). The method(s) must compare data collected at the compliance point(s) to a concentration limit developed in accordance with section 11-264-94.

(2) The owner or operator must determine whether there is statistically significant evidence of increased contamination at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The director will specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

(e) The owner or operator must determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

(f) The director will specify the frequencies for collecting samples and conducting statistical tests to determine statistically significant evidence of increased contamination in accordance with subsection 11-264-97(g). A sequence of at least four samples from each well (background and compliance wells) must be collected at least semi-annually during the compliance period of the facility.

(g) The owner or operator must analyze samples from all monitoring wells at the compliance point for all constituents

contained in Appendix IX of chapter 11-264 at least annually to determine whether additional hazardous constituents are present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in subsection 11-264-98(f). If the owner or operator finds Appendix IX constituents in the ground water that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month and repeat the Appendix IX analysis. If the second analysis confirms the presence of new constituents, the owner or operator must report the concentration of these additional constituents to the director within seven days after the completion of the second analysis and add them to the monitoring list. If the owner or operator chooses not to resample, then he or she must report the concentrations of these additional constituents to the director within seven days after completion of the initial analysis and add them to the monitoring list.

(h) If the owner or operator determines pursuant to subsection (d) that any concentration limits under section 11-264-94 are being exceeded at any monitoring well at the point of compliance he or she must:

(1) Notify the director of this finding in writing within seven days. The notification must indicate what concentration limits have been exceeded.

(2) Submit to the director an application for a permit modification to establish a corrective action program meeting the requirements of section 11-264-100 within one hundred and eighty days, or within ninety days if an engineering feasibility study has been previously submitted to the director under paragraph 11-264-98(h)(5). The application must at a minimum include the following information:

(i) A detailed description of corrective actions that will achieve compliance with the ground water protection standard specified in the permit under subsection (a); and

(ii) A plan for a ground-water monitoring program that will demonstrate the effectiveness of the corrective action. Such a ground-water monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.

(i) If the owner or operator determines, pursuant to subsection (d), that the ground-water concentration limits under this section are being exceeded at any monitoring well at the point of compliance, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. In making a demonstration under this subsection, the owner or operator must:

(1) Notify the director in writing within seven days that he intends to make a demonstration under this subsection;
(2) Within ninety days, submit a report to the director which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation;
(3) Within ninety days, submit to the director an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility; and
(4) Continue to monitor in accord with the compliance monitoring program established under this section.

(j) If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of this section, he must, within ninety days, submit an application for a permit modification to make any appropriate changes to the program. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.99)

§11-264-100 Corrective action program. An owner or operator required to establish a corrective action program under this subchapter must, at a minimum, discharge the following responsibilities:

(a) The owner or operator must take corrective action to ensure that regulated units are in compliance with the ground-water protection standard under section 11-264-92. The director will specify the ground-water protection standard in the facility permit, including:
(1) A list of the hazardous constituents identified under section 11-264-93;
(2) Concentration limits under section 11-264-94 for each of those hazardous constituents;
(3) The compliance point under section 11-264-95; and
(4) The compliance period under section 11-264-96.

(b) The owner or operator must implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken.

(c) The owner or operator must begin corrective action within a reasonable time period after the ground-water protection standard is exceeded. The director will specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will

begin and such a requirement will operate in lieu of paragraph 11-264-99(i)(2).

(d) In conjunction with a corrective action program, the owner or operator must establish and implement a ground-water monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under section 11-264-99 and must be as effective as that program in determining compliance with the ground-water protection standard under section 11-264-92 and in determining the success of a corrective action program under subsection (e), where appropriate.

(e) In addition to the other requirements of this section, the owner or operator must conduct a corrective action program to remove or treat in place any hazardous constituents under section 11-264-93 that exceed concentration limits under section 11-264-94 in groundwater:

(1) Between the compliance point under section 11-264-95 and the down-gradient property boundary; and

(2) Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.

(3) Corrective action measures under this section must be initiated and completed within a reasonable period of time considering the extent of contamination.

(4) Corrective action measures under this section may be terminated once the concentration of hazardous constituents under section 11-264-93 is reduced to levels below their respective concentration limits under section 11-264-94.

(f) The owner or operator must continue corrective action measures during the compliance period to the extent necessary to ensure that the ground-water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he must continue that corrective action for as long as necessary to achieve compliance with the ground-water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if he can demonstrate, based on data from the ground-water monitoring program under subsection (d), that the

ground-water protection standard of section 11-264-92 has not been exceeded for a period of three consecutive years.

(g) The owner or operator must report in writing to the director on the effectiveness of the corrective action program. The owner or operator must submit these reports semi-annually.

(h) If the owner or operator determines that the corrective action program no longer satisfies the requirements of this section, he must, within ninety days, submit an application for a permit modification to make any appropriate changes to the program. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.100)

§11-264-101 Corrective action for solid waste management units. (a) The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.

(b) Corrective action will be specified in the permit in accordance with this section and subchapter S of this chapter. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.

(c) The owner or operator must implement corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action must be provided. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.101)

SUBCHAPTER G

CLOSURE AND POST-CLOSURE

§11-264-110 Applicability. Except as section 11-264-1 provides otherwise:

(a) Sections 11-264-111 through 11-264-115 (which concern closure) apply to the owners and operators of all hazardous waste management facilities; and

(b) Sections 11-264-116 through 11-264-120 (which concern post-closure care) apply to the owners and operators of:

(1) All hazardous waste disposal facilities;

(2) Waste piles and surface impoundments from which the owner or operator intends to remove the wastes at closure to the extent that these sections are made applicable to such facilities in section 11-264-228 or section 11-264-258;

(3) Tank systems that are required under section 11-264-197 to meet the requirements for landfills; and

(4) Containment buildings that are required under section 11-264-1102 to meet the requirement for landfills. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.110)

§11-264-111 Closure performance standard. The owner or operator must close the facility in a manner that:

(a) Minimizes the need for further maintenance; and

(b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and

(c) Complies with the closure requirements of this subchapter, including, but not limited to, the requirements of sections 11-264-178, 11-264-197, 11-264-228, 11-264-258, 11-264-280, 11-264-310, 11-264-351, and 11-264-601 through 11-264-603, and 11-264-1102. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.111)

§11-264-112 Closure plan; amendment of plan. (a) Written plan.

(1) The owner or operator of a hazardous waste management facility must have a written closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous waste at partial or final closure are required by subparagraph 11-264-228(c)(1)(i) and subparagraph 11-264-258(c)(1)(i) to have contingent closure plans. The plan must be submitted with the permit application, in accordance

with paragraph 11-270-14(b)(13), and approved by the director as part of the permit issuance procedures under chapter 11-271. In accordance with section 11-270-32, the approved closure plan will become a condition of any hazardous waste management permit.

(2) The director's approval of the plan must ensure that the approved closure plan is consistent with sections 11-264-111 through 11-264-115 and the applicable requirements of subchapter F of this chapter, sections 11-264-178, 11-264-197, 11-264-228, 11-264-258, 11-264-280, 11-264-310, 11-264-351, 11-264-601, and 11-264-1102. Until final closure is completed and certified in accordance with section 11-264-115, a copy of the approved plan and all approved revisions must be furnished to the director upon request, including requests by mail.

(b) Content of plan. The plan must identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The closure plan must include, at least:

(1) A description of how each hazardous waste management unit at the facility will be closed in accordance with section 11-264-111;

(2) A description of how final closure of the facility will be conducted in accordance with section 11-264-111. The description must identify the maximum extent of the operations which will be unclosed during the active life of the facility; and

(3) An estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial closures and final closure, including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all hazardous wastes, and identification of the type(s) of the off-site hazardous waste management units to be used, if applicable; and

(4) A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard; and

(5) A detailed description of other activities necessary during the closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to,

ground-water monitoring, leachate collection, and run-on and run-off control; and

(6) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure. (For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover must be included.)

(7) For facilities that use trust funds to establish financial assurance under section 11-264-143 or section 11-264-145 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure.

(c) Amendment of plan. The owner or operator must submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in chapters 11-271 and 11-270. The written notification or request must include a copy of the amended closure plan for review or approval by the director.

(1) The owner or operator may submit a written notification or request to the director for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility.

(2) The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved closure plan whenever:

(i) Changes in operating plans or facility design affect the closure plan, or

(ii) There is a change in the expected year of closure, if applicable, or

(iii) In conducting partial or final closure activities, unexpected events require a modification of the approved closure plan.

(3) The owner or operator must submit a written request for a permit modification including a copy of the amended closure plan for approval at least sixty days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator must request a permit modification no later than thirty days after the

unexpected event. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to prepare a contingent closure plan under subparagraph 11-264-228(c)(1)(i) or subparagraph 11-264-258(c)(1)(i), must submit an amended closure plan to the director no later than sixty days from the date that the owner or operator or director determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of section 11-264-310, or no later than thirty days from that date if the determination is made during partial or final closure. The director will approve, disapprove, or modify this amended plan in accordance with the procedures in chapters 11-271 and 11-270. In accordance with section 11-270-32, the approved closure plan will become a condition of any RCRA or State hazardous waste management permit issued.

(4) The director may request modifications to the plan under the conditions described in paragraph 11-264-112(c)(2). The owner or operator must submit the modified plan within sixty days of the director's request, or within thirty days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the director will be approved in accordance with the procedures in chapters 11-271 and 11-270.

(d) Notification of partial closure and final closure.

(1) The owner or operator must notify the director in writing at least sixty days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, land treatment or landfill unit, or final closure of a facility with such a unit. The owner or operator must notify the director in writing at least forty-five days prior to the date on which he expects to begin final closure of a facility with only treatment or storage tanks, container storage, or incinerator units to be closed. The owner operator must notify the director in writing at least forty-five days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace, whichever is earlier.

(2) The date when he ''expects to begin closure'' must be either:

(i) No later than thirty days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one

year after the date on which the unit received the most recent volume of hazardous wastes. If the owner or operator of a hazardous waste management unit can demonstrate to the director that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he has taken all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the director may approve an extension to this one-year limit; or

(ii) For units meeting the requirements of subsection 11-264-113(d), no later than thirty days after the date on which the hazardous waste management unit receives the known final volume of non-hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional non-hazardous wastes, no later than one year after the date on which the unit received the most recent volume of non-hazardous wastes. If the owner or operator can demonstrate to the director that the hazardous waste management unit has the capacity to receive additional non-hazardous wastes and he has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the director may approve an extension to this one-year limit.

(3) If the facility's permit is terminated, or if the facility is otherwise ordered, by judicial decree or administrative order under HRS section 342J-7, to cease receiving hazardous wastes or to close, then the requirements of this subsection do not apply. However, the owner or operator must close the facility in accordance with the deadlines established in section 11-264-113.

(e) Removal of wastes and decontamination or dismantling of equipment. Nothing in this section shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.112)

§11-264-113 <u>Closure; time allowed for closure.</u> (a) Within ninety days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or

operator complies with all applicable requirements in subsections (d) and (e), at a hazardous waste management unit or facility, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The director may approve a longer period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(1) (i) The activities required to comply with this subsection will, of necessity, take longer than ninety days to complete; or

(ii) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with subsections (d) and (e); and

(B) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements.

(b) The owner or operator must complete partial and final closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in subsections (d) and (e), at the hazardous waste management unit or facility. The director may approve an extension to the closure period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(1) (i) The partial or final closure activities will, of necessity, take longer than 180 days to complete; or

(ii) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with subsections (d) and (e); and

(B) There is reasonable likelihood that he or another person will recommence operation of

the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable permit requirements.

(c) The demonstrations referred to in paragraphs (a)(1) and (b)(1) must be made as follows:

(1) The demonstrations in paragraph (a)(1) must be made at least thirty days prior to the expiration of the ninety day period in subsection (a); and

(2) The demonstration in paragraph (b)(1) must be made at least thirty days prior to the expiration of the one-hundred and eighty day period in subsection (b), unless the owner or operator is otherwise subject to the deadlines in subsection (d).

(d) The director may allow an owner or operator to receive only non-hazardous wastes in a landfill, land treatment, or surface impoundment unit after the final receipt of hazardous wastes at that unit if:

(1) The owner or operator requests a permit modification in compliance with all applicable requirements in chapters 11-270 and 11-271 and in the permit modification request demonstrates that:

(i) The unit has the existing design capacity as indicated on the part A application to receive non-hazardous wastes; and

(ii) There is a reasonable likelihood that the owner or operator or another person will receive non-hazardous wastes in the unit within one year after the final receipt of hazardous wastes; and

(iii) The non-hazardous wastes will not be incompatible with any remaining wastes in the unit, or with the facility design and operating requirements of the unit or facility under this chapter; and

(iv) Closure of the hazardous waste management unit would be incompatible with continued operation of the unit or facility; and

(v) The owner or operator is operating and will continue to operate in compliance with all applicable permit requirements; and

(2) The request to modify the permit includes an amended waste analysis plan, ground-water monitoring and response program, human exposure assessment required under 42 U.S.C. section 6939a (1984), and closure and post-closure plans, and updated cost estimates and

demonstrations of financial assurance for closure and post-closure care as necessary and appropriate, to reflect any changes due to the presence of hazardous constituents in the non-hazardous wastes, and changes in closure activities, including the expected year of closure if applicable under paragraph 11-264-112(b)(7), as a result of the receipt of non-hazardous wastes following the final receipt of hazardous wastes; and

(3) The request to modify the permit includes revisions, as necessary and appropriate, to affected conditions of the permit to account for the receipt of non-hazardous wastes following receipt of the final volume of hazardous wastes; and

(4) The request to modify the permit and the demonstrations referred to in paragraphs (d)(1) and (d)(2) are submitted to the director no later than one-hundred and twenty days prior to the date on which the owner or operator of the facility receives the known final volume of hazardous wastes at the unit, or no later than ninety days after the effective date of this rule, whichever is later.

(e) In addition to the requirements in subsection (d), an owner or operator of a hazardous waste surface impoundment that is not in compliance with the liner and leachate collection system requirements in 42 U.S.C. sections 6924(o)(1) and 6925(j)(1) (1984) or 42 U.S.C. section 6924(o)(2) or (3) or section 6925(j)(2), (3), (4) or (13) (1984) must:

(1) Submit with the request to modify the permit:

(i) A contingent corrective measures plan, unless a corrective action plan has already been submitted under section 11-264-99; and

(ii) A plan for removing hazardous wastes in compliance with paragraph (e)(2); and

(2) Remove all hazardous wastes from the unit by removing all hazardous liquids, and removing all hazardous sludges to the extent practicable without impairing the integrity of the liner(s), if any.

(3) Removal of hazardous wastes must be completed no later than ninety days after the final receipt of hazardous wastes. The director may approve an extension to this deadline if the owner or operator demonstrates that the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete and that an extension will not pose a threat to human health and the environment.

(4) If a release that is a statistically significant increase (or decrease in the case of pH) over background values for detection monitoring parameters or constituents specified in the permit or that exceeds the facility's ground-water protection standard at the

point of compliance, if applicable, is detected in accordance with the requirements in subchapter F, the owner or operator of the unit:

(i) Must implement corrective measures in accordance with the approved contingent corrective measures plan required by paragraph (e)(1) no later than one year after detection of the release, or approval of the contingent corrective measures plan, whichever is later;

(ii) May continue to receive wastes at the unit following detection of the release only if the approved corrective measures plan includes a demonstration that continued receipt of wastes will not impede corrective action; and

(iii) May be required by the director to implement corrective measures in less than one year or to cease the receipt of wastes until corrective measures have been implemented if necessary to protect human health and the environment.

(5) During the period of corrective action, the owner or operator shall provide semi-annual reports to the director that describe the progress of the corrective action program, compile all ground-water monitoring data, and evaluate the effect of the continued receipt of non-hazardous wastes on the effectiveness of the corrective action.

(6) The director may require the owner or operator to commence closure of the unit if the owner or operator fails to implement corrective action measures in accordance with the approved contingent corrective measures plan within one year as required in paragraph (e)(4), or fails to make substantial progress in implementing corrective action and achieving the facility's ground-water protection standard or background levels if the facility has not yet established a ground-water protection standard.

(7) If the owner or operator fails to implement corrective measures as required in paragraph (e)(4), or if the director determines that substantial progress has not been made pursuant to paragraph (e)(6) he shall:

(i) Notify the owner or operator in writing that the owner or operator must begin closure in accordance with the deadlines in subsections (a) and (b) and provide a detailed statement of reasons for this determination, and

(ii) Provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the decision no later than twenty days after the date of the notice.

(iii) If the director receives no written comments, the decision will become final five days after the close of the comment period. The director will notify the owner or operator that the decision is final, and that a revised closure plan, if necessary, must be submitted within fifteen days of the final notice and that closure must begin in accordance with the deadlines in subsections (a) and (b).

(iv) If the director receives written comments on the decision, he shall make a final decision within thirty days after the end of the comment period, and provide the owner or operator in writing and the public through a newspaper notice, a detailed statement of reasons for the final decision. If the director determines that substantial progress has not been made, closure must be initiated in accordance with the deadlines in subsections (a) and (b).

(v) [Reserved] [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.113)

§11-264-114 Disposal or decontamination of equipment, structures and soils. During the partial and final closure periods, all contaminated equipment, structures and soils must be properly disposed of or decontaminated unless otherwise specified in sections 11-264-197, 11-264-228, 11-264-258, 11-264-280 or 11-264-310. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that waste in accordance with all applicable requirements of chapter 11-262. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.114)

§11-264-115 Certification of closure. Within sixty days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within sixty days of the completion of final closure, the owner or operator must submit to the director, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the director upon request until he releases the owner or operator from the financial assurance requirements for

closure under subsection 11-264-143(i). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.115)

§11-264-116 Survey plat. No later than the submission of the certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the County and local zoning authority, or the authority with jurisdiction over local land use, and to the director, a survey plat indicating the location and dimensions of landfills cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the county zoning authority, or the authority with jurisdiction over local land use, must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable subchapter G regulations. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.116)

§11-264-117 Post-closure care and use of property.

(a)(1) Post-closure care for each hazardous waste management unit subject to the requirements of sections 11-264-117 through 11-264-120 must begin after completion of closure of the unit and continue for thirty years after that date and must consist of at least the following:

(i) Monitoring and reporting in accordance with the requirements of subchapters F, K, L, M, N and X; and

(ii) Maintenance and monitoring of waste containment systems in accordance with the requirements of subchapters F, K, L, M, N, and X.

(2) Any time preceding partial closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular unit, the director may, in accordance with the permit modification procedures in chapters 11-271 and 11-270:

(i) Shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if he finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or ground-water monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate

that the hazardous waste management unit or facility is secure); or

(ii) Extend the post-closure care period applicable to the hazardous waste management unit or facility if he finds that the extended period is necessary to protect human health and the environment (e.g., leachate or ground-water monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

(b) The director may require, at partial and final closure, continuation of any of the security requirements of section 11-264-14 during part or all of the post-closure period when:

(1) Hazardous wastes may remain exposed after completion of partial or final closure; or

(2) Access by the public or domestic livestock may pose a hazard to human health.

(c) Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring systems, unless the director finds that the disturbance:

(1) Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

(2) Is necessary to reduce a threat to human health or the environment.

(d) All post-closure care activities must be in accordance with the provisions of the approved post-closure plan as specified in section 11-264-118. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.117)

§11-264-118 <u>Post-closure plan; amendment of plan.</u> (a) Written Plan. The owner or operator of a hazardous waste disposal unit must have a written post-closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous wastes at partial or final closure are required by subparagraphs 11-264-228(c)(1)(ii) and 11-264-258(c)(1)(ii) to have contingent post-closure plans. Owners or operators of surface impoundments and waste piles not otherwise required to prepare contingent post-closure plans under subparagraphs 11-264-228(c)(1)(ii) and 11-264-258(c)(1)(ii) must submit a post-closure plan to the director within ninety days from the date that the owner or operator or director determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of sections 11-264-117 through 11-264-120. The plan

must be submitted with the permit application, in accordance with paragraph 11-270-14(b)(13), and approved by the director as part of the permit issuance procedures under chapter 11-271. In accordance with section 11-270-32, the approved post-closure plan will become a condition of any hazardous waste management permit issued.

(b) For each hazardous waste management unit subject to the requirements of this section, the post-closure plan must identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:

(1) A description of the planned monitoring activities and frequencies at which they will be performed to comply with subchapters F, K, L, M, N, and X during the post-closure care period; and

(2) A description of the planned maintenance activities, and frequencies at which they will be performed, to ensure:

(i) The integrity of the cap and final cover or other containment systems in accordance with the requirements of subchapters F, K, L, M, N, and X; and

(ii) The function of the monitoring equipment in accordance with the requirements of subchapters F, K, L, M, N, and X; and

(3) The name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.

(c) Until final closure of the facility, a copy of the approved post-closure plan must be furnished to the director upon request, including request by mail. After final closure has been certified, the person or office specified in paragraph 11-264-188(b)(3) must keep the approved post-closure plan during the remainder of the post-closure period.

(d) Amendment of plan. The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan in accordance with the applicable requirements in chapters 11-271 and 11-270. The written notification or request must include a copy of the amended post-closure plan for review or approval by the director.

(1) The owner or operator may submit a written notification or request to the director for a permit modification to amend the post-closure plan at any time during the active life of the facility or during the post-closure care period.

(2) The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan whenever:

(i) Changes in operating plans or facility design affect the approved post-closure plan, or
(ii) There is a change in the expected year of final closure, if applicable, or
(iii) Events which occur during the active life of the facility, including partial and final closures, affect the approved post-closure plan.

(3) The owner or operator must submit a written request for a permit modification at least sixty days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the post-closure plan. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to submit a contingent post-closure plan under subparagraphs 11-264-228(c)(1)(ii) and 11-264-258(c)(1)(ii) must submit a post-closure plan to the director no later than ninety days after the date that the owner or operator or director determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of section 11-264-310. The director will approve, disapprove or modify this plan in accordance with the procedures in chapters 11-271 and 11-270. In accordance with section 11-270-32, the approved post-closure plan will become a permit condition.

(4) The director may request modifications to the plan under the conditions described in paragraph 11-264-118(d)(2). The owner or operator must submit the modified plan no later than sixty days after the director's request, or no later than ninety days if the unit is a surface impoundment or waste pile not previously required to prepare a contingent post-closure plan. Any modifications requested by the director will be approved, disapproved, or modified in accordance with the procedures in chapters 11-271 and 11-270. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.118)

§11-264-119 <u>Post-closure notices.</u> (a) No later than sixty days after certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the county zoning authority, or the authority with jurisdiction over local land use, and to the director a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed of before January 12, 1981, the owner or operator must

identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.

(b) Within sixty days of certification of closure of the first hazardous waste disposal unit and within sixty days of certification of closure of the last hazardous waste disposal unit, the owner or operator must:

(1) Record, in accordance with State law, a notation on the deed to the facility property -- or on some other instrument which is normally examined during title search -- that will in perpetuity notify any potential purchaser of the property that:

(i) The land has been used to manage hazardous wastes; and

(ii) Its use is restricted under subchapter G regulations; and

(iii) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by section 11-264-116 and subsection 11-264-119(a) have been filed with the county zoning authority or the authority with jurisdiction over local land use and with the director; and

(2) Submit a certification, signed by the owner or operator, that he has recorded the notation specified in paragraph (b)(1), including a copy of the document in which the notation has been placed, to the director.

(c) If the owner or operator or any subsequent owner or operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, he must request a modification to the post-closure permit in accordance with the applicable requirements in chapters 11-271 and 11-270. The owner or operator must demonstrate that the removal of hazardous wastes will satisfy the criteria of subsection 11-264-117(c). By removing hazardous waste, the owner or operator may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of chapters 11-260 through 11-271. If he is granted a permit modification or otherwise granted approval to conduct such removal activities, the owner or operator may request that the director approve either:

(1) The removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

(2) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.119)

§11-264-120 Certification of completion of post-closure care. No later than sixty days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the director, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the director upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under subsection 11-264-145(i). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.120)

SUBCHAPTER H

FINANCIAL REQUIREMENTS

§11-264-140 Applicability. (a) The requirements of sections 11-264-142, 11-264-143, and 11-264-147 through 11-264-151 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this section or in section 11-264-1.

(b) The requirements of sections 11-264-144 and 11-264-145 apply only to owners and operators of:

(1) Disposal facilities;

(2) Piles, and surface impoundments from which the owner or operator intends to remove the wastes at closure, to the extent that these sections are made applicable to such facilities in sections 11-264-228 and 11-264-258;

(3) Tank systems that are required section 11-264-197 to meet the requirements for landfills; and

(4) Containment buildings that are required under section 11-264-1102 to meet the requirements for landfills.

(c) The State and the federal government are exempt from the requirements of this subchapter. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.140)

§11-264-141 Definitions of terms as used in this subchapter. (a) ''Closure plan'' means the plan for closure prepared in accordance with the requirements of section 11-264-112.

(b) ''Current closure cost estimate'' means the most recent of the estimates prepared in accordance with subsections 11-264-142(a), (b), and (c).

(c) ''Current post-closure cost estimate'' means the most recent of the estimates prepared in accordance with subsections 11-264-144(a), (b), and (c).

(d) ''Parent corporation'' means a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a ''subsidiary'' of the parent corporation.

(e) ''Post-closure plan'' means the plan for post-closure care prepared in accordance with the requirements of sections 11-264-117 through 11-264-120.

(f) The following terms are used in the specifications for the financial tests for closure, post-closure care, and liability coverage. The definitions are intended to assist in the understanding of these rules and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.

''Assets'' means all existing and all probable future economic benefits obtained or controlled by a particular entity.

''Current assets'' means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

''Current liabilities'' means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

''Current plugging and abandonment cost estimate'' means the most recent of the estimates prepared in accordance with 40 CFR 144.62(a), (b), and (c) (1998).

''Independently audited'' refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

''Liabilities'' means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

''Net working capital'' means current assets minus current liabilities.

''Net worth'' means total assets minus total liabilities and is equivalent to owner's equity.

''Tangible net worth'' means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

(g) In the liability insurance requirements the terms ''bodily injury'' and ''property damage'' shall have the meanings given these terms by applicable State law. However, these terms do not include those liabilities which, consistent with standard

industry practices, are excluded from coverage in liability policies for bodily injury and property damage. The department intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings within the insurance industry. The definitions given below of several of the terms are intended to assist in the understanding of these rules and are not intended to limit their meanings in a way that conflicts with general insurance industry usage.

''Accidental occurrence'' means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.

''Legal defense costs'' means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

''Nonsudden accidental occurrence'' means an occurrence which takes place over time and involves continuous or repeated exposure.

''Sudden accidental occurrence'' means an occurrence which is not continuous or repeated in nature.

(h) ''Substantial business relationship'' means the extent of a business relationship necessary under applicable State law to make a guarantee contract issued incident to that relationship valid and enforceable. A ''substantial business relationship'' must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the director. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.141)

§11-264-142 <u>Cost estimate for closure.</u> (a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in sections 11-264-111 through 11-264-115 and applicable closure requirements in sections 11-264-178, 11-264-197, 11-264-228, 11-264-258, 11-264-280, 11-264-310, 11-264-351, 11-264-601 through 11-264-603, and 11-264-1102.

(1) The estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see subsection 11-264-112(b)); and

(2) The closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in subsection 11-264-

141(d).) The owner or operator may use costs for on-site disposal if he can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.

(3) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous wastes, or non-hazardous wastes if applicable under subsection 11-264-113(d), facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.

(4) The owner or operator may not incorporate a zero cost for hazardous wastes, or non-hazardous wastes if applicable under subsection 11-264-113(d), that might have economic value.

(b) During the active life of the facility, the owner or operator must adjust the closure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with section 11-264-143. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within thirty days after the close of the firm's fiscal year and before submission of updated information to the director as specified in paragraph 11-264-143(f)(3). The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in paragraphs (b)(1) and (2). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator must revise the closure cost estimate no later than thirty days after the director has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in subsection 11-264-142(b).

(d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with subsections 11-264-142 (a) and (c) and, when this estimate has been adjusted in accordance with subsection 11-264-142(b), the latest adjusted closure cost estimate. [Eff 6/18/94; comp SEP 20 1999] (Auth:

HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.142)

§11-264-143 Financial assurance for closure. An owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from the options as specified in subsections (a) through (f).

(a) Closure trust fund.

(1) An owner or operator may satisfy the requirements of this section by establishing a closure trust fund which conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the director. An owner or operator of a new facility must submit the originally signed duplicate of the trust agreement to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by the State.

(2) The wording of the trust agreement must be identical to the wording specified in paragraph 11-264-151(a)(1), and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see paragraph 11-264-151(a)(2)). Schedule A of the trust agreement must be updated within sixty days after a change in the amount of the current closure cost estimate covered by the agreement.

(3) Payments into the trust fund must be made annually by the owner or operator over the term of the initial RCRA or State hazardous waste management permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the ''pay-in period.'' The payments into the closure trust fund must be made as follows:

(i) For a new facility, the first payment must be made before the initial receipt of hazardous waste for treatment, storage, or disposal. A receipt from the trustee for this payment must be submitted by the owner or operator to the director before this initial receipt of hazardous waste. The first payment must be at least equal to the current closure cost estimate, except as provided in subsection 11-264-143(g), divided by the number of years in the pay-in period. Subsequent payments must be made no later than thirty days after each anniversary date of the first payment. The amount

of each subsequent payment must be determined by this formula:

$$\text{Next payment} = \frac{CE-CV}{Y}$$

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(ii) If an owner or operator establishes a trust fund as specified in subsection 11-265-143(a), and the value of that trust fund is less than the current closure cost estimate when a permit is awarded for the facility, the amount of the current closure cost estimate still to be paid into the trust fund must be paid in over the pay-in period as defined in paragraph (a)(3). Payments must continue to be made no later than thirty days after each anniversary date of the first payment made pursuant to chapter 11-265 . The amount of each payment must be determined by this formula:

$$\text{Next payment} = \frac{CE-CV}{Y}$$

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(4) The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in paragraph (a)(3).

(5) If the owner or operator establishes a closure trust fund after having used one or more alternate mechanisms specified in this section or in section 11-265-143, his first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to

specifications of this subsection and subsection 11-265-143(a), as applicable.

(6) After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within sixty days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference.

(7) If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the director for release of the amount in excess of the current closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he may submit a written request to the director for release of the amount in excess of the current closure cost estimate covered by the trust fund.

(9) Within sixty days after receiving a request from the owner or operator for release of funds as specified in paragraph (a)(7) or (8), the director will instruct the trustee to release to the owner or operator such funds as the director specifies in writing.

(10) After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursements for partial or final closure expenditures by submitting itemized bills to the director. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. Within sixty days after receiving bills for partial or final closure activities, the director will instruct the trustee to make reimbursements in those amounts as the director specifies in writing, if the director determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he may withhold reimbursements of such amounts as he deems prudent until he

determines, in accordance with subsection 11-264-143(i) that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the director does not instruct the trustee to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(11) The director will agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-143(i).

(b) Surety bond guaranteeing payment into a closure trust fund.

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the director. An owner or operator of a new facility must submit the bond to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in subsection 11-264-151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust fund must meet the requirements specified in subsection 11-264-143(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the director with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in subsection 11-264-143(a);

(B) Updating of Schedule A of the trust agreement (see subsection 11-264-151(a)) to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

(ii) Fund the standby trust fund in an amount equal to the penal sum within fifteen days after an administrative order to begin final closure issued by the director becomes final, or within 15 days after an order to begin final closure is issued by a court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in this section, and obtain the director's written approval of the assurance provided, within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond must be in an amount at least equal to the current closure cost estimate, except as provided in subsection 11-264-143(g).

(7) Whenever the current closure cost estimate increases to an amount greater then the penal sum, the owner or operator, within sixty days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the director.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the director has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this section.

(c) Surety bond guaranteeing performance of closure. (1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the director. An owner or operator of a new facility must submit the bond to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in subsection 11-264-151(c).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust must meet the requirements specified in subsection 11-264-143(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the director with the surety bond; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in subsection 11-264-143(a);

(B) Updating of Schedule A of the trust agreement (see subsection 11-264-151(a)) to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Perform final closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; or

(ii) Provide alternate financial assurance as specified in this section, and obtain the director's written approval of the assurance provided, within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

Following an administrative or judicial determination pursuant to HRS section 342J-7 that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform final closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.

(6) The penal sum of the bond must be in an amount at least equal to the current closure cost estimate.

(7) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the director.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the director has given prior written consent. The director will provide such written consent when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-143(i).

(10) The surety will not be liable for deficiencies in the performance of closure by the owner or operator after the director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-143(i).

(d) Closure letter of credit.

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this subsection and submitting the letter to the director. An owner or operator of a new facility must submit the letter of credit to the director at least sixty days

before the date on which hazardous waste is first received for treatment, storage, or disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or State agency.

(2) The wording of the letter of credit must be identical to the wording specified in subsection 11-264-151(d).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the director will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the director. This standby trust fund must meet the requirements of the trust fund specified in subsection 11-264-143(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the director with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in subsection 11-264-143(a);

(B) Updating of Schedule A of the trust agreement (see subsection 11-264-151(a)) to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA identification number, name, and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit.

(5) The letter of credit must be irrevocable and issued for a period of at least 1 year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least 1 year unless, at least one-hundred and twenty days before the current expiration date, the issuing institution notifies both the owner or operator and the director by certified mail of a decision not to extend the expiration date.

Under the terms of the letter of credit, the one-hundred and twenty days will begin on the date when both the owner or operator and the director have received the notice, as evidenced by the return receipts.

(6) The letter of credit must be issued in an amount at least equal to the current closure cost estimate, except as provided in subsection 11-264-143(g).

(7) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within sixty days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the director.

(8) Following an administrative or judicial determination pursuant to HRS section 342J-7 that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, the director may draw on the letter of credit.

(9) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the director will draw on the letter of credit. The director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty days of any such extension the director will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the director.

(10) The director will return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-143(i).

(e) Closure insurance.

(1) An owner or operator may satisfy the requirements of this section by obtaining closure insurance which conforms to the requirements of this subsection and submitting a certificate of such insurance to the director. An owner or operator of a new facility must submit the certificate of insurance to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

(2) The wording of the certificate of insurance must be identical to the wording specified in subsection 11-264-151(e).

(3) The closure insurance policy must be issued for a face amount at least equal to the current closure cost estimate, except as provided in subsection 11-264-143(g). The term ''face amount'' means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The closure insurance policy must guarantee that funds will be available to close the facility whenever final closure occurs. The policy must also guarantee that once final closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the director, to such party or parties as the director specifies.

(5) After beginning partial or final closure, an owner or operator or any other person authorized to conduct closure may request reimbursements for closure expenditures by submitting itemized bills to the director. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within sixty days after receiving bills for closure activities, the director will instruct the insurer to make reimbursements in such amounts as the director specifies in writing, if the director determines that the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified. If the director has reason to believe that the maximum cost of closure over the remaining life of the facility will be

significantly greater than the face amount of the policy, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with subsection 11-264-143(i), that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the director does not instruct the insurer to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(6) The owner or operator must maintain the policy in full force and effect until the director consents to termination of the policy by the owner or operator as specified in paragraph (e)(10). Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, will constitute a significant violation of these regulations, warranting such remedy as the director deems necessary. Such violation will be deemed to begin upon receipt by the director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the director. Cancellation, termination, or failure to renew may not occur, however, during the one-hundred and twenty days beginning with the date of receipt of the notice by both the director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

(i) The director deems the facility abandoned; or

(ii) The permit is terminated or revoked or a new permit is denied; or

(iii) Closure is ordered by the director or a court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within sixty days after the increase, must either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the director.

(10) The director will give written consent to the owner or operator that he may terminate the insurance policy when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-143(i).

(f) Financial test and corporate guarantee for closure.

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this subsection. To pass this test the owner or operator must meet the criteria of either subparagraph (f)(1)(i) or (ii):

(i) The owner or operator must have:

(A) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least ten million dollars; and

(D) Assets located in the United States amounting to at least ninety percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and

the current plugging and abandonment cost estimates.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least ten million dollars; and

(D) Assets located in the United States amounting to at least ninety percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase ''current closure and post-closure cost estimates'' as used in paragraph (f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (subsection 11-264-151(f)). The phrase ''current plugging and abandonment cost estimates'' as used in paragraph (f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (40 C.F.R. 144.70(f) (1998)).

(3) To demonstrate that he meets this test, the owner or operator must submit the following items to the director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in subsection 11-264-151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to

believe that the specified data should be adjusted.

(4) An owner or operator of a new facility must submit the items specified in paragraph (f)(3) to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal.

(5) After the initial submission of items specified in paragraph (f)(3), the owner or operator must send updated information to the director within ninety days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3).

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1), he must send notice to the director of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within one-hundred and twenty days after the end of such fiscal year.

(7) The director may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (f)(1), require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (f)(3). If the director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (f)(1), the owner or operator must provide alternate financial assurance as specified in this section within thirty days after notification of such a finding.

(8) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see subparagraph (f)(3)(ii)). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The director will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within thirty days after notification of the disallowance.

(9) The owner or operator is no longer required to submit the items specified in paragraph (f)(3) when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-143(i).

(10) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (8) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in subsection 11-264-151(h). The certified copy of the guarantee must accompany the items sent to the director as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(i) If the owner or operator fails to perform final closure of a facility covered by the corporate guarantee in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in subsection 11-264-143(a) in the name of the owner or operator.

(ii) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such

alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the owner or operator.

(g) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in subsections (a), (b), (d), and (e), respectively, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The director may use any or all of the mechanisms to provide for closure of the facility.

(h) Use of a financial mechanism for multiple facilities within the State. An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility within the State. Evidence of financial assurance submitted to the director must include a list showing, for each facility, the EPA identification number, name, address, and the amount of funds for closure assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any of the facilities covered by the mechanism, the director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(i) Release of the owner or operator from the requirements of this section. Within sixty days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the director will notify the owner or operator in writing that he is no longer

required by this section to maintain financial assurance for final closure of the facility, unless the director has reason to believe that final closure has not been in accordance with the approved closure plan. The director shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.143)

§11-264-144 Cost estimate for post-closure care. (a) The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment unit, or landfill unit, or of a surface impoundment or waste pile required under sections 11-264-228 and 11-264-258 to prepare a contingent closure and post-closure plan, must have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in sections 11-264-117 through 11-264-120, 11-264-228, 11-264-258, 11-264-280, 11-264-310, and 11-264-603.

(1) The post-closure cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in subsection 11-264-141(d).)

(2) The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under section 11-264-117.

(b) During the active life of the facility, the owner or operator must adjust the post-closure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with section 11-264-145. For owners or operators using the financial test or corporate guarantee, the post-closure cost estimate must be updated for inflation within thirty days after the close of the firm's fiscal year and before the submission of updated information to the director as specified in paragraph 11-264-145(f)(5). The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business as specified in paragraphs 11-264-145(b)(1) and (2). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the post-closure cost estimate by the inflation factor. The result is the adjusted post-closure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator must revise the post-closure cost estimate within thirty days after the director has approved the request to modify the post-closure plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate must be adjusted for inflation as specified in subsection 11-264-144(b).

(d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest post-closure cost estimate prepared in accordance with subsections 11-264-144 (a) and (c) and, when this estimate has been adjusted in accordance with subsection 11-264-144(b), the latest adjusted post-closure cost estimate. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.144)

§11-264-145 Financial assurance for post-closure care. The owner or operator of a hazardous waste management unit subject to the requirements of section 11-264-144 must establish financial assurance for post-closure care in accordance with the approved post-closure plan for the facility sixty days prior to the initial receipt of hazardous waste or the effective date of the hazardous waste regulations, whichever is later. He must choose from the following options:

(a) Post-closure trust fund.

(1) An owner or operator may satisfy the requirements of this section by establishing a post-closure trust fund which conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the director. An owner or operator of a new facility must submit the originally signed duplicate of the trust agreement to the director at least sixty days before the date on which hazardous waste is first received for disposal. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by the State.

(2) The wording of the trust agreement must be identical to the wording specified in paragraph 11-264-151(a)(1), and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see paragraph 11-264-151(a)(2)). Schedule A of the trust agreement must be updated within sixty days after a

change in the amount of the current post-closure cost estimate covered by the agreement.

(3) Payments into the trust fund must be made annually by the owner or operator over the term of the initial hazardous waste management permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the ''pay-in period.'' The payments into the post-closure trust fund must be made as follows:

(i) For a new facility, the first payment must be made before the initial receipt of hazardous waste for disposal. A receipt from the trustee for this payment must be submitted by the owner or operator to the director before this initial receipt of hazardous waste. The first payment must be at least equal to the current post-closure cost estimate, except as provided in subsection 11-264-145(g), divided by the number of years in the pay-in period. Subsequent payments must be made no later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by this formula:

$$\text{Next payment} = \frac{CE - CV}{Y}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(ii) If an owner or operator establishes a trust fund as specified in subsection 11-265-145(a), and the value of that trust fund is less than the current post-closure cost estimate when a permit is awarded for the facility, the amount of the current post-closure cost estimate still to be paid into the fund must be paid in over the pay-in period as defined in paragraph (a)(3). Payments must continue to be made no later than thirty days after each anniversary date of the first payment made pursuant to chapter 11-265. The amount of each payment must be determined by this formula:

$$\text{Next payment} = \frac{CE - CV}{Y}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(4) The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the current post-closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in paragraph (a)(3).

(5) If the owner or operator establishes a post-closure trust fund after having used one or more alternate mechanisms specified in this section or in section 11-265-145, his first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to specifications of this subsection and subsection 11-265-145(a), as applicable.

(6) After the pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within sixty days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference.

(7) During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the director for release of the amount in excess of the current post-closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he may submit a written request to the director for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.

(9) Within sixty days after receiving a request from the owner or operator for release of funds as specified in paragraph (a)(7) or (8), the director will instruct the trustee to release to the owner or operator such funds as the director specifies in writing.

(10) During the period of post-closure care, the director may approve a release of funds if the owner or operator demonstrates to the director that the value of the trust fund exceeds the remaining cost of post-closure care.

(11) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the director. Within sixty days after receiving bills for post-closure care activities, the director will instruct the trustee to make reimbursements in those amounts as the director specifies in writing, if the director determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the director does not instruct the trustee to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(12) The director will agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-145(i).

(b) Surety bond guaranteeing payment into a post-closure trust fund.

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the director. An owner or operator of a new facility must submit the bond to the director at least sixty days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in subsection 11-264-151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust fund must meet the requirements specified in subsection 11-264-145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the director with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in subsection 11-264-145(a);

(B) Updating of Schedule A of the trust agreement (see subsection 11-264-151(a)) to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

(ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin final closure issued by the director becomes final, or within fifteen days after an order to begin final closure is issued by a court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in this section, and obtain the director's written approval of the assurance provided, within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate, except as provided in subsection 11-264-145(g).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty days after the increase, must either cause the penal sum to be

increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the director.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the director has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this section.

(c) Surety bond guaranteeing performance of post-closure care.

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the director. An owner or operator of a new facility must submit the bond to the director at least sixty days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in subsection 11-264-151(c).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the director. This standby trust fund must meet the requirements specified in subsection 11-264-145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the director with the surety bond; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in subsection 11-264-145(a);
(B) Updating of Schedule A of the trust agreement (see subsection 11-264-151(a)) to show current post-closure cost estimates;
(C) Annual valuations as required by the trust agreement; and
(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:
(i) Perform post-closure care in accordance with the post-closure plan and other requirements of the permit for the facility; or
(ii) Provide alternate financial assurance as specified in this section, and obtain the director's written approval of the assurance provided, within ninety days of receipt by both the owner or operator and the director of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following an administrative or judicial determination pursuant to HRS section 342J-7 that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, under the terms of the bond the surety will perform post-closure care in accordance with the post-closure plan and other permit requirements or will deposit the amount of the penal sum into the standby trust fund.

(6) The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate.

(7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum during the operating life of the facility, the owner or operator, within sixty days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the director.

(8) During the period of post-closure care, the director may approve a decrease in the penal sum if the owner or

operator demonstrates to the director that the amount exceeds the remaining cost of post-closure care.

(9) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.

(10) The owner or operator may cancel the bond if the director has given prior written consent. The director will provide such written consent when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-145(i).

(11) The surety will not be liable for deficiencies in the performance of post-closure care by the owner or operator after the director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-145(i).

(d) Post-closure letter of credit.

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this subsection and submitting the letter to the director. An owner or operator of a new facility must submit the letter of credit to the director at least sixty days before the date on which hazardous waste is first received for disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or State agency.

(2) The wording of the letter of credit must be identical to the wording specified in subsection 11-264-151(d).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the director will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the director. This standby trust fund must meet the requirements of the trust fund specified in subsection 11-264-145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the director with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in subsection 11-264-145(a);

(B) Updating of Schedule A of the trust agreement (see subsection 11-264-151(a)) to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA identification number, name, and address of the facility, and the amount of funds assured for post-closure care of the facility by the letter of credit.

(5) The letter of credit must be irrevocable and issued for a period of at least 1 year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least 1 year unless, at least one-hundred and twenty days before the current expiration date, the issuing institution notifies both the owner or operator and the director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one-hundred and twenty days will begin on the date when both the owner or operator and the director have received the notice, as evidenced by the return receipts.

(6) The letter of credit must be issued in a amount at least equal to the current post-closure cost estimate, except as provided in subsection 11-264-145(g).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within sixty days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current post-closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the

facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the director.

(8) During the period of post-closure care, the director may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the director that the amount exceeds the remaining cost of post-closure care.

(9) Following an administrative or judicial determination pursuant to HRS section 342J-7 that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the director may draw on the letter of credit.

(10) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the director will draw on the letter of credit. The director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty days of any such extension the director will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the director.

(11) The director will return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-145(i).

(e) Post-closure insurance.

(1) An owner or operator may satisfy the requirements of this section by obtaining post-closure insurance which conforms to the requirements of this subsection and submitting a certificate of such insurance to the director. An owner or operator of a new facility must submit the certificate of insurance to the director at least sixty days before the date on which hazardous waste is first received for disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance, or

eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

(2) The wording of the certificate of insurance must be identical to the wording specified in subsection 11-264-151(e).

(3) The post-closure insurance policy must be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in subsection 11-264-145(g). The term ''face amount'' means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The post-closure insurance policy must guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The policy must also guarantee that once post-closure care begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the director, to such party or parties as the director specifies.

(5) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the director. Within sixty days after receiving bills for post-closure care activities, the director will instruct the insurer to make reimbursements in those amounts as the director specifies in writing, if the director determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the director does not instruct the insurer to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(6) The owner or operator must maintain the policy in full force and effect until the director consents to termination of the policy by the owner or operator as specified in paragraph (e)(11). Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, will constitute a significant violation of these rules, warranting such remedy as the director deems necessary. Such violation will be deemed to begin upon receipt by the director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon

consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the director. Cancellation, termination, or failure to renew may not occur, however, during the one-hundred and twenty days beginning with the date of receipt of the notice by both the director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

(i) The director deems the facility abandoned; or

(ii) The permit is terminated or revoked or a new permit is denied; or

(iii) Closure is ordered by the director or a court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within sixty days after the increase, must either cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the director.

(10) Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to eighty-five percent of the most recent investment rate or of the

equivalent coupon-issue yield announced by the U.S. Treasury for 26-week Treasury securities.

(11) The director will give written consent to the owner or operator that he may terminate the insurance policy when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-145(i).

(f) Financial test and corporate guarantee for post-closure care.

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this subsection. To pass this test the owner or operator must meet the criteria of either subparagraph (f)(1)(i) or (ii):

(i) The owner or operator must have:

(A) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least ten million dollars; and

(D) Assets in the United States amounting to at least ninety percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least ten million dollars; and

(D) Assets located in the United States amounting to at least ninety percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase ''current closure and post-closure cost estimates'' as used in paragraph (f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (subsection 11-264-151(f)). The phrase ''current plugging and abandonment cost estimates'' as used in paragraph (f)(1) refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (40 CFR 144.70(f) (1998)).

(3) To demonstrate that he meets this test, the owner or operator must submit the following items to the director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in subsection 11-264-151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility must submit the items specified in paragraph (f)(3) to the director at least sixty days before the date on which hazardous waste is first received for disposal.

(5) After the initial submission of items specified in paragraph (f)(3), the owner or operator must send updated information to the director within ninety days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3).

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1), he must send notice to the director of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within one-hundred and twenty days after the end of such fiscal year.

(7) The director may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (f)(1), require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (f)(3). If the director finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (f)(1), the owner or operator must provide alternate financial assurance as specified in this section within thirty days after notification of such a finding.

(8) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see subparagraph (f)(3)(ii)). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The director will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within thirty days after notification of the disallowance.

(9) During the period of post-closure care, the director may approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the director that the amount of the cost estimate exceeds the remaining cost of post-closure care.

(10) The owner or operator is no longer required to submit the items specified in paragraph (f)(3) when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The director releases the owner or operator from the requirements of this section in accordance with subsection 11-264-145(i).

(11) An owner or operator may meet the requirements for this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent

corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (9) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in subsection 11-264-151(h). A certified copy of the guarantee must accompany the items sent to the director as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(i) If the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in subsection 11-264-145(a) in the name of the owner or operator.

(ii) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the director. Cancellation may not occur, however, during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the director, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the director within ninety days after receipt by both the owner or operator and the director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

(g) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in subsections (a), (b), (d), and (e), respectively, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The director may use any or all of the mechanisms to provide for post-closure care of the facility.

(h) Use of a financial mechanism for multiple facilities within the State. An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility within the State. Evidence of financial assurance submitted to the director must include a list showing, for each facility, the EPA identification number, name, address, and the amount of funds for post-closure care assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(i) Release of the owner or operator from the requirements of this section. Within sixty days after receiving certifications from the owner or operator and an independent registered professional engineer that the post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the director will notify the owner or operator that he is no longer required to maintain financial assurance for post-closure care of that unit, unless the director has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The director shall provide the owner or operator with a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.145)

§11-264-146 Use of a mechanism for financial assurance of both closure and post-closure care. An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in both sections 11-264-143 and 11-264-145. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of post-closure care. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.146)

§11-264-147 Liability requirements. (a) Coverage for sudden accidental occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in paragraphs (a)(1), (2), (3), (4), (5), or (6):

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subsection.

(i) Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in subsection 11-264-151(i). The wording of the certificate of insurance must be identical to the wording specified in subsection 11-264-151(j). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the director. If requested by the director, the owner or operator must provide a signed duplicate original of the insurance policy. An owner or operator of a new facility must submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the director at least sixty days before the date on which hazardous waste is first

received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in subsections (f) and (g).

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in subsection (h).

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in subsection (i).

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in subsection (j).

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this subsection, the owner or operator shall specify at least one such assurance as ''primary'' coverage and shall specify other assurance as ''excess'' coverage.

(7) An owner or operator shall notify the director in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (a)(1) through (a)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability

coverage under paragraphs (a)(1) through (a)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (a)(1) through (a)(6) of this section.

(b) Coverage for nonsudden accidental occurrences. An owner or operator of a surface impoundment, landfill, land treatment facility, or disposal miscellaneous unit that is used to manage hazardous waste, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least $3 million per occurrence with an annual aggregate of at least $6 million, exclusive of legal defense costs. An owner or operator who must meet the requirements of this section may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences must maintain liability coverage in the amount of at least $4 million per occurrence and $8 million annual aggregate. This liability coverage may be demonstrated as specified in paragraphs (b) (1), (2), (3), (4), (5), or (6), of this section:

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subsection.

(i) Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in subsection 11-264-151(i). The wording of the certificate of insurance must be identical to the wording specified in subsection 11-264-151(j). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the director. If requested by the director, the owner or operator must provide a signed duplicate original of the insurance policy. An owner or operator of a new

facility must submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in subsections (f) and (g).

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in subsection (h).

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in subsection (i).

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in subsection (j).

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amount required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this subsection, the owner or operator shall specify at least one such assurance as ''primary'' coverage and shall specify other assurance as ''excess'' coverage.

(7) An owner or operator shall notify the director in writing within 30 days whenever:

(i) A Claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (b)(1) through (b)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (b)(1) through (b)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (b)(1) through (b)(6) of this section.

(c) Request for variance. If an owner or operator can demonstrate to the satisfaction of the director that the levels of financial responsibility required by subsection (a) or (b) are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the director. The request for a variance must be submitted to the director as part of the application under section 11-270-14 for a facility that does not have a permit, or pursuant to the procedures for permit modification under section 11-271-5 for a facility that has a permit. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The director may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the director to determine a level of financial responsibility other than that required by subsection (a) or (b). Any request for a variance for a permitted facility will be treated as a request for a permit modification under paragraph 11-270-41(a)(5) and section 11-271-5.

(d) Adjustments by the director. If the director determines that the levels of financial responsibility required by subsection (a) or (b) are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the director may adjust the level of financial responsibility required under subsection (a) or (b) as may be necessary to protect human health and the environment. This adjusted level will be based on the director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the director determines that there is a significant

risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, he may require that an owner or operator of the facility comply with subsection (b). An owner or operator must furnish to the director, within a reasonable time, any information which the director requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a facility that has a permit will be treated as a permit modification under paragraph 11-270-41(a)(5) and section 11-271-5.

(e) Period of coverage. Within sixty days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the director will notify the owner or operator in writing that he is no longer required by this section to maintain liability coverage for that facility, unless the director has reason to believe that closure has not been in accordance with the approved closure plan.

(f) Financial test for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this subsection. To pass this test the owner or operator must meet the criteria of subparagraph (f)(1)(i) or (ii).

(i) The owner or operator must have:

(A) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test; and

(B) Tangible net worth of at least ten million dollars; and

(C) Assets in the United States amounting to either:

(1) At least ninety percent of his total assets; or

(2) At least six times the amount of liability coverage to be demonstrated by this test.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth of at least ten million dollars; and

(C) Tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

(D) Assets in the United States amounting to either:
(1) At least ninety percent of his total assets; or
(2) At least six times the amount of liability coverage to be demonstrated by this test.

(2) The phrase ''amount of liability coverage'' as used in paragraph (f)(1) refers to the annual aggregate amounts for which coverage is required under subsections (a) and (b).

(3) To demonstrate that he meets this test, the owner or operator must submit the following three items to the director:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in subsection 11-264-151(g). If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by subsections 11-264-143(f), 11-264-145(f), 11-265-143(e), and 11-265-145(e), and liability coverage, he must submit the letter specified in subsection 11-264-151(g) to cover both forms of financial responsibility; a separate letter as specified in subsection 11-264-151(f) is not required.

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:
(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and
(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility must submit the items specified in paragraph (f)(3) to the director at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal.

(5) After the initial submission of items specified in paragraph (f)(3), the owner or operator must send

updated information to the director within ninety days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3).

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the director within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

(7) The director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see subparagraph (f)(3)(ii)). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The director will evaluate other qualifications on an individual basis. The owner or operator must provide evidence of insurance for the entire amount of required liability coverage as specified in this section within thirty days after notification of disallowance.

(g) Guarantee for liability coverage.

(1) Subject to paragraph (g)(2), an owner or operator may meet the requirements of this section by obtaining a written guarantee, hereinafter referred to as ''guarantee.'' The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a ''substantial business relationship'' with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (f)(6). The wording of the guarantee must be identical to the wording specified in paragraph 11-264-151(h)(2). A certified copy of the guarantee must accompany the items sent to the director as specified in paragraph (f)(3). One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a ''substantial business relationship'' with the owner or operator, this letter must describe this

''substantial business relationship'' and the value received in consideration of the guarantee.

(i) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may be), arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

(ii) [Reserved]

(2) (i) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this section only if the Attorneys General or Insurance Commissioners of:

(A) the state in which the guarantor is incorporated, and

(B) the State

have submitted written statements to the director that a guarantee executed as described in this section and paragraph 11-264-151(h)(2) is a legally valid and enforceable obligation in the state in which the guarantor is incorporated and in the State of Hawaii, respectively.

(ii) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this section only if:

(A) the non-U.S. corporation has identified a registered agent for service of process in the State of Hawaii and in the state in which it has its principal place of business, and

(B) the Attorney General or Insurance Commissioner of the State of Hawaii and the state in which the guarantor corporation has its principal place of business, have submitted written statements to the director that a guarantee executed as described in this section and paragraph 11-264-151(h)(2) is a legally valid and enforceable obligation in the State of Hawaii and in the state in which the guarantor corporation has its principal place of business, respectively.

(h) Letter of credit for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter or credit that conforms to the requirements of this subsection and submitting a copy of the letter of credit to the director.

(2) The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or State agency.

(3) The wording of the letter of credit must be identical to the wording specified in subsection 11-264-151(k).

(4) An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by the State.

(5) The wording of the standby trust fund must be identical to the wording specified in subsection 11-264-151(n).

(i) Surety bond for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond that conforms to the requirements of this subsection and submitting a copy of the bond to the director.

(2) The surety company issuing the bond must be among those listed as acceptable sureties on Federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

(3) The wording of the surety bond must be identical to the wording specified in subsection 11-264-151(l).

(4) A surety bond may be used to satisfy the requirements of this section only if the Attorneys General or Insurance Commissioners of:

(i) the state in which the surety is incorporated, and

(ii) the State of Hawaii

have submitted written statements to the director that a surety bond executed as described in this section and subsection 11-264-151(l) is a legally valid and enforceable obligation in the state in which the surety is incorporated and in the State of Hawaii, respectively.

(j) Trust fund for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by establishing a trust fund that conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the director.

(2) The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by the State.

(3) The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the fund, must either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in this section to cover the difference. For purposes of this subsection, ''the full amount of the liability coverage to be provided'' means the amount of coverage for sudden and/or nonsudden occurrences required to be provided by the owner or operator by this section, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

(4) The wording of the trust fund must be identical to the wording specified in subsection 11-264-151(m).

(k) [Reserved] [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.147)

§11-264-148 <u>Incapacity of owners or operators, guarantors, or financial institutions.</u>

(a) An owner or operator must notify the director by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in subsections 11-264-143(f) and 11-264-145(f) must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee (subsection 11-264-151(h)).

(b) An owner or operator who fulfills the requirements of section 11-264-143, section 11-264-145, or section 11-264-147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The

owner or operator must establish other financial assurance or liability coverage within sixty days after such an event. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.148)

§11-264-149 [Reserved]

§11-264-150 [Reserved]

§11-264-151 Wording of the instruments. (a) Trust agreement.

(1) A trust agreement for a trust fund, as specified in subsection 11-264-143(a) or subsection 11-264-145(a) or subsection 11-265-143(a) or subsection 11-265-145(a), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

TRUST AGREEMENT

Trust Agreement, the ''Agreement,'' entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert ''corporation,'' ''partnership,'' ''association,'' or ''proprietorship''], the ''Grantor,'' and [name of corporate trustee], [insert ''incorporated in the State of _____'' or ''a national bank''], the ''Trustee.''

Whereas, the Department of Health, State of Hawaii, has established certain rules applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility,

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee,

Now, Therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term ''Grantor'' means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term ''Trustee'' means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "department" means the Department of Health, State of Hawaii.

(d) The term "director" means the director of the Department of Health, State of Hawaii.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA identification number, name, address, and the current closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the ''Fund,'' for the benefit of the State of Hawaii. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the department.

Section 4. Payment for Closure and Post-Closure Care. The Trustee shall make payments from the Fund as the director shall direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the director from the Fund for closure and post-closure expenditures in such amounts as the director shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of

prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the federal Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or a state government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the federal Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit

or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or a state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least thirty days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than sixty days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within ninety days after the statement has been furnished to the Grantor and the director shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the

appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the director, and the present Trustee by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the director to the Trustee shall be in writing, signed by the director or the director's designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the department, except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the director by certified mail within ten days following the expiration of the thirty day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the director, or by the Trustee and the director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the director, or by the Trustee and the director, if the Grantor ceases to exist. Upon termination of the Trust, all

remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Hawaii.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in paragraph (a)(1) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date first above written.

[Signature of Grantor]

[Title]

Attest:

[Title]

[Seal]

[Signature of Trustee]

Attest:

[Title]

[Seal]

(2) The following is an example of the certification of acknowledgment which must accompany the trust agreement

for a trust fund as specified in subsections 11-264-143(a) and 11-264-145(a) or subsection 11-265-143(a) or 11-265-145(a).

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

(b) A surety bond guaranteeing payment into a trust fund, as specified in subsection 11-264-143(b) or 11-264-145(b) or 11-265-143(b) or 11-265-145(b), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Financial Guarantee Bond

Date bond executed:

Effective date:

Principal: [legal name and business address of owner or operator]

Type of Organization: [insert ''individual,'' ''joint venture,'' ''partnership,'' or ''corporation'']

State of incorporation: _____

Surety(ies): [name(s) and business address(es)]

EPA identification number, name, address and closure and/or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure amounts separately]: _____

Total penal sum of bond: $_____

Surety's bond number:_____

As used in this instrument:

(a) The term "department" means the Department of Health, State of Hawaii.

(b) The term "director" means the director of the Department of Health, State of Hawaii.

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the State of Hawaii, in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum ''jointly and severally'' only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under chapter 342J of the Hawaii Revised Statutes, to have a permit or interim status in order to own or operate each hazardous waste management facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit or interim status, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

Or, if the Principal shall fund the standby trust fund in such amount(s) within fifteen days after a final order to begin closure is issued by the director or a court of competent jurisdiction,

Or, if the Principal shall provide alternate financial assurance, as specified in Subchapter H of chapter 11-264 or 11-265 of the Hawaii Administrative Rules, as applicable, and obtain the director's written approval of such assurance, within ninety days after the date notice of cancellation is received by both the Principal and the director from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the director that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the

facility(ies) into the standby trust fund as directed by the director.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and the director, provided, however, that cancellation shall not occur during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the Principal and the director, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the director.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than twenty percent in any one year, and no decrease in the penal sum takes place without the written permission of the director.

In Witness Whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in subsection (b) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date this bond was executed.

Principal

[Signature(s)] _____

[Name(s)] _____

[Title(s)] _____

[Corporate seal] _____

Corporate Surety(ies)

[Name and address]

State of incorporation: _____

Liability limit: $ _____

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $ _____

(c) A surety bond guaranteeing performance of closure and/or post-closure care, as specified in subsection 11-264-143(c) or 11-264-145(c), must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Performance Bond

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address of owner or operator]

Type of organization: [insert ''individual,'' ''joint venture,'' ''partnership,'' or ''corporation''']

State of incorporation: _____

Surety(ies): [name(s) and business address(es)] _____

EPA identification number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure amounts separately]: _____

Total penal sum of bond: $ _____

Surety's bond number: _____

As used in this instrument:

(a) The term "department" means the Department of Health, State of Hawaii.

(b) The term "director" means the director of the Department of Health, State of Hawaii.

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the State of Hawaii,

in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum ''jointly and severally'' only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under chapter 342J of the Hawaii Revised Statutes, to have a permit in order to own or operate each hazardous waste management facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

And, if the Principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the post-closure plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance as specified in subchapter H of chapter 11-264 of the Hawaii Administrative Rules, and obtain the director's written approval of such assurance, within ninety days after the date notice of cancellation is received by both the Principal and the director from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the director that the Principal has been found in violation of the closure requirements of chapter 11-264 of the Hawaii Administrative Rules, for a facility for which this bond guarantees performance of closure, the

Surety(ies) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the director.

Upon notification by the director that the Principal has been found in violation of the post-closure requirements of chapter 11-264 of the Hawaii Administrative Rules for a facility for which this bond guarantees performance of post-closure care, the Surety(ies) shall either perform post-closure care in accordance with the post-closure plan and other permit requirements or place the post-closure amount guaranteed for the facility into the standby trust fund as directed by the director.

Upon notification by the director that the Principal has failed to provide alternate financial assurance as specified in subchapter H of chapter 11-264 of the Hawaii Administrative Rules, and obtain written approval of such assurance from the director during the ninety days following receipt by both the Principal and the director of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the director.

The surety(ies) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the director, provided, however, that cancellation shall not occur during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by both the Principal and the director, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the director.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the director.

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in subsection (c) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

Corporate Surety(ies)

[Name and address]

State of incorporation: _____

Liability limit: $ _____

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $ _____

(d) A letter of credit, as specified in subsection 11-264-143(d) or 11-264-145(d) or 11-265-143(c) or 11-265-145(c), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

Director of Health
Department of Health
State of Hawaii

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars $ _ _____, available upon presentation of

(1) your sight draft, bearing reference to this letter of credit No. _____, and

(2) your signed statement reading as follows: ''I certify that the amount of the draft is payable pursuant to rules issued under authority of chapter 342J of the Hawaii Revised Statutes.''

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one-hundred and twenty days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for one-hundred and twenty days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in subsection (d) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]
[Date]

This credit is subject to [insert ''the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce,'' or ''the Uniform Commercial Code''].

(e) A certificate of insurance, as specified in subsection 11-264-143(e) or 11-264-145(e) or 11-265-143(d) or 11-265-145(d), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certificate of Insurance for Closure or Post-Closure Care

Name and Address of Insurer

(herein called the ''Insurer''):

Name and Address of Insured

(herein called the ''Insured''):

Facilities Covered: [List for each facility: The EPA identification number, name, address, and the amount of insurance for closure and/or the amount for post-closure care (these amounts for all facilities covered must total the face amount shown below).]

Face Amount:

Policy Number:

Effective Date:

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for [insert ''closure'' or ''closure and post-closure care'' or ''post-closure care''] for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of subsections 11-264-143(e), 11-264-145(e), 11-265-143(d), and 11-265-145(d) of the Hawaii Administrative Rules, as applicable and as such rules were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such rules is hereby amended to eliminate such inconsistency.

Whenever requested by the Hawaii State Director of Health, the Insurer agrees to furnish to the Director a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in subsection (e) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date shown immediately below.

[Authorized signature for Insurer]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

[Date]

(f) A letter from the chief financial officer, as specified in subsections 11-264-143(f) or 11-264-145(f), or 11-265-143(e) or 11-265-145(e), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Letter From Chief Financial Officer

[Address to director].

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure and/or post-closure costs, as specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules.

[Fill out the following five paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA identification number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care].

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules. The current closure and/or post-closure cost estimates covered by the test are shown for each facility:_____.

2. This firm guarantees, through the guarantee specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules, the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility:____. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee_____; or (3) engaged in the following substantial business relationship with the owner or operator_____, and receiving the following value in consideration of this guarantee_____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

3. [Reserved]

4. This firm is the owner or operator of the following hazardous waste management facilities for which financial

assurance for closure or, if a disposal facility, post-closure care, is not demonstrated to the State of Hawaii through the financial test or any other financial assurance mechanism specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility:_____.

5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR Part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility:_____.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph (f)(1)(i) of section 11-264-143 or 11-264-145, or of paragraph (e)(1)(i) of section 11-265-143 or 11-265-145 are used. Fill in Alternative II if the criteria of paragraph (f)(1)(ii) of section 11-264-143 or 11-264-145, or of paragraph (e)(1)(ii) of section 11-265-143 or 11-265-145 are used.]

Alternative I

1. Sum of current closure and post-closure cost estimate [total of all cost estimates shown in the five paragraphs above] $_____

*2. Total liabilities [if any portion of the closure or post-closure cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4] $_____

*3. Tangible net worth $_____

*4. Net worth $_____

*5. Current assets $_____

*6. Current liabilities $_____

7. Net working capital [line 5 minus line 6] $_____

*8. The sum of net income plus depreciation, depletion, and amortization $_____

*9. Total assets in U.S. [required only if less than 90% of firm's assets are located in the U.S.] $_____

10. Is line 3 at least $10 million? [Yes/No]_____

11. Is line 3 at least 6 times line 1? [Yes/No]_____
12. Is line 7 at least 6 times line 1? [Yes/No]_____
*13. Are at least 90% of firm's assets located in the U.S.? If not, complete line 14 [Yes/No]_____
14. Is line 9 at least 6 times line 1? [Yes/No]_____
15. Is line 2 divided by line 4 less than 2.0? [Yes/No]_____

16. Is line 8 divided by line 2 greater than 0.1? [Yes/No] _____

17. Is line 5 divided by line 6 greater than 1.5? [Yes/No] _____

Alternative II

1. Sum of current closure and post-closure cost estimates [total of all cost estimates shown in the five paragraphs above] $_____
2. Current bond rating of most recent issuance of this firm and name of rating service_____
3. Date of issuance of bond_____
4. Date of maturity of bond_____
*5. Tangible net worth [if any portion of the closure and post-closure cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line] $_____
*6. Total assets in U.S. [required only if less than 90% of firm's assets are located in the U.S.] $_____
7. Is line 5 at least $10 million? [Yes/No]_____
8. Is line 5 at least 6 times line 1? [Yes/No]_____
*9. Are at least 90% of firm's assets located in the U.S.? If not, complete line 10 [Yes/No]_____
10. Is line 6 at least 6 times line 1? [Yes/No]_____

I hereby certify that the wording of this letter is identical to the wording specified in subsection 11-264-151(f) of the Hawaii Administrative Rules as such regulations were constituted on the date shown immediately below.
[Signature] _____
[Name] _____
[Title] _____
[Date] _____

(g) A letter from the chief financial officer, as specified in subsection 11-264-147(f) or 11-265-147(f), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

Letter From Chief Financial Officer

[Address to director].

I am the chief financial officer of [firm's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage [insert "and closure and/or post-closure care" if applicable] as specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA identification number, name, and address].

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules:_____

The firm identified above guarantees, through the guarantee specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following:_____. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____ _____, and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

[If you are using the financial test to demonstrate coverage of both liability and closure and post-closure care, fill in the following five paragraphs regarding facilities and associated closure and post-closure cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA identification number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.]

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or post-closure care or liability coverage is demonstrated through the financial test specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules. The current closure and/or post-closure cost estimate covered by the test are shown for each facility: _____.

2. The firm identified above guarantees, through the guarantee specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules, the closure and post-closure care or liability coverage of the following facilities owned or operated by the guaranteed party. The current cost estimates for closure or post-closure care so guaranteed are shown for each facility: _____.

3. [Reserved]

4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated to the State of Hawaii through the financial test or any other financial assurance mechanisms specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator or guarantor of the following UIC facilities for which financial assurance for plugging and abandonment is required under 40 CFR Part 144 and is assured through a financial test. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

This firm [insert "is required" or "is not required"] to file a Form 10K with the U.S. Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in part A if you are using the financial test to demonstrate coverage only for the liability requirements.]

Part A. Liability Coverage for Accidental Occurrences

[Fill in Alternative I if the criteria of paragraph (f)(1)(i) of section 11-264-147 or 11-265-147 are used. Fill in Alternative II if the criteria of paragraph (f)(1)(ii) of section 11-264-147 or 11-265-147 are used.]

Alternative I

1. Amount of annual aggregate liability coverage to be demonstrated $_____.

*2. Current assets $_____.

*3. Current liabilities $_____.

4. Net working capital [line 2 minus line 3] $_____.

*5. Tangible net worth $_____.

*6. If less than 90% of assets are located in the U.S., give total U.S. assets $_____.

7. Is line 5 at least $10 million? [Yes/No] _____.

8. Is line 4 at least 6 times line 1? [Yes/No] _____.

9. Is line 5 at least 6 times line 1? [Yes/No] _____.

*10. Are at least 90% of assets located in the U.S.? [Yes/No] _____. If not, complete line 11.

11. Is line 6 at least 6 times line 1? [Yes/No] _____.

Alternative II

1. Amount of annual aggregate liability coverage to be demonstrated $_____.

2. Current bond rating of most recent issuance and name of rating service _____.

3. Date of issuance of bond _____.

4. Date of maturity of bond _____.

*5. Tangible net worth $_____.

*6. Total assets in U.S. [required only if less than 90% of assets are located in the U.S.] $_____.

7. Is line 5 at least $10 million? [Yes/No] _____.

8. Is line 5 at least 6 times line 1? _____.

9. Are at least 90% of assets located in the U.S.? If not, complete line 10. [Yes/No] _____.

10. Is line 6 at least 6 times line 1? _____.

[Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and closure or post-closure care.]

Part B. Closure or Post-Closure Care and Liability Coverage

[Fill in Alternative I if the criteria of paragraphs (f)(1)(i) of section 11-264-143 or 11-264-145 and (f)(1)(i) of section 11-264-147 are used or if the criteria of paragraphs (e)(1)(i) of section 11-265-143 or 11-265-145 and (f)(1)(i) of section 11-265-147 are used. Fill in Alternative II if the criteria of paragraphs (f)(1)(ii) of section 11-264-143 or 11-264-145 and (f)(1)(ii) of section 11-264-147 are used or if the criteria of paragraphs (e)(1)(ii) of section 11-265-143 or 11-265-145 and (f)(1)(ii) of section 11-265-147 are used.]

Alternative I

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above) $_____.

2. Amount of annual aggregate liability coverage to be demonstrated $_____.

3. Sum of lines 1 and 2 $_____.

*4. Total liabilities (If any portion of your closure or post-closure cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6) $_____.

*5. Tangible net worth $_____.

*6. Net Worth $_____.

*7. Current assets $_____.

*8. Current liabilities $_____.

9. Net working capital (line 7 minus line 8) $_____.

*10. The sum of net income plus depreciation, depletion, and amortization $_____.

*11. Total assets on U.S. (required only if less than 90% of assets are located in the U.S.) $_____.

12. Is line 5 at least $10 million? [Yes/No]

13. Is line 5 at least 6 times line 3? [Yes/No]

14. Is line 9 at least 6 times line 3? [Yes/No]

*15. Are at least 90% of assets located in the U.S.? [Yes/No] If not, complete line 16.

16. Is line 11 at least 6 times line 3? [Yes/No]

17. Is line 4 divided by line 6 less than 2.0? [Yes/No]

18. Is line 10 divided by line 4 greater than 0.1? [Yes/No]

19. Is line 7 divided by line 8 greater than 1.5? [Yes/No]

Alternative II

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above) $_____.

2. Amount of annual aggregate liability coverage to be demonstrated $_____.

3. Sum of lines 1 and 2 $_____.

4. Current bond rating of most recent issuance and name of rating service_____.

5. Date of issuance of bond_____.

6. Date of maturity of bond_____.

*7. Tangible net worth (if any portion of the closure or post-closure cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line) $_____.

*8. Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.) $_____.

9. Is line 7 at least $10 million? [Yes/No]

10. Is line 7 at least 6 times line 3? [Yes/No]

*11. Are at least 90% of assets located in the U.S.? [Yes/No] If not complete line 12.

12. Is line 8 at least 6 times line 3? [Yes/No]

I hereby certify that the wording of this letter is identical to the wording specified in subsection 11-264-151(g) of the Hawaii Administrative Rules as such regulations were constituted on the date shown immediately below.

[Signature] _____

[Name] _____

[Title] _____

[Date] _____

(h)(1) A corporate guarantee, as specified in subsection 11-264-143(f) or 11-264-145(f), or 11-265-143(e) or 11-265-145(e), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Corporate Guarantee for Closure or Post-Closure Care

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the State of [insert name of state], herein referred to as guarantor. This guarantee is made on behalf of the [owner or operator] of [business address], which is [one of the following: "our subsidiary"; "a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in [either subsection 11-264-141(h) or 11-265-141(h) of the Hawaii Administrative Rules]" to the Department of Health, State of Hawaii.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in subsections 11-264-143(f), 11-264-145(f), 11-265-143(e), and 11-265-145(e) of the Hawaii Administrative Rules.

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA identificatIon number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.]

3. "Closure plans" and "post-closure plans" as used below refer to the plans maintained as required by subchapter G of chapters 11-264 and 11-265 of the Hawaii Administrative Rules for the closure and post-closure care of facilities as identified above.

4. For value received from [owner or operator], guarantor guarantees to the Department of Health, State of Hawaii, that in the event that [owner or operator] fails to perform [insert "closure," "post-closure care" or "closure and post-closure

care"] of the above facility(ies) in accordance with the closure or post-closure plans and other permit or interim status requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in subchapter H of chapter 11-264 or 11-265 of the Hawaii Administrative Rules, as applicable, in the name of [owner or operator] in the amount of the current closure or post-closure cost estimates as specified in subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the Director of Health, State of Hawaii, and to [owner or operator] that he intends to provide alternate financial assurance as specified in subchapter H of chapter 11-264 or 11-265 of the Hawaii Administrative Rules, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the Director of Health, State of Hawaii, by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by the Director of Health, State of Hawaii, of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of closure or post- closure care, he shall establish alternate financial assurance as specified in subchapter H of chapter 11-264 or 11-265 of the Hawaii Administrative Rules, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure or post-closure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure or post-closure, or any other modification or alteration of an obligation of the owner or operator pursuant to chapter 11-264 or 11-265 of the Hawaii Administrative Rules.

9. Guarantor agrees to remain bound under this guarantee for as long as [owner or operator] must comply with the applicable financial assurance requirements of subchapter H of chapters 11-264 and 11-265 of the Hawaii Administrative Rules for the above-listed facilities, except as provided in paragraph 10 of this agreement.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose

parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the Director of Health, State of Hawaii, and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the Director of Health, State of Hawaii, approves, alternate closure and/or post-closure care coverage complying with sections 11-264-143, 11-264-145, 11-265-143, and/or 11-265-145 of the Hawaii Administrative Rules.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator]

Guarantor may terminate this guarantee 120 days following the receipt of notification, through certified mail, by the Director of Health, State of Hawaii, and by [the owner or operator].

11. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in subchapter H of chapter 11-264 or 11-265 of the Hawaii Administrative Rules, as applicable, and obtain written approval of such assurance from the Director of Health, State of Hawaii, within 90 days after a notice of cancellation by the guarantor is received by the Director of Health, State of Hawaii, from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].

12. Guarantor expressly waives notice of acceptance of this guarantee by the Department of Health, State of Hawaii, or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the closure and/or post-closure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in subsection 11-264-151(h) of the Hawaii Administrative Rules as such regulations were constituted on the date first above written.

Effective date: _____

[Name of guarantor] _____

[Authorized signature for guarantor] _____

[Name of person signing] _____

[Title of person signing] _____

Signature of witness or notary: _____

(2) A guarantee, as specified in subsection 11-264-147(g) or 11-265-147(g), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

§11-264-151

Guarantee for Liability Coverage

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the State of_____ ___"and insert name of state; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the state of the principal place of business], herein referred to as guarantor. This guarantee is made on behalf of [owner or operator] of [business address], which is one of the following: "our subsidiary;" "a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary;" or "an entity with which guarantor has a substantial business relationship, as defined in [either subsection 11-264-141(h) or 11-265-141(h) of the Hawaii Administrative Rules]", to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in subsections 11-264-147(g) and 11-265-147(g) of the Hawaii Administrative Rules.

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA identification number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in the State of Hawaii.] This corporate guarantee satisfies third-party liability requirements imposed by Hawaii hazardous waste management law for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of

a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s) or settlement agreement(s) up to the limits of coverage identified above.

4. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert owner or operator]. This exclusion applies:

(A) Whether [insert owner or operator] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert owner or operator];

(2) Premises that are sold, given away or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert owner or operator];

(4) Personal property in the care, custody or control of [insert owner or operator];

(5) That particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the Director of Health, State of Hawaii, and to [owner or operator] that he intends to provide alternate liability coverage as specified in sections 11-264-147

and 11-265-147 of the Hawaii Administrative Rules, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

6. The guarantor agrees to notify the Director of Health, State of Hawaii, by certified mail of a voluntary or involuntary proceeding under title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

7. Guarantor agrees that within 30 days after being notified by the Director of Health, State of Hawaii, of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor, he shall establish alternate liability coverage as specified in section 11-264-147 or 11-265-147 of the Hawaii Administrative Rules in the name of [owner or operator], unless [owner or operator] has done so.

8. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by sections 11-264-147 and 11-265-147 of the Hawaii Administrative Rules, provided that such modification shall become effective only if the Director of Health, State of Hawaii, does not disapprove the modification within 30 days of receipt of notification of the modification.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of sections 11-264-147 and 11-265-147 of the Hawaii Administrative Rules for the above-listed facility(ies), except as provided in paragraph 10 of this agreement.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the Director of Health, State of Hawaii, and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the Director of Health, State of Hawaii, approves, alternate liability coverage complying with sections 11-264-147 and/or 11-265-147 of the Hawaii Administrative Rules.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator]:

Guarantor may terminate this guarantee 120 days following receipt of notification, through certified mail, by the Director of Health, State of Hawaii, and by [the owner or operator].

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert Principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's hazardous waste treatment, storage, or disposal facility] should be paid in the amount of $

[Signatures] _____
Principal _____
(Notary) Date _____
[Signatures] _____
Claimant(s) _____
(Notary) Date _____

(b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee will be considered [insert "primary" or "excess"] coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in paragraph 11-264-151(h)(2) of the Hawaii Administrative Rules as such regulations were constituted on the date shown immediately below.

Effective date: _____
[Name of guarantor] _____
[Authorized signature for guarantor] _____
[Name of person signing] _____
[Title of person signing] _____
Signature of witness or notary: _____

(i) A hazardous waste facility liability endorsement as required in section 11-264-147 or 11-265-147 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Hazardous Waste Facility Liability Endorsement

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under section 11-264-147 or 11-265-147 of the Hawaii Administrative Rules. The coverage applies at [list EPA identification number, name, and address for each facility] for [insert ''sudden accidental occurrences,'' ''nonsudden accidental occurrences,'' or ''sudden and nonsudden accidental occurrences''; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the ''each occurrence'' and ''annual aggregate'' limits of the Insurer's liability], exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in subsection 11-264-147(f) or 11-265-147(f) of the Hawaii Administrative Rules.

(c) Whenever requested by the Hawaii State Director of Health, the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the Hawaii State Director of Health.

(e) Any other termination of this endorsement will be effective only upon written notice and only after the expiration of thirty days after a copy of such written notice is received by the Hawaii State Director of Health.

Attached to and forming part of policy No. _____ issued by [name of Insurer], herein called the Insurer, of [address of Insurer] to [name of insured] of [address] this _____

day of _____, 19_____ . The effective date of said policy is _____ day of _____, 19_____ .

I hereby certify that the wording of this endorsement is identical to the wording specified in subsection (i) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

[Signature of Authorized Representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer]

[Address of Representative]

(j) A certificate of liability insurance as required in section 11-264-147 or 11-265-147 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Hazardous Waste Facility Certificate of Liability Insurance

1. [Name of Insurer], (the ''Insurer''), of [address of Insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the ''insured''), of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under section 11-264-147 or 11-265-147 of the Hawaii Administrative Rules. The coverage applies at [list EPA identification number, name, and address for each facility] for [insert ''sudden accidental occurrences,'' ''nonsudden accidental occurrences,'' or ''sudden and nonsudden accidental occurrences''; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the ''each occurrence'' and ''annual aggregate'' limits of the Insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number _____, issued on [date]. The effective date of said policy is [date].

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of

reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in subsection 11-264-147(f) or 11-265-147(f) of the Hawaii Administrative Rules.

(c) Whenever requested by the Hawaii State Director of Health, the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the Hawaii State Director of Health.

(e) Any other termination of the insurance will be effective only upon written notice and only after the expiration of thirty days after a copy of such written notice is received by the Hawaii State Director of Health.

I hereby certify that the wording of this instrument is identical to the wording specified in subsection (j) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

[Signature of authorized representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer]

[Address of Representative]

(k) A letter of credit, as specified in subsection 11-264-147(h) or 11-265-147(h), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

Name and Address of issuing institution _____
Director of Health _____
State of Hawaii _____

Dear Sir or Madam: We hereby establish our irrevocable Standby Letter of Credit No. _____ in the favor of ["any and all third-party liability claimants" or insert name of

trustee of the standby trust fund], at the request and for the account of [owner or operator's name and address] for third-party liability awards or settlements up to [in words] U.S. dollars $___ _____ per occurrence, and the annual aggregate amount of [in words] U.S. dollars $_____, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] U.S. dollars $_____ _____ per occurrence, and the annual aggregate amount of [in words] U.S dollars $_____, for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this letter of credit No. _____, and [insert the following language if the letter of credit is being used without a standby trust fund:] "(1) a signed certificate reading as follows:

Certificate of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operations of [principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $( ). We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal].

This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert principal];

(4) Personal property in the care, custody, or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures] _____

Principal _____

[Signatures] _____

Claimant(s) _____

or (2) a valid final court order establishing a judgment against the principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

This letter of credit is effective as of [date] and shall expire on [date] at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify you, the Director of Health, State of Hawaii, and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

[Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered [insert "primary" or "excess" coverage]."]

We certify that the wording of this letter of credit is identical to the wording specified in subsection 11-264-151(k) of the Hawaii Administrative Rules as such regulations were constituted on the date shown immediately below. [Signature(s) and title(s) of official(s) of issuing institution] [Date].

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code"].

(1) A surety bond, as specified in subsection 11-264-147(i) or 11-265-147(i), must be worded as follows: except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Payment Bond

Surety Bond No. [Insert number]

Parties [Insert name and address of owner or operator], Principal, incorporated in [Insert state of incorporation] of [Insert city and state of principal place of business] and [Insert name and address of surety company(ies)], Surety Company(ies), of [Insert surety(ies) place of business].

EPA identification number, name, and address for each facility guaranteed by this bond: _____

	Sudden accidental occurrences	Nonsudden accidental occurrences
Penal Sum Per Occurrence	[insert amount]	[insert amount]
Annual Aggregate	[insert amount]	[insert amount]

Purpose: This is an agreement between the Surety(ies) and the Principal under which the Surety(ies), its(their) successors and assignees, agree to be responsible for the payment of claims against the Principal for bodily injury and/or property damage to third parties caused by [''sudden'' and/or ''nonsudden''] accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein; subject to the governing provisions and the following conditions.

Governing Provisions:

(1) Chapter 342J, Hawaii Revised Statutes.

(2) Administrative Rules of the Hawaii State Department of Health, particularly section [''11-264-147'' or ''11-265-147''] of the Hawaii Administrative Rules (if applicable).

Conditions:

(1) The Principal is subject to the applicable governing provisions that require the Principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by [''sudden'' and/or ''nonsudden''] accidental occurrences arising

from operations of the facility or group of facilities. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal]. This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert principal];

(4) Personal property in the care, custody or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

(2) This bond assures that the Principal will satisfy valid third party liability claims, as described in condition 1.

(3) If the Principal fails to satisfy a valid third party liability claim, as described above, the Surety(ies) becomes liable on this bond obligation.

(4) The Surety(ies) shall satisfy a third party liability claim only upon the receipt of one of the following documents:

(a) Certification from the Principal and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert name of Principal] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signature]

Principal

[Notary] Date

[Signature(s)]

Claimant(s)

[Notary] Date

or (b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

(5) In the event of combination of this bond with another mechanism for liability coverage, this bond will be considered [insert ''primary'' or ''excess''] coverage.

(6) The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the Surety(ies) furnish(es) notice to the Hawaii State Director of Health forthwith of all claims filed and payments made by the Surety(ies) under this bond.

(7) The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and the Hawaii State Director of Health, provided, however, that cancellation shall not occur during the one-hundred and twenty days beginning on the date of receipt of the notice of cancellation by the Principal

and the Hawaii State Director of Health, as evidenced by the return receipt.

(8) The Principal may terminate this bond by sending written notice to the Surety(ies) and to the Hawaii State Director of Health.

(9) The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

(10) This bond is effective from [insert date] (12:01 a.m., standard time, at the address of the Principal as stated herein) and shall continue in force until terminated as described above.

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in subsection (1) of section 11-264-151 of the Hawaii Administrative Rules, as such rule was constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate Seal]

CORPORATE SURETY[IES]

[Name and address]

State of incorporation: _____

Liability Limit: $ _____

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $ _____

(m)(1) A trust agreement, as specified in subsection 11-264-147(j) or 11-265-147(j), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Trust Agreement

Trust Agreement, the ''Agreement,'' entered into as of [date] by and between [name of the owner or operator] a [name of State] [insert ''corporation,'' ''partnership,'' ''association,'' or ''proprietorship''], the ''Grantor,'' and [name of corporate trustee], [insert, ''incorporated in the State of _____'' or ''a national bank''], the ''trustee.''

Whereas, the Department of Health, State of Hawaii, has established certain rules applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term ''Grantor'' means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term ''Trustee'' means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "department" means the Department of Health, State of Hawaii.

(d) The term "director" means the director of the Department of Health, State of Hawaii.

Section 2. Identification of Facilities. This agreement pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the EPA identification number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, hereinafter the ''Fund,''

for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ [up to $1 million] per occurrence and _____ [up to $2 million] annual aggregate for sudden accidental occurrences and _____ [up to $3 million] per occurrence and _____ [up to $6 million] annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert Grantor] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert Grantor] arising from, and in the course of, employment by [insert Grantor]; or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor].

This exclusion applies:

(A) Whether [insert Grantor] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert Grantor];

(2) Premises that are sold, given away or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert Grantor];

(4) Personal property in the care, custody or control of [insert Grantor];

(5) That particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered [insert ''primary'' or ''excess''] coverage.

The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the department.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by making payments from the Fund only upon receipt of one of the following documents;

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert Grantor] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Grantor's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signatures]

Grantor

[Signatures]

Claimant(s)

or (b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing,

reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the federal Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held unless they are securities or other obligations of the federal or a state government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or a state government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common commingled, or collective trust fund created by the Trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the federal Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or a state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuations. The Trustee shall annually, at least thirty days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than sixty days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within ninety days after the statement has been furnished to the Grantor and the director shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the director, and the present Trustee by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the director to the Trustee shall be in writing, signed by the director, or the director's designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the department, except as provided for herein.

Section 15. Notice of Nonpayment. If a payment for bodily injury or property damage is made under Section 4 of this trust, the Trustee shall notify the Grantor of such payment and the amount(s) thereof within five working days. The Grantor shall, on or before the anniversary date of the establishment of the Fund following such notice, either make payments to the Trustee in amounts sufficient to cause the trust to return to its value immediately prior to the payment of claims under Section 4, or shall provide written proof to the Trustee that other financial assurance for liability coverage has been obtained equalling the

amount necessary to return the trust to its value prior to the payment of claims. If the Grantor does not either make payments to the Trustee or provide the Trustee with such proof, the Trustee shall within 10 working days after the anniversary date of the establishment of the Fund provide a written notice of nonpayment to the director.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the director, or by the Trustee and the director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the director, or by the Trustee and the director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

The director will agree to termination of the Trust when the owner or operator substitutes alternate financial assurance as specified in this section.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Hawaii.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in subsection (m) of section 11-264-151 of the Hawaii Administrative Rules as such rule was constituted on the date first above written.

_____

[Signature of Grantor]

[Title]

Attest:

[Title]

[Seal]

_____

[Signature of Trustee]

Attest:

[Title]

[Seal]

(2) The following is an example of the certification of acknowledgement which must accompany the trust agreement for a trust fund as specified in subsection 11-264-147(j) or 11-265-147(j).

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

_____

[Signature of Notary Public]

(n)(1) A standby trust agreement, as specified in subsection 11-264-147(h) or 11-265-147(h), must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Standby Trust Agreement

Trust Agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator] a [name of a state] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert, "incorporated in the State of _____" or "a national bank"], the "trustee."

Whereas the Department of Health, State of Hawaii, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term Grantor means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term Trustee means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities. This agreement pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the EPA Identification Number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a standby trust fund, hereafter the "Fund," for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ [up to $1 million] per occurrence and _____ [up to $2 million] annual aggregate for sudden accidental occurrences and _____ [up to $3 million] per occurrence and _____ [up to $6 million] annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert Grantor] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee or [insert Grantor] arising from, and in the course of, employment by [insert Grantor]; or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor].

This exclusion applies:

(A) Whether [insert Grantor] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert Grantor];

(2) Premises that are sold, given away or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert Grantor];

(4) Personal property in the care, custody or control of [insert Grantor];

(5) That particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered [insert "primary" or "excess"] coverage.

The fund is established initially as consisting of the proceeds of the letter of credit deposited into the Fund. Such proceeds and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any

liabilities of the Grantor established by the Department of Health, State of Hawaii.

Section 4. Payment for Bodily Injury or Property Damage. The Trustee shall satisfy a third party liability claim by drawing on the letter of credit described in Schedule B and by making payments from the Fund only upon receipt of one of the following documents:

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert Grantor] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Grantor's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signature] _____

Grantor _____

[Signatures] _____

Claimant(s) _____

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden, accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of the proceeds from the letter of credit drawn upon by the Trustee in accordance with the requirements of subsection 11-264-151(k) of the Hawaii Administrative Rules and Section 4 of this Agreement.

Section 6. Trustee Management. The trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the federal Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or

held, unless they are securities or other obligations of the federal or a state government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or a state government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the federal Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or a state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements to the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment; the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director of Health, State of Hawaii, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee. All orders, requests, certifications of valid claims, and instructions to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in

accordance with the Grantor's orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Director of Health, State of Hawaii, hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or Department of Health, State of Hawaii, except as provided for herein.

Section 14. Amendment of agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director of Health, State of Hawaii, or by the Trustee and the Director of Health, State of Hawaii, if the Grantor ceases to exist.

Section 15. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director of Health, State of Hawaii, or by the Trustee and the Director of Health, State of Hawaii, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be paid to the Grantor.

The Director of Health, State of Hawaii, will agree to termination of the Trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. Immunity and indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor and the Director of Health, State of Hawaii, issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Hawaii.

Section 18. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation of the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the

wording of this Agreement is identical to the wording specified in subsection 11-264-151(n) of the Hawaii Administrative Rules as such regulations were constituted on the date first above written.

[Signature of Grantor]
[Title]
Attest:
[Title]
[Seal]

[Signature of Trustee]
Attest:
[Title]
[Seal]

(2) The following is an example of the certification of acknowledgement which must accompany the trust agreement for a standby trust fund as specified in subsection 11-264-147(h) or 11-265-147(h). State requirements may differ on the proper content of this acknowledgement.

State of _____
County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

_____
[Signature of Notary Public]

[Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.151)

SUBCHAPTER I

USE AND MANAGEMENT OF CONTAINERS

§11-264-170 Applicability. The rules in this subchapter apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as section 11-264-1 provides otherwise. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.170)

§11-264-171 Condition of containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this chapter. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.171)

§11-264-172 Compatibility of waste with containers. The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.172)

§11-264-173 Management of containers. (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

(b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.173)

§11-264-174 Inspections. At least weekly, the owner or operator must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.174)

§11-264-175 Containment. (a) Container storage areas must have a containment system that is designed and operated in

accordance with subsection (b), except as otherwise provided by subsection (c).

(b) A containment system must be designed and operated as follows:

(1) A base must underly the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

(2) The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

(3) The containment system must have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination;

(4) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in paragraph (b)(3) to contain any run-on which might enter the system; and

(5) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

(c) Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by subsection (b), except as provided by subsection (d) or provided that:

(1) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or

(2) The containers are elevated or are otherwise protected from contact with accumulated liquid.

(d) Storage areas that store containers holding the wastes listed below that do not contain free liquids must have a containment system defined by subsection (b):

(1) F020, F021, F022, F023, F026, and F027.

(2) [Reserved] [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.175)

§11-264-176 <u>Special requirements for ignitable or reactive waste.</u> Containers holding ignitable or reactive waste must be located at least fifteen meters (fifty feet) from the facility's property line. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.176)

§11-264-177 Special requirements for incompatible wastes.
(a) Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), must not be placed in the same container, unless subsection 11-264-17(b) is complied with.

(b) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.

(c) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.177)

§11-264-178 Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.178)

§11-264-179 Air emission standards. The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of subchapters AA, BB, and CC. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.179)

SUBCHAPTER J

TANK SYSTEMS

§11-264-190 Applicability. The requirements of this subchapter apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in subsections (a), (b) and (c) or in section 11-264-1.

(a) Tank systems that are used to store or treat hazardous waste which contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in section 11-264-193. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste,

Physical/Chemical Methods,'' EPA Publication SW-846, as incorporated by reference in section 11-260-11.

(b) Tank systems, including sumps, as defined in section 11-260-10, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in subsection 11-264-193(a).

(c) Tanks, sumps, and other such collection devices or systems used in conjunction with drip pads, as defined in section 11-260-10 and regulated under subchapter W of this chapter, must meet the requirements of this subchapter. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.190)

§11-264-191 Assessment of existing tank system's integrity.

(a) For each existing tank system that does not have secondary containment meeting the requirements of section 11-264-193, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in subsection (c), the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified registered professional engineer, in accordance with subsection 11-270-11(d), that attests to the tank system's integrity by the effective date of these rules.

(b) This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following:

(1) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;

(2) Hazardous characteristics of the waste(s) that have been and will be handled;

(3) Existing corrosion protection measures;

(4) Documented age of the tank system, if available (otherwise, an estimate of the age); and

(5) Results of a leak test, internal inspection, or other tank integrity examination such that:

(i) For non-enterable underground tanks, the assessment must include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects, and

(ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination, that is certified by an independent, qualified, registered professional

engineer in accordance with subsection 11-270-11(d), that addresses cracks, leaks, corrosion, and erosion.

(c) Tank systems that store or treat materials that become hazardous wastes on the effective date of these rules must conduct this assessment by the effective date of these rules. Tank systems that store or treat materials that become hazardous wastes subsequent to the effective date of these rules must conduct this assessment within twelve months after the date that the waste becomes a hazardous waste.

(d) If, as a result of the assessment conducted in accordance with subsection (a), a tank system is found to be leaking or unfit for use, the owner or operator must comply with the requirements of section 11-264-196. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.191)

§11-264-192 <u>Design and installation of new tank systems or components.</u> (a) Owners or operators of new tank systems or components must obtain and submit to the director, at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified registered professional engineer, in accordance with subsection 11-270-11(d), attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which will be used by the director to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:

(1) Design standard(s) according to which tank(s) and/or the ancillary equipment are constructed;

(2) Hazardous characteristics of the waste(s) to be handled;

(3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:

(i) Factors affecting the potential for corrosion, including but not limited to:

(A) Soil moisture content;

(B) Soil pH;

(C) Soil sulfides level;

(D) Soil resistivity;

(E) Structure to soil potential;
(F) Influence of nearby underground metal structures (e.g., piping);
(G) Existence of stray electric current;
(H) Existing corrosion-protection measures (e.g., coating, cathodic protection), and

(ii) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:
(A) Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, etc.;
(B) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and
(C) Electrical isolation devices such as insulating joints, flanges, etc.

(4) For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

(5) Design considerations to ensure that:
(i) Tank foundations will maintain the load of a full tank;
(ii) Tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of subsection 11-264-18(a); and
(iii) Tank systems will withstand the effects of frost heave.

(b) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:

(1) Weld breaks;
(2) Punctures;
(3) Scrapes of protective coatings;
(4) Cracks;
(5) Corrosion;

(6) Other structural damage or inadequate construction/installation.

All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

(c) New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

(d) All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed into use.

(e) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

(f) The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under paragraph (a)(3), or other corrosion protection if the director believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

(g) The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of subsections (b) through (f), that attest that the tank system was properly designed and installed and that repairs, pursuant to subsections (b) and (d), were performed. These written statements must also include the certification statement as required in subsection 11-270-11(d). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.192)

§11-264-193 <u>Containment and detection of releases.</u> (a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in subsections (f) and (g)):

(1) For all new tank systems or components, prior to their being put into service;

(2) For all existing tank systems used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, by the effective date of these rules;

(3) For those existing tank systems of known and documented age, by the effective date of these rules or when the tank system has reached 15 years of age, whichever comes later;

(4) For those existing tank systems for which the age cannot be documented, by January 12, 1995; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or by the effective date of these rules, whichever comes later;

(5) For those existing tank systems of known and documented age that store or treat materials that become hazardous wastes subsequent to the effective date of these rules, within two years after the date that the material becomes a hazardous waste under RCRA, or by the effective date of these rules, or when the tank system has reached 15 years of age, whichever comes later; and

(6) For those existing tank systems for which the age cannot be documented that store or treat materials that become hazardous wastes subsequent to the effective date of these rules, within eight years after the date that the material becomes a hazardous waste under RCRA, or by the effective date of these rules, whichever comes later; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years after the date that the material becomes a hazardous waste under RCRA, or by the effective date of these rules, whichever comes later.

(b) Secondary containment systems must be:

(1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and

(2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(c) To meet the requirements of subsection (b), secondary containment systems must be at a minimum:

(1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic).

(2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

(3) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within twenty-four hours, or at the earliest practicable time if the owner or operator can demonstrate to the director that existing detection technologies or site conditions will not allow detection of a release within twenty-four hours; and

(4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within twenty-four hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the director that removal of the released waste or accumulated precipitation cannot be accomplished within twenty-four hours.

(d) Secondary containment for tanks must include one or more of the following devices:

(1) A liner (external to the tank);

(2) A vault;

(3) A double-walled tank; or

(4) An equivalent device as approved by the director

(e) In addition to the requirements of subsections (b), (c), and (d), secondary containment systems must satisfy the following requirements:

(1) External liner systems must be:

(i) Designed or operated to contain one hundred percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five year, twenty-four hour rainfall event.

(iii) Free of cracks or gaps; and

(iv) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s) (i.e., capable

of preventing lateral as well as vertical migration of the waste).

(2) Vault systems must be:

(i) Designed or operated to contain one hundred percent of the capacity of the largest tank within its boundary;

(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five year, twenty-four hour rainfall event:

(iii) Constructed with chemical-resistant water stops in place at all joints (if any):

(iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;

(v) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:

(A) Meets the definition of ignitable waste under section 11-262-21; or

(B) Meets the definition of reactive waste under section 11-262-21, and may form an ignitable or explosive vapor.

(vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

(3) Double-walled tanks must be:

(i) Designed as an integral structure (i.e., an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell.

(ii) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell: and

(iii) Provided with a built-in continuous leak detection system capable of detecting a release within twenty-four hours, or at the earliest practicable time, if the owner or operator can demonstrate to the director, and the director concludes, that the existing detection technology or site conditions would not allow detection of a release within twenty-four hours.

(f) Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of subsections (b) and (c) except for:

(1) Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;
(2) Welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;
(3) Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and
(4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

(g) The owner or operator may obtain a variance from the requirements of this section if the director finds, as a result of a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous constituents into the ground water; or surface water at least as effectively as secondary containment during the active life of the tank system or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (g)(2), be exempted from the secondary containment requirements of this section.

(1) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the director will consider:
  (i) The nature and quantity of the wastes;
  (ii) The proposed alternate design and operation;
  (iii) The hydrogeologic setting of the facility, including the thickness of soils present between the tank system and ground water, and
  (iv) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water
(2) In deciding whether to grant a variance based on a demonstration of no substantial present or potential hazard, the director will consider:
  (i) The potential adverse effects on ground water, surface water, and land quality taking into account:
    (A) The physical and chemical characteristics of the waste in the tank system, including its potential for migration.
    (B) The hydrogeological characteristics of the facility and surrounding land,

(C) The potential for health risks caused by human exposure to waste constituents,
(D) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents, and
(E) The persistence and permanence of the potential adverse effects;

(ii) The potential adverse effects of a release on ground-water quality, taking into account:
(A) The quantity and quality of ground water and the direction of ground-water flow,
(B) The proximity and withdrawal rates of ground-water users,
(C) The current and future uses of ground water in the area, and
(D) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(iii) The potential adverse effects of a release on surface water quality, taking into account:
(A) The quantity and quality of ground water and the direction of ground-water flow,
(B) The patterns of rainfall in the region,
(C) The proximity of the tank system to surface waters,
(D) The current and future uses of surface waters in the area and any water quality standards established for those surface waters, and
(E) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality; and

(iv) The potential adverse effects of a release on the land surrounding the tank system, taking into account:
(A) The patterns of rainfall in the region, and
(B) The current and future uses of the surrounding land.

(3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1), at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control (as established in the variance), must:
(i) Comply with the requirements of section 11-264-196, except subsection (d), and
(ii) Decontaminate or remove contaminated soil to the extent necessary to:

(A) Enable the tank system for which the variance was granted to resume operation with the capability for the detection of releases at least equivalent to the capability it had prior to the release; and

(B) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and

(iii) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (g)(3)(ii), comply with the requirement of subsection 11-264-197(b).

(4) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1), at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), must:

(i) Comply with the requirements of subsections 11-264-196 (a), (b), (c), and (d); and

(ii) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed or if ground water has been contaminated, the owner or operator must comply with the requirements of subsection 11-264-197(b); and

(iii) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of subsections (a) through (f) or reapply for a variance from secondary containment and meet the requirements for new tank systems in section 11-264-192 if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed and ground water or surface water has not been contaminated.

(h) The following procedures must be followed in order to request a variance from secondary containment:

(1) The director must be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in subsection (g) according to the following schedule:

(i) For existing tank systems, at least twenty-four months prior to the date that secondary

containment must be provided in accordance with subsection (a).

(ii) For new tank systems, at least thirty days prior to entering into a contract for installation.

(2) As part of the notification, the owner or operator must also submit to the director a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in paragraph (g)(1) or paragraph (g)(2);

(3) The demonstration for a variance must be completed within one-hundred and eighty days after notifying the director of an intent to conduct the demonstration; and

(4) If a variance is granted under this subsection, the director will require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the variance.

(i) All tank systems, until such time as secondary containment that meets the requirements of this section is provided, must comply with the following:

(1) For non-enterable underground tanks, a leak test that meets the requirements of paragraph 11-264-191(b)(5) or other tank integrity method, as approved or required by the director, must be conducted at least annually.

(2) For other than non-enterable underground tanks, the owner or operator must either conduct a leak test as in paragraph (i)(1) or develop a schedule and procedure for an assessment of the overall condition of the tank system by an independent, qualified registered professional engineer. The schedule and procedure must be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed. The frequency of these assessments must be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated.

(3) For ancillary equipment, a leak test or other integrity assessment as approved by the director must be conducted at least annually.

(4) The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with paragraphs (i)(1) through (i)(3).

(5) If a tank system or component is found to be leaking or unfit for use as a result of the leak test or

assessment in paragraphs (i)(1) through (i)(3), the owner or operator must comply with the requirements of section 11-264-196. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.193)

§11-264-194 General operating requirements. (a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

(b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

(1) Spill prevention controls (e.g., check valves, dry disconnect couplings);

(2) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and

(3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

(c) The owner or operator must comply with the requirements of section 11-264-196 if a leak or spill occurs in the tank system. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.194)

§11-264-195 Inspections. (a) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls.

(b) The owner or operator must inspect at least once each operating day:

(1) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

(2) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

(3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

(c) The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:

(1) The proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and

(2) All sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (i.e., every other month).

(d) The owner or operator must document in the operating record of the facility an inspection of those items in subsections (a) through (c). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.195)

§11-264-196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems. A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements:

(a) Cessation of use; prevent flow or addition of wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(b) Removal of waste from tank system or secondary containment system.

(1) If the release was from the tank system, the owner/operator must, within twenty-four hours after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the material released was to a secondary containment system, all released materials must be removed within twenty-four hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Containment of visible releases to the environment. The owner/operator must immediately conduct a visual inspection of the release and, based upon that inspection:

(1) Prevent further migration of the leak or spill to soils or surface water; and

(2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(d) Notifications, reports.

(1) Any release to the environment, except as provided in paragraph (d)(2), must be reported to the director within twenty-four hours of its detection. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement.

(2) A leak or spill of hazardous waste is exempted from the requirements of this subsection if it is:

(i) Less than or equal to a quantity of one (1) pound, and

(ii) Immediately contained and cleaned up.

(3) Within thirty days of detection of a release to the environment, a report containing the following information must be submitted to the director:

(i) Likely route of migration of the release;

(ii) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

(iii) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data must be submitted to the director as soon as they become available.

(iv) Proximity to down-gradient drinking water, surface water, and populated areas; and

(v) Description of response actions taken or planned.

(e) Provision of secondary containment, repair, or closure.

(1) Unless the owner/operator satisfies the requirements of paragraphs (e)(2) through (4), the tank system must be closed in accordance with section 11-264-197.

(2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

(3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

(4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of section 11-264-193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of subsection (f) are satisfied. If a component is replaced to comply with the requirements of this paragraph, that component must satisfy the requirements for new tank systems or components in sections 11-264-192 and 11-264-193. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g.,

the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with section 11-264-193 prior to being returned to use.

(f) Certification of major repairs. If the owner/operator has repaired a tank system in accordance with subsection (e), and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified, registered, professional engineer in accordance with subsection 11-270-11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the director within seven days after returning the tank system to use. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.196)

§11-264-197 Closure and post-closure care. (a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless subsection 11-261-3(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in Subchapters G and H.

(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in subsection (a), then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (section 11-264-310). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in Subchapters G and H.

(c) If an owner or operator has a tank system that does not have secondary containment that meets the requirements of subsections 11-264-193 (b) through (f) and has not been granted a variance from the secondary containment requirements in accordance with subsection 11-264-193(g), then:

(1) The closure plan for the tank system must include both a plan for complying with subsection (a) and a contingent plan for complying with subsection (b).

(2) A contingent post-closure plan for complying with subsection (b) must be prepared and submitted as part of the permit application.

(3) The cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under subsection (a).

(4) Financial assurance must be based on the cost estimates in paragraph (c)(3).

(5) For the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements for landfills under Subchapters G and H. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.197)

§11-264-198 Special requirements for ignitable or reactive wastes. (a) Ignitable or reactive waste must not be placed in tank systems, unless:

(1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:

(i) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under section 11-261-21 or 11-261-23, and

(ii) Subsection 11-264-17(b) is complied with; or

(2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

(3) The tank system is used solely for emergencies.

(b) The owner or operator of a facility where ignitable or reactive waste is stored or treated in a tank must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's ''Flammable and Combustible Liquids Code,'' (1977 or 1981), (incorporated by reference, see section 11-260-11). [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.198)

§11-264-199 Special requirements for incompatible wastes. (a) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank system, unless subsection 11-264-17(b) is complied with.

(b) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless subsection 11-264-17(b) is complied with. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.199)

§11-264-200 Air emission standards. The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of subchapters AA, BB, and CC. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.200)

SUBCHAPTER K

SURFACE IMPOUNDMENTS

§11-264-220 Applicability. The rules in this subchapter apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste except as section 11-264-1 provides otherwise. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.220)

§11-264-221 Design and operating requirements. (a) Any surface impoundment that is not covered by subsection (c) or section 11-265-221 must have a liner for all portions of the impoundment (except for existing portions of such impoundments). The liner must be designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility, provided that the impoundment is closed in accordance with paragraph 11-264-228(a)(1). For impoundments that will be closed in accordance with paragraph 11-264-228(a)(2), the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner must be:

(1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.

(b) The owner or operator will be exempted from the requirements of subsection (a) if the director finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 11-264-93) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the director will consider:

(1) The nature and quantity of the wastes;

(2) The proposed alternate design and operation;

(3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water; and

(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992 and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992 must install two or more liners and a leachate collection and removal system between such liners. "Construction commences" is as defined in section 11-260-10 under "existing facility".

(1) (i) The liner system must include:

(A) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

(B) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component

must be constructed of at least three feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1 X 10^{-7}/cm/sec.

(ii) The liners must comply with paragraphs (a)(1), (a)(2) and (a)(3).

(2) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this paragraph are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1 X 10^{-1}/cm/sec or more and a thickness of twelve inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3 X 10^{-4}/m^2sec or more;

(iii) Constructed of materials that are chemically resistant to the waste managed in the surface impoundment and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes and any waste cover materials or equipment used at the surface impoundment;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(3) The owner or operator shall collect and remove pumpable liquids in the sumps to minimize the head on the bottom liner.

(4) The owner or operator of a leak detection system that is not located completely above the seasonal high water

table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The director may approve alternative design or operating practices to those specified in subsection (c) if the owner or operator demonstrates to the director that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal system specified in subsection (c); and

(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) The double liner requirement set forth in subsection (c) may be waived by the director for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the toxicity characteristics in section 11-261-24; and

(2) (i) (A) The monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this subsection, the term ''liner'' means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, ground water, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of subsection (c) on the basis of a liner designed, constructed, installed, and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment, the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment will comply with appropriate post-closure requirements, including but not limited to ground-water monitoring and corrective action;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in 40 CFR 144.3 (1998)); and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under HRS section 342J-30; or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(f) The owner or operator of any replacement surface impoundment unit is exempt from subsection (c) if:

(1) The existing unit was constructed in compliance with the design standards of sections 3004(o)(1)(A)(i) and (o)(5) of RCRA (1984); and

(2) There is no reason to believe that the liner is not functioning as designed.

(g) A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error.

(h) A surface impoundment must have dikes that are designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the unit.

(i) The director will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.221)

§11-264-222 <u>Action leakage rate.</u> (a) The director shall approve an action leakage rate for surface impoundment units subject to subsection 11-264-221(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding one foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in

the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.)

(b) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under subsection 11-264-226(d) to an average daily flow rate (gallons per acre per day) for each sump. Unless the director approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and if the unit is closed in accordance with subsection 11-264-228(b), monthly during the post-closure care period when monthly monitoring is required under subsection 11-264-226(d). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.222)

§11-264-223 Response actions. (a) The owner or operator of surface impoundment units subject to subsection 11-264-221(c) or (d) must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b).

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

(1) Notify the director in writing of the exceedence within seven days of the determination;

(2) Submit a preliminary written assessment to the director within fourteen days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

(3) Determine to the extent practicable the location, size, and cause of any leak;

(4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

(5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

(6) Within thirty days after the notification that the action leakage rate has been exceeded, submit to the director the results of the analyses specified in paragraphs (b)(3), (b)(4), and (b)(5), the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the director a report

summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b)(3), (b)(4), and (b)(5), the owner or operator must:

(1) (i) Assess the source of liquids and amounts of liquids by source,

(ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) Document why such assessments are not needed. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264-223)

§11-264-224 -- §11-264-225 [Reserved]

§11-264-226 Monitoring and inspection. (a) During construction and installation, liners (except in the case of existing portions of surface impoundments exempt from subsection 11-264-221(a)) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

(1) Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(2) Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a surface impoundment is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions, or improper operation of overtopping control systems;

(2) Sudden drops in the level of the impoundment's contents; and

(3) Severe erosion or other signs of deterioration in dikes or other containment devices.

(c) Prior to the issuance of a permit, and after any extended period of time (at least six months) during which the impoundment was not in service, the owner or operator must obtain a certification from a qualified engineer that the impoundment's

dike, including that portion of any dike which provides freeboard, has structural integrity. The certification must establish, in particular, that the dike:

(1) Will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the impoundment; and

(2) Will not fail due to scouring or piping, without dependence on any liner system included in the surface impoundment construction.

(d)(1) An owner or operator required to have a leak detection system under subsection 11-264-221(c) or (d) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(2) After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the director based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264-226)

§11-264-227 <u>Emergency repairs; contingency plans.</u> (a) A surface impoundment must be removed from service in accordance with subsection (b) when:

(1) The level of liquids in the impoundment suddenly drops and the drop is not known to be caused by changes in the flows into or out of the impoundment; or

(2) The dike leaks.

(b) When a surface impoundment must be removed from service as required by subsection (a), the owner or operator must:

(1) Immediately shut off the flow or stop the addition of wastes into the impoundment;

(2) Immediately contain any surface leakage which has occurred or is occurring;
(3) Immediately stop the leak;
(4) Take any other necessary steps to stop or prevent catastrophic failure;
(5) If a leak cannot be stopped by any other means, empty the impoundment; and
(6) Notify the director of the problem in writing within seven days after detecting the problem.

(c) As part of the contingency plan required in Subchapter D, the owner or operator must specify a procedure for complying with the requirements of subsection (b).

(d) No surface impoundment that has been removed from service in accordance with the requirements of this section may be restored to service unless the portion of the impoundment which was failing is repaired and the following steps are taken:
(1) If the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity must be recertified in accordance with subsection 11-264-226(c).
(2) If the impoundment was removed from service as the result of a sudden drop in the liquid level, then:
(i) For any existing portion of the impoundment, a liner must be installed in compliance with subsection 11-264-221(a); and
(ii) For any other portion of the impoundment, the repaired liner system must be certified by a qualified engineer as meeting the design specifications approved in the permit.

(e) A surface impoundment that has been removed from service in accordance with the requirements of this section and that is not being repaired must be closed in accordance with the provisions of section 11-264-228. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.227)

§11-264-228 <u>Closure and post-closure care.</u> (a) At closure, the owner or operator must:
(1) Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 11-261-3(d) applies; or
(2) (i) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;
(ii) Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and

(iii) Cover the surface impoundment with a final cover designed and constructed to:
(A) Provide long-term minimization of the migration of liquids through the closed impoundment;
(B) Function with minimum maintenance;
(C) Promote drainage and minimize erosion or abrasion of the final cover;
(D) Accommodate settling and subsidence so that the cover's integrity is maintained; and
(E) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) If some waste residues or contaminated materials are left in place at final closure, the owner or operator must comply with all post-closure requirements contained in sections 11-264-117 through 11-264-120, including maintenance and monitoring throughout the post-closure care period (specified in the permit under section 11-264-117). The owner or operator must:

(1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;
(2) Maintain and monitor the leak detection system in accordance with subparagraph 11-264-221(c)(2)(iv) and paragraph 11-264-221(c)(3) and subsection 11-264-226(d), and comply with all other applicable leak detection system requirements of this chapter;
(3) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of subchapter F; and
(4) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

(c)(1) If an owner or operator plans to close a surface impoundment in accordance with paragraph (a)(1), and the impoundment does not comply with the liner requirements of subsection 11-264-221(a) and is not exempt from them in accordance with subsection 11-264-221(b), then:
(i) The closure plan for the impoundment under section 11-264-112 must include both a plan for complying with paragraph (a)(1) and a contingent plan for complying with paragraph (a)(2) in case not all contaminated subsoils can be practicably removed at closure; and
(ii) The owner or operator must prepare a contingent post-closure plan under section 11-264-118 for complying with subsection (b) in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under sections 11-264-142 and 11-264-144 for closure and post-closure care of an impoundment subject to this subsection must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a)(1). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264-228)

§11-264-229 Special requirements for ignitable or reactive waste. Ignitable or reactive waste must not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of chapter 11-268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under section 11-261-21 or section 11-261-23; and

(2) Subsection 11-264-17(b) is complied with; or

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; or

(c) The surface impoundment is used solely for emergencies. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.229)

§11-264-230 Special requirements for incompatible wastes. Incompatible wastes, or incompatible wastes and materials, (see Appendix V for examples) must not be placed in the same surface impoundment, unless subsection 11-264-17(b) is complied with. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.230)

§11-264-231 Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027. (a) Hazardous Wastes F020, F021, F022, F023, F026, and F027 must not be placed in a surface impoundment unless the owner or operator operates the surface impoundment in accordance with a management plan for these wastes that is approved by the director pursuant to the standards set out in this subsection, and in accord with all other applicable requirements of this chapter. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;
(3) The mobilizing properties of other materials co-disposed with these wastes; and
(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The director may determine that additional design, operating, and monitoring requirements are necessary for surface impoundments managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.231)

§11-264-232 Air emission standards. The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of subchapters BB and CC. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.232)

SUBCHAPTER L

WASTE PILES

§11-264-250 Applicability. (a) The rules in this subchapter apply to owners and operators of facilities that store or treat hazardous waste in piles, except as section 11-264-1 provides otherwise.

(b) The rules in this subchapter do not apply to owners or operators of waste piles that are closed with wastes left in place. Such waste piles are subject to regulation under subchapter N (Landfills).

(c) The owner or operator of any waste pile that is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated is not subject to regulation under section 11-264-251 or under Subchapter F, provided that:
(1) Liquids or materials containing free liquids are not placed in the pile;
(2) The pile is protected from surface water run-on by the structure or in some other manner;
(3) The pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and
(4) The pile will not generate leachate through decomposition or other reactions. [Eff 6/18/94; comp

SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.250)

§11-264-251 Design and operating requirements. (a) A waste pile (except for an existing portion of a waste pile) must have:

(1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility. The liner must be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

(2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The director will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed thirty cm (one foot). The leachate collection and removal system must be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the pile and the leachate expected to be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying wastes, waste cover materials, and by any equipment used at the pile; and

(ii) Designed and operated to function without clogging through the scheduled closure of the waste pile.

(b) The owner or operator will be exempted from the requirements of subsection (a), if the director finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 11-264-93) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the director will consider:

(1) The nature and quantity of the wastes;
(2) The proposed alternate design and operation;
(3) The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and ground water or surface water; and
(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new waste pile unit on which construction commences after January 29, 1992, each lateral expansion of a waste pile unit on which construction commences after July 29, 1992, and each replacement of an existing waste pile unit that is to commence reuse after July 29, 1992 must install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in section 11-260-10 under "existing facility".

(1) (i) The liner system must include:
(A) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and
(B) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least three feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1 X 10^{-7}cm/sec.

(ii) The liners must comply with subparagraph (a)(1)(i), (a)(1)(ii) and (a)(1)(iii).

(2) The leachate collection and removal system immediately above the top liner must be designed, constructed,

operated, and maintained to collect and remove leachate from the waste pile during the active life and post-closure care period. The director will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must comply with subparagraphs (c)(3)(iii) and (c)(3)(iv).

(3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this paragraph are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} m^2/sec or more;

(iii) Constructed of materials that are chemically resistant to the waste managed in the waste pile and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the waste pile;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(4) The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

(5) The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The director may approve alternative design or operating practices to those specified in subsection (c) if the owner or operator demonstrates to the director that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in subsection (c); and

(2) Will allow detection of any leaks of hazardous constituents through the top liner at least as effectively.

(e) Subsection (c) does not apply to monofills that are granted a waiver by the director in accordance with subsection 11-264-221(e).

(f) The owner or operator of any replacement waste pile unit is exempt from subsection (c) if:

(1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and (o)(5) of the RCRA (1984); and

(2) There is no reason to believe that the liner is not functioning as designed.

(g) The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-year storm.

(h) The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a twenty-four hour, twenty-five year storm.

(i) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(j) If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the pile to control wind dispersal.

(k) The director will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.251)

§11-264-252 <u>Action leakage rate.</u> (a) The director shall approve an action leakage rate for waste pile units subject to

subsection 11-264-251(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding one foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.)

(b) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly flow rate from the monitoring data obtained under subsection 11-264-254(c) to an average daily flow rate (gallons per acre per day) for each sump. Unless the director approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.252)

§11-264-253 <u>Response actions.</u> (a) The owner or operator of surface impoundment units subject to subsection 11-264-251(c) or (d) must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b).

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

(1) Notify the director in writing of the exceedence within seven days of the determination;
(2) Submit a preliminary written assessment to the director within fourteen days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
(3) Determine to the extent practicable the location, size, and cause of any leak;
(4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repair, or controls, and whether or not the unit should be closed;
(5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
(6) Within thirty days after the notification that the action leakage rate has been exceeded, submit to the

director the results of the analyses specified in paragraphs (b)(3), (b)(4), and (b)(5), the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the director a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b)(3), (b)(4), and (b)(5), the owner or operator must:

(1) (i) Assess the source of liquids and amounts of liquids by source,

(ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) Document why such assessments are not needed. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.253)

§11-264-254 Monitoring and inspection. (a) During construction or installation, liners (except in the case of existing portions of piles exempt from subsection 11-264-251(a)) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

(1) Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(2) Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a waste pile is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(2) Proper functioning of wind dispersal control systems, where present; and

(3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

(c) An owner or operator required to have a leak detection system under subsection 11-264-251(c) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.254)

§11-264-255 [Reserved]

§11-264-256 Special requirements for ignitable or reactive waste. Ignitable or reactive waste must not be placed in a waste pile unless the waste and waste pile satisfy all applicable requirements of chapter 11-268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under section 11-261-21 or section 11-261-23; and

(2) Subsection 11-264-17(b) is complied with; or

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.256)

§11-264-257 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials, (see Appendix V for examples) must not be placed in the same pile, unless subsection 11-264-17(b) is complied with.

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

(c) Hazardous waste must not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with subsection 11-264-17(b). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.257)

§11-264-258 Closure and post-closure care. (a) At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and

equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 11-261-3(d) applies.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection (a), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must close the facility and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (section 11-264-310).

(c)(1) The owner or operator of a waste pile that does not comply with the liner requirements of paragraph 11-264-251(a)(1) and is not exempt from them in accordance with subsection 11-264-250(c) or subsection 11-264-251(b), must:

(i) Include in the closure plan for the pile under section 11-264-112 both a plan for complying with subsection (a) and a contingent plan for complying with subsection (b) in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under section 11-264-118 for complying with subsection (b) in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under sections 11-264-142 and 11-264-144 for closure and post-closure care of a pile subject to this subsection must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under subsection (a). [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.258)

§11-264-259 <u>Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027.</u> (a) Hazardous Wastes F020, F021, F022, F023, F026, and F027 must not be placed in waste piles that are not enclosed (as defined in subsection 11-264-250(c)) unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by the director pursuant to the standards set out in this subsection, and in accord with all other applicable requirements of this chapter. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;
(3) The mobilizing properties of other materials co-disposed with these wastes; and
(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The director may determine that additional design, operating, and monitoring requirements are necessary for piles managing hazardous wastes F020, F021, F022, F023, F026, and, F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.259)

SUBCHAPTER M

LAND TREATMENT

§11-264-270 Applicability. The rules in this subchapter apply to owners and operators of facilities that treat or dispose of hazardous waste in land treatment units, except as section 11-264-1 provides otherwise. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.270)

§11-264-271 Treatment program. (a) An owner or operator subject to this subchapter must establish a land treatment program that is designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The director will specify in the facility permit the elements of the treatment program, including:
(1) The wastes that are capable of being treated at the unit based on a demonstration under section 11-264-272;
(2) Design measures and operating practices necessary to maximize the success of degradation, transformation, and immobilization processes in the treatment zone in accordance with subsection 11-264-273(a); and
(3) Unsaturated zone monitoring provisions meeting the requirements of section 11-264-278.

(b) The director will specify in the facility permit the hazardous constituents that must be degraded, transformed, or immobilized under this subchapter. Hazardous constituents are constituents identified in Appendix VIII of chapter 11-261 that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.

(c) The director will specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below and including the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of hazardous constituents. The maximum depth of the treatment zone must be:

(1) No more than 1.5 meters (5 feet) from the initial soil surface; and

(2) More than 1 meter (3 feet) above the seasonal high water table. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.271)

§11-264-272 Treatment demonstration. (a) For each waste that will be applied to the treatment zone, the owner or operator must demonstrate, prior to application of the waste, that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.

(b) In making this demonstration, the owner or operator may use field tests, laboratory analyses, available data, or, in the case of existing units, operating data. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration required under subsection (a), he must obtain a treatment or disposal permit under section 11-270-63. The director will specify in this permit the testing, analytical, design, and operating requirements (including the duration of the tests and analyses, and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and clean-up activities) necessary to meet the requirements in subsection (c).

(c) Any field test or laboratory analysis conducted in order to make a demonstration under subsection (a) must:

(1) Accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:

(i) The characteristics of the waste (including the presence of Appendix VIII of chapter 11-261 constituents);

(ii) The climate in the area;

(iii) The topography of the surrounding area;

(iv) The characteristics of the soil in the treatment zone (including depth); and

(v) The operating practices to be used at the unit.

(2) Be likely to show that hazardous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment unit; and

(3) Be conducted in a manner that protects human health and the environment considering:
(i) The characteristics of the waste to be tested;
(ii) The operating and monitoring measures taken during the course of the test;
(iii) The duration of the test;
(iv) The volume of waste used in the test;
(v) In the case of field tests, the potential for migration of hazardous constituents to ground water or surface water. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.272)

§11-264-273 Design and operating requirements. The director will specify in the facility permit how the owner or operator will design, construct, operate, and maintain the land treatment unit in compliance with this section.

(a) The owner or operator must design, construct, operate, and maintain the unit to maximize the degradation, transformation, and immobilization of hazardous constituents in the treatment zone. The owner or operator must design, construct, operate, and maintain the unit in accord with all design and operating conditions that were used in the treatment demonstration under section 11-264-272. At a minimum, the director will specify the following in the facility permit:
(1) The rate and method of waste application to the treatment zone;
(2) Measures to control soil pH;
(3) Measures to enhance microbial or chemical reactions (e.g., fertilization, tilling); and
(4) Measures to control the moisture content of the treatment zone.

(b) The owner or operator must design, construct, operate, and maintain the treatment zone to minimize run-off of hazardous constituents during the active life of the land treatment unit.

(c) The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a twenty-five year storm.

(d) The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a twenty-four hour, twenty-five year storm.

(e) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system.

(f) If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator must manage the unit to control wind dispersal.

(g) The owner or operator must inspect the unit weekly and after storms to detect evidence of:

(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems; and

(2) Improper functioning of wind dispersal control measures. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.273)

§11-264-274 -- §11-264-275 [Reserved]

§11-264-276 Food-chain crops. The director may allow the growth of food-chain crops in or on the treatment zone only if the owner or operator satisfies the conditions of this section. The director will specify in the facility permit the specific food-chain crops which may be grown.

(a)(1) The owner or operator must demonstrate that there is no substantial risk to human health caused by the growth of such crops in or on the treatment zone by demonstrating, prior to the planting of such crops, that hazardous constituents other than cadmium:

(i) Will not be transferred to the food or feed portions of the crop by plant uptake or direct contact, and will not otherwise be ingested by food-chain animals (e.g., by grazing); or

(ii) Will not occur in greater concentrations in or on the food or feed portions of crops grown on the treatment zone than in or on identical portions of the same crops grown on untreated soils under similar conditions in the same region.

(2) The owner or operator must make the demonstration required under this subsection prior to the planting of crops at the facility for all constituents identified in Appendix VIII of chapter 11-261 that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.

(3) In making a demonstration under this subsection, the owner or operator may use field tests, greenhouse studies, available data, or, in the case of existing units, operating data, and must:

(i) Base the demonstration on conditions similar to those present in the treatment zone, including soil characteristics (e.g., pH, cation exchange capacity), specific wastes, application rates, application methods, and crops to be grown; and

(ii) Describe the procedures used in conducting any tests, including the sample selection criteria, sample size, analytical methods, and statistical procedures.

(4) If the owner or operator intends to conduct field tests or greenhouse studies in order to make the demonstration required under this subsection, he must obtain a permit for conducting such activities.

(b) The owner or operator must comply with the following conditions if cadmium is contained in wastes applied to the treatment zone:

(1) (i) The pH of the waste and soil mixture must be 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less;

(ii) The annual application of cadmium from waste must not exceed 0.5 kilograms per hectare (kg/ha) on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food-chain crops, the annual cadmium application rate must not exceed:

Time period	Annual Cd application rate (kilograms per hectare)
Present to June 30, 1984	2.0
July 1, 1984 to December 31, 1986	1.25
Beginning January 1, 1987	0.5

(iii) The cumulative application of cadmium from waste must not exceed 5 kg/ha if the waste and soil mixture has a pH of less than 6.5; and

(iv) If the waste and soil mixture has a pH of 6.5 or greater or is maintained at a pH of 6.5 or greater during crop growth, the cumulative application of cadmium from waste must not exceed: 5 kg/ha if soil cation exchange capacity (CEC) is less than 5 meq/100g; 10 kg/ha if soil CEC is 5-15 meq/100g; and 20 kg/ha if soil CEC is greater than 15 meq/100g; or

(2) (i) Animal feed must be the only food-chain crop produced;

(ii) The pH of the waste and soil mixture must be 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level must be maintained whenever food-chain crops are grown;

(iii) There must be an operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The operating plan must describe the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses; and

(iv) Future property owners must be notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food-chain crops must not be grown except in compliance with paragraph (b)(2). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.276)

§11-264-277 [Reserved]

§11-264-278 Unsaturated zone monitoring. An owner or operator subject to this subchapter must establish an unsaturated zone monitoring program to discharge the following responsibilities:

(a) The owner or operator must monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.

(1) The director will specify the hazardous constituents to be monitored in the facility permit. The hazardous constituents to be monitored are those specified under subsection 11-264-271(b).

(2) The director may require monitoring for principal hazardous constituents (PHCs) in lieu of the constituents specified under subsection 11-264-271(b). PHCs are hazardous constituents contained in the wastes to be applied at the unit that are the most difficult to treat, considering the combined effects of degradation, transformation, and immobilization. The director will establish PHCs if he finds, based on waste analyses, treatment demonstrations, or other data, that effective degradation, transformation, or immobilization of the PHCs will assure treatment at at least equivalent levels for the other hazardous constituents in the wastes.

(b) The owner or operator must install an unsaturated zone monitoring system that includes soil monitoring using soil cores and soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system must consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:

(1) Represent the quality of background soil-pore liquid quality and the chemical make-up of soil that has not been affected by leakage from the treatment zone; and

(2) Indicate the quality of soil-pore liquid and the chemical make-up of the soil below the treatment zone.

(c) The owner or operator must establish a background value for each hazardous constituent to be monitored under subsection (a). The permit will specify the background values for each constituent or specify the procedures to be used to calculate the background values.

(1) Background soil values may be based on a one-time sampling at a background plot having characteristics similar to those of the treatment zone.

(2) Background soil-pore liquid values must be based on at least quarterly sampling for one year at a background plot having characteristics similar to those of the treatment zone.

(3) The owner or operator must express all background values in a form necessary for the determination of statistically significant increases under subsection (f).

(4) In taking samples used in the determination of all background values, the owner or operator must use an unsaturated zone monitoring system that complies with paragraph (b)(1).

(d) The owner or operator must conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The director will specify the frequency and timing of soil and soil-pore liquid monitoring in the facility permit after considering the frequency, timing, and rate of waste application, and the soil permeability. The owner or operator must express the results of soil and soil-pore liquid monitoring in a form necessary for the determination of statistically significant increases under subsection (f).

(e) The owner or operator must use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical make-up of the soil below the treatment zone. At a minimum, the owner or operator must implement procedures and techniques for:

(1) Sample collection;

(2) Sample preservation and shipment;

(3) Analytical procedures; and

(4) Chain of custody control.

(f) The owner or operator must determine whether there is a statistically significant change over background values for any hazardous constituent to be monitored under subsection (a) below the treatment zone each time he conducts soil monitoring and soil-pore liquid monitoring under subsection (d).

(1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the value of each constituent, as determined under subsection (d), to the background value for that constituent according to the statistical procedure specified in the facility permit under this subsection.

(2) The owner or operator must determine whether there has been a statistically significant increase below the treatment zone within a reasonable time period after completion of sampling. The director will specify that time period in the facility permit after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of soil and soil-pore liquid samples.

(3) The owner or operator must determine whether there is a statistically significant increase below the treatment zone using a statistical procedure that provides reasonable confidence that migration from the treatment zone will be identified. The director will specify a statistical procedure in the facility permit that he finds:

(i) Is appropriate for the distribution of the data used to establish background values; and

(ii) Provides a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.

(g) If the owner or operator determines, pursuant to subsection (f), that there is a statistically significant increase of hazardous constituents below the treatment zone, he must:

(1) Notify the director of this finding in writing within seven days. The notification must indicate what constituents have shown statistically significant increases.

(2) Within ninety days, submit to the director an application for a permit modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.

(h) If the owner or operator determines, pursuant to subsection (f), that there is a statistically significant increase of hazardous constituents below the treatment zone, he may demonstrate that a source other than regulated units caused

the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this subsection in addition to, or in lieu of, submitting a permit modification application under paragraph (g)(2), he is not relieved of the requirement to submit a permit modification application within the time specified in paragraph (g)(2) unless the demonstration made under this subsection successfully shows that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. In making a demonstration under this subsection, the owner or operator must:

(1) Notify the director in writing within seven days of determining a statistically significant increase below the treatment zone that he intends to make a determination under this subsection;

(2) Within ninety days, submit a report to the director demonstrating that a source other than the regulated units caused the increase or that the increase resulted from error in sampling, analysis, or evaluation;

(3) Within ninety days, submit to the director an application for a permit modification to make any appropriate changes to the unsaturated zone monitoring program at the facility; and

(4) Continue to monitor in accordance with the unsaturated zone monitoring program established under this section. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.278)

§11-264-279 Recordkeeping. The owner or operator must include hazardous waste application dates and rates in the operating record required under section 11-264-73. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.279)

§11-264-280 Closure and post-closure care. (a) During the closure period the owner or operator must:

(1) Continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone as required under subsection 11-264-273(a), except to the extent such measures are inconsistent with paragraph (a)(8).

(2) Continue all operations in the treatment zone to minimize run-off of hazardous constituents as required under subsection 11-264-273(b);

(3) Maintain the run-on control system required under subsection 11-264-273(c);

(4) Maintain the run-off management system required under subsection 11-264-273(d);
(5) Control wind dispersal of hazardous waste if required under subsection 11-264-273(f);
(6) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under section 11-264-276;
(7) Continue unsaturated zone monitoring in compliance with section 11-264-278, except that soil-pore liquid monitoring may be terminated ninety days after the last application of waste to the treatment zone; and
(8) Establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone. The vegetative cover must be capable of maintaining growth without extensive maintenance.

(b) For the purpose of complying with section 11-264-115, when closure is completed the owner or operator may submit to the director certification by an independent qualified soil scientist, in lieu of an independent registered professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(c) During the post-closure care period the owner or operator must:
(1) Continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure care activities;
(2) Maintain a vegetative cover over closed portions of the facility;
(3) Maintain the run-on control system required under subsection 11-264-273(c);
(4) Maintain the run-off management system required under subsection 11-264-273(d);
(5) Control wind dispersal of hazardous waste if required under subsection 11-264-273(f);
(6) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under section 11-264-276; and
(7) Continue unsaturated zone monitoring in compliance with section 11-264-278, except that soil-pore liquid monitoring may be terminated ninety days after the last application of waste to the treatment zone.

(d) The owner or operator is not subject to regulation under paragraphs (a)(8) and (c) if the director finds that the level of hazardous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant when using the test

specified in paragraph (d)(3). The owner or operator may submit such a demonstration to the director at any time during the closure or post-closure care periods. For the purposes of this subsection:

(1) The owner or operator must establish background soil values and determine whether there is a statistically significant increase over those values for all hazardous constituents specified in the facility permit under subsection 11-264-271 (b).

(i) Background soil values may be based on a one-time sampling of a background plot having characteristics similar to those of the treatment zone.

(ii) The owner or operator must express background values and values for hazardous constituents in the treatment zone in a form necessary for the determination of statistically significant increases under paragraph (d)(3).

(2) In taking samples used in the determination of background and treatment zone values, the owner or operator must take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical make-up of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively.

(3) In determining whether a statistically significant increase has occurred, the owner or operator must compare the value of each constituent in the treatment zone to the background value for that constituent using a statistical procedure that provides reasonable confidence that constituent presence in the treatment zone will be identified. The owner or operator must use a statistical procedure that:

(i) Is appropriate for the distribution of the data used to establish background values; and

(ii) Provides a reasonable balance between the probability of falsely identifying hazardous constituent presence in the treatment zone and the probability of failing to identify real presence in the treatment zone.

(e) The owner or operator is not subject to regulation under Subchapter F if the director finds that the owner or operator satisfies subsection (d) and if unsaturated zone monitoring under section 11-264-278 indicates that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.280)

§11-264-281 Special requirements for ignitable or reactive waste. The owner or operator must not apply ignitable or reactive waste to the treatment zone unless the waste and the treatment zone meet all applicable requirements of chapter 11-268, and:

(a) The waste is immediately incorporated into the soil so that:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under section 11-261-21 or section 11-261-23; and

(2) Subsection 11-264-17(b) is complied with; or

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.281)

§11-264-282 Special requirements for incompatible wastes. The owner or operator must not place incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), in or on the same treatment zone, unless subsection 11-264-17(b) is complied with. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.282)

§11-264-283 Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027. (a) Hazardous Wastes F020, F021, F022, F023, F026 and, F027 must not be placed in a land treatment unit unless the owner or operator operates the facility in accordance with a management plan for these wastes that is approved by the director pursuant to the standards set out in this subsection, and in accord with all other applicable requirements of this chapter. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The director may determine that additional design, operating, and monitoring requirements are necessary for land treatment facilities managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air

so as to protect human health and the environment. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.283)

SUBCHAPTER N

LANDFILLS

§11-264-300 Applicability. The rules in this subchapter apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as section 11-264-1 provides otherwise. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.300)

§11-264-301 Design and operating requirements. (a) Any landfill that is not covered by subsection (c) or subsection 11-265-301(a) must have a liner system for all portions of the landfill (except for existing portions of such landfill). The liner system must have:

(1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or ground water or surface water at anytime during the active life (including the closure period) of the landfill. The liner must be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner must be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

(2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the landfill. The director will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed thirty cm

(one foot). The leachate collection and removal system must be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the landfill and the leachate expected to be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the landfill; and

(ii) Designed and operated to function without clogging through the scheduled closure of the landfill.

(b) The owner or operator will be exempted from the requirements of subsection (a) if the director finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 11-264-93) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the director will consider:

(1) The nature and quantity of the wastes;

(2) The proposed alternate design and operation;

(3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the landfill and ground water or surface water; and

(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new landfill unit on which construction commences after January 29, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill unit that is to commence reuse after July 29, 1992 must install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in section 11-260-10 under "existing facility".

(1) (i) The liner system must include:

(A) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

(B) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-

closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least three feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1 X 10^{-7}cm/sec.

(ii) The liners must comply with subparagraphs (a)(1)(i), (a)(1)(ii), and (a)(1)(iii).

(2) The leachate collection and removal system immediately above the top liner must be designed, constructed, operated, and maintained to collect and remove leachate from the landfill during the active life and post-closure care period. The director will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed thirty cm (one foot). The leachate collection and removal system must comply with subparagraphs (c)(3)(iii) and (c)(3)(iv).

(3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this paragraph are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1 X 10^{-2}cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3 X $10^{-5}m^2$/sec or more;

(iii) Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the landfill;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(4) The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

(5) The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The director may approve alternative design or operating practices to those specified in subsection (c) if the owner or operator demonstrates to the director that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in subsection (c); and

(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) The double liner requirement set forth in subsection (c) may be waived by the director for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the Toxicity Characteristic in section 11-261-24, with EPA Hazardous Waste Numbers D004 through D017; and

(2) (i) (A) The monofill has at least one liner for which there is no evidence that such liner is leaking;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in 40 CFR 144.3 (1998)); and

(C) The monofill is in compliance with generally applicable ground-water monitoring requirements for facilities with permits under HRS section 342J-30; or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as

to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(f) The owner or operator of any replacement landfill unit is exempt from subsection (c) if:

(1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and (o)(5) of RCRA (1984); and

(2) There is no reason to believe that the liner is not functioning as designed.

(g) The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a twenty-five year storm.

(h) The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a twenty-four hour, twenty-five year storm.

(i) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(j) If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the landfill to control wind dispersal.

(k) The director will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

(l) [Reserved] [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp 40 C.F.R. §264.301)

§11-264-302 Action leakage rate. (a) The director shall approve an action leakage rate for landfill units subject to subsection 11-264-301(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding one foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

(b) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under

subsection 11-264-303(c) to an average daily flow rate (gallons per acre per day) for each sump. Unless the director approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and monthly during the post-closure care period when monthly monitoring is required under subsection 11-264-303(c). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.302)

§11-264-303 Monitoring and inspection. (a) During construction or installation, liners (except in the case of existing portions of landfills exempt from subsection 11-264-301(a)) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

(1) Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(2) Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a landfill is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(2) Proper functioning of wind dispersal control systems, where present; and

(3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

(c) (1) An owner or operator required to have a leak detection system under subsection 11-264-301(c) or (d) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(2) After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period

the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the director based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

[Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.303)

§11-264-304 Response actions. (a) The owner or operator of landfill units subject to subsection 11-264-301(c) or (d) must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection (b).

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

(1) Notify the director in writing of the exceedence within seven days of the determination;

(2) Submit a preliminary written assessment to the director within fourteen days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

(3) Determine to the extent practicable the location, size, and cause of any leak;

(4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

(5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and

(6) Within thirty days after the notification that the action leakage rate has been exceeded, submit to the director the results of the analyses specified in paragraphs (b)(3), (b)(4), and (b)(5), the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the director a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b)(3), (b)(4), and (b)(5), the owner or operator must:

(1) (i) Assess the source of liquids and amounts of liquids by source,

(ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) Document why such assessments are not needed. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.304)

§11-264-305 -- §11-264-308 [Reserved]

§11-264-309 Surveying and recordkeeping. The owner or operator of a landfill must maintain the following items in the operating record required under section 11-264-73:

(a) On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and

(b) The contents of each cell and the approximate location of each hazardous waste type within each cell. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.309)

§11-264-310 Closure and post-closure care. (a) At final closure of the landfill or upon closure of any cell, the owner or operator must cover the landfill or cell with a final cover designed and constructed to:

(1) Provide long-term minimization of migration of liquids through the closed landfill;

(2) Function with minimum maintenance;

(3) Promote drainage and minimize erosion or abrasion of the cover;

(4) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(5) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) After final closure, the owner or operator must comply with all post-closure requirements contained in sections 11-264-117 through 11-264-120, including maintenance and monitoring

throughout the post-closure care period (specified in the permit under section 11-264-117). The owner or operator must:

(1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

(2) Continue to operate the leachate collection and removal system until leachate is no longer detected;

(3) Maintain and monitor the leak detection system in accordance with subparagraph 11-264-301(c)(3)(iv) and paragraph 11-264-301(c)(4) and subsection 11-264-303(c), and comply with all other applicable leak detection system requirements of this chapter;

(4) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of subchapter F;

(5) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and

(6) Protect and maintain surveyed benchmarks used in complying with section 11-264-309. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.310)

§11-264-311 [Reserved]

§11-264-312 <u>Special requirements for ignitable or reactive waste.</u> (a) Except as provided in subsection (b), and in section 11-264-316, ignitable or reactive waste must not be placed in a landfill, unless the waste and landfill meet all applicable requirements of chapter 11-268, and:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under section 11-261-21 or section 11-261-23; and

(2) Subsection 11-264-17(b) is complied with.

(b) Except for prohibited wastes which remain subject to treatment standards in subchapter D of chapter 11-268, ignitable wastes in containers may be landfilled without meeting the requirements of subsection (a), provided that the wastes are disposed of in such a way that they are protected from any material or conditions which may cause them to ignite. At a minimum, ignitable wastes must be disposed of in non-leaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause ignition of the wastes; must be covered daily with soil or other non-combustible material to minimize the potential for ignition of the wastes; and must not be disposed of in cells that contain or will contain other wastes which may generate heat sufficient

to cause ignition of the waste. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.312)

§11-264-313 Special requirements for incompatible wastes. Incompatible wastes, or incompatible wastes and materials, (see Appendix V for examples) must not be placed in the same landfill cell, unless subsection 11-264-17(b) is complied with. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.313)

§11-264-314 Special requirements for bulk and containerized liquids.

(a) [Reserved]

(b) The placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.

(c) To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846, as incorporated by reference in section 11-260-11.

(d) Containers holding free liquids must not be placed in a landfill unless:

(1) All free-standing liquid: (i) has been removed by decanting, or other methods; (ii) has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or (iii) has been otherwise eliminated; or

(2) The container is very small, such as an ampule; or

(3) The container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or

(4) The container is a lab pack as defined in section 11-264-316 and is disposed of in accordance with section 11-264-316.

(e) Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in paragraph (e)(1) of this section; materials that pass one of the tests in paragraph (e)(2) of this section; or materials that are determined by the EPA to be nonbiodegradable through the 40 CFR Part 260 petition process.

(1) Nonbiodegradable sorbents.

(i) Inorganic minerals, other inorganic materials, and elemental carbon (e.g., aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined

montmorillonite, kaolinite, micas (illite), vermiculites, zeolites; calcium carbonate (organic free limestone); oxides/hydroxides, alumina, lime, silica (sand), diatomaceous earth; perlite (volcanic glass); expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/activated carbon); or

(ii) High molecular weight synthetic polymers (e.g., polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or

(iii) Mixtures of these nonbiodegradable materials.

(2) Tests for nonbiodegradable sorbents.

(i) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)-Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi; or

(ii) The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)-Standard Practice for Determining Resistance of Plastics to Bacteria; or

(iii) The sorbent material is determined to be non-biodegradable under OECD test 301B: [CO_2 Evolution (Modified Sturm Test)].

(f) Effective November 8, 1985, the placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the director, or the director determines, that:

(1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

(2) Placement in such owner or operator's landfill will not present a risk of contamination of any underground source of drinking water (as that term is defined in 40 CFR 144.3 (1998)) [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.314)

§11-264-315 Special requirements for containers. Unless they are very small, such as an ampule, containers must be either:

(a) At least ninety percent full when placed in the landfill; or

(b) Crushed, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.315)

§11-264-316 Disposal of small containers of hazardous waste in overpacked drums (lab packs). Small containers of hazardous waste in overpacked drums (lab packs) may be placed in a landfill if the following requirements are met:

(a) Hazardous waste must be packaged in non-leaking inside containers. The inside containers must be of a design and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the contained waste. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the U.S. Department of Transportation (DOT) hazardous materials regulations (49 CFR parts 173, 178, and 179), if those regulations specify a particular inside container for the waste.

(b) The inside containers must be overpacked in an open head DOT-specification metal shipping container (49 CFR Parts 178 and 179) of no more than 416-liter (110 gallon) capacity and surrounded by, at a minimum, a sufficient quantity of sorbent material, determined to be nonbiodegradable in accordance with subsection 11-264-314(e), to completely sorb all of the liquid contents of the inside containers. The metal outer container must be full after it has been packed with inside containers and sorbent material.

(c) The sorbent material used must not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers, in accordance with subsection 11-264-17(b).

(d) Incompatible wastes, as defined in section 11-260-10, must not be placed in the same outside container.

(e) Reactive wastes, other than cyanide- or sulfide-bearing waste as defined in paragraph 11-261-23(a)(5), must be treated or rendered non-reactive prior to packaging in accordance with subsections (a) through (d). Cyanide- and sulfide-bearing reactive waste may be packed in accordance with subsections (a) through (d) without first being treated or rendered non-reactive.

(f) Such disposal is in compliance with the requirements of chapter 11-268. Persons who incinerate lab packs according to the requirements in paragraph 11-268-42(c)(1) may use fiber drums in place of metal outer containers. Such fiber drums must meet the DOT specifications in 49 CFR 173.12 and be overpacked according to the requirements in subsection (b). [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.316)

§11-264-317 Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027. (a) Hazardous Wastes F020, F021, F022, F023, F026, and F027 must not be placed in any landfill unless the owner or operator operates the landfill in accord with a management plan for these wastes that is approved by the director pursuant to the standards set out in this subsection, and in accord with all other applicable requirements of this chapter. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through the soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring requirements.

(b) The director may determine that additional design, operating, and monitoring requirements are necessary for landfills managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.317)

SUBCHAPTER O

INCINERATORS

§11-264-340 Applicability. (a) The rules of this subchapter apply to owners and operators of hazardous waste incinerators (as defined in section 11-260-10), except as section 11-264-1 provides otherwise.

(b) After consideration of the waste analysis included with Part B of the permit application, the director, in establishing the permit conditions, must exempt the applicant from all

requirements of this subchapter except section 11-264-341 (Waste analysis) and section 11-264-351 (Closure),

(1) If the director finds that the waste to be burned is:

(i) Listed as a hazardous waste in subchapter D of chapter 11-261, solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both; or

(ii) Listed as a hazardous waste in subchapter D of chapter 11-261, solely because it is reactive (Hazard Code R) for characteristics other than those listed in paragraphs 11-261-23(a)(4) and (5), and will not be burned when other hazardous wastes are present in the combustion zone; or

(iii) A hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the test for characteristics of hazardous wastes under subchapter C of chapter 11-261; or

(iv) A hazardous waste solely because it possesses any of the reactivity characteristics described by paragraphs 11-261-23(a)(1), (2), (3), (6), (7), and (8), and will not be burned when other hazardous wastes are present in the combustion zone; and

(2) If the waste analysis shows that the waste contains none of the hazardous constituents listed in Appendix VIII of chapter 11-261, which would reasonably be expected to be in the waste.

(c) If the waste to be burned is one which is described by subparagraphs (b)(1)(i), (ii), (iii), or (iv) and contains insignificant concentrations of the hazardous constituents listed in Appendix VIII of chapter 11-261, then the director may, in establishing permit conditions, exempt the applicant from all requirements of this subchapter, except section 11-264-341 (Waste analysis) and section 11-264-351 (Closure), after consideration of the waste analysis included with Part B of the permit application, unless the director finds that the waste will pose a threat to human health and the environment when burned in an incinerator.

(d) The owner or operator of an incinerator may conduct trial burns subject only to the requirements of section 11-270-62 (Short term and incinerator permits). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.340)

§11-264-341 Waste analysis. (a) As a portion of the trial burn plan required by section 11-270-62, or with Part B of the permit application, the owner or operator must have included an analysis of the waste feed sufficient to provide all information

required by subsection 11-270-62(b) or section 11-270-19. Owners or operators of new hazardous waste incinerators must provide the information required by subsection 11-270-62(c) or section 11-270-19 to the greatest extent possible.

(b) Throughout normal operation the owner or operator must conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limits specified in his permit (under subsection 11-264-345(b)). [Eff 6/18/94; comp SEP 20 1999 (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.341)

§11-264-342 Principal organic hazardous constituents (POHCs). (a) Principal Organic Hazardous Constituents (POHCs) in the waste feed must be treated to the extent required by the performance standard of section 11-264-343.

(b)(1) One or more POHCs will be specified in the facility's permit, from among those constituents listed in Appendix VIII of chapter 11-261, for each waste feed to be burned. This specification will be based on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses and trial burns or alternative data submitted with Part B of the facility's permit application. Organic constituents which represent the greatest degree of difficulty of incineration will be those most likely to be designated as POHCs. Constituents are more likely to be designated as POHCs if they are present in large quantities or concentrations in the waste.

(2) Trial POHCs will be designated for performance of trial burns in accordance with the procedure specified in section 11-270-62 for obtaining trial burn permits. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.342)

§11-264-343 Performance standards. An incinerator burning hazardous waste must be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under section 11-264-345, it will meet the following performance standards:

(a)(1) Except as provided in paragraph (a)(2), an incinerator burning hazardous waste must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) designated (under section 11-264-342) in its permit for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = \frac{(W_{in} - W_{out})}{W_{in}} X\ 100\%$$

where:

W_{in}=mass feed rate of one principal organic hazardous constituent (POHC) in the waste stream feeding the incinerator

and

W_{out}=mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) An incinerator burning hazardous wastes F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principal organic hazardous constituent (POHC) designated (under section 11-264-342) in its permit. This performance must be demonstrated on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in paragraph 11-264-343(a)(1). In addition, the owner or operator of the incinerator must notify the director of his intent to incinerate hazardous wastes F020, F021, F022, F023, F026, or F027.

(b) An incinerator burning hazardous waste and producing stack emissions of more than 1.8 kilograms per hour (4 pounds per hour) of hydrogen chloride (HCl) must control HCl emissions such that the rate of emission is no greater than the larger of either 1.8 kilograms per hour or 1% of the HCl in the stack gas prior to entering any pollution control equipment.

(c) An incinerator burning hazardous waste must not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) when corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_m X \frac{14}{21 - Y}$$

Where P_c is the corrected concentration of particulate matter, P_m is the measured concentration of particulate matter, and Y is the measured concentration of oxygen in the stack gas, using the Orsat method for oxygen analysis of dry flue gas, presented in 40

CFR part 60, Appendix A (Method 3). This correction procedure is to be used by all hazardous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities, the director will select an appropriate correction procedure, to be specified in the facility permit.

(d) For purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 11-264-345) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of this section may be ''information'' justifying modification, revocation, or reissuance of a permit under section 11-270-41. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.343)

§11-264-344 Hazardous waste incinerator permits. (a) The owner or operator of a hazardous waste incinerator may burn only wastes specified in his permit and only under operating conditions specified for those wastes under section 11-264-345, except:

(1) In approved trial burns under section 11-270-62; or

(2) Under exemptions created by section 11-264-340.

(b) Other hazardous wastes may be burned only after operating conditions have been specified in a new permit or a permit modification as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with Part B of a permit application under section 11-270-19.

(c) The permit for a new hazardous waste incinerator must establish appropriate conditions for each of the applicable requirements of this subchapter, including but not limited to allowable waste feeds and operating conditions necessary to meet the requirements of section 11-264-345, sufficient to comply with the following standards:

(1) For the period beginning with initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish operating conditions required in paragraph (c)(2), not to exceed a duration of 720 hours operating time for treatment of hazardous waste, the operating requirements must be those most likely to ensure compliance with the performance standards of section 11-264-343, based on the director's engineering judgment. The director may extend the duration of this period once for up to 720 additional hours when good cause for the extension is demonstrated by the applicant.

(2) For the duration of the trial burn, the operating requirements must be sufficient to demonstrate

compliance with the performance standards of section 11-264-343 and must be in accordance with the approved trial burn plan;

(3) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the director, the operating requirements must be those most likely to ensure compliance with the performance standards of section 11-264-343, based on the director's engineering judgement.

(4) For the remaining duration of the permit, the operating requirements must be those demonstrated, in a trial burn or by alternative data specified in subsection 11-270-19(c), as sufficient to ensure compliance with the performance standards of section 11-264-343. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.344)

§11-264-345 Operating requirements. (a) An incinerator must be operated in accordance with operating requirements specified in the permit. These will be specified on a case-by-case basis as those demonstrated (in a trial burn or in alternative data as specified in subsection 11-264-344(b) and included with Part B of a facility's permit application) to be sufficient to comply with the performance standards of section 11-264-343.

(b) Each set of operating requirements will specify the composition of the waste feed (including acceptable variations in the physical or chemical properties of the waste feed which will not affect compliance with the performance requirement of section 11-264-343) to which the operating requirements apply. For each such waste feed, the permit will specify acceptable operating limits including the following conditions:

(1) Carbon monoxide (CO) level in the stack exhaust gas;
(2) Waste feed rate;
(3) Combustion temperature;
(4) An appropriate indicator of combustion gas velocity;
(5) Allowable variations in incinerator system design or operating procedures; and
(6) Such other operating requirements as are necessary to ensure that the performance standards of section 11-264-343 are met.

(c) During start-up and shut-down of an incinerator, hazardous waste (except wastes exempted in accordance with section 11-264-340) must not be fed into the incinerator unless

the incinerator is operating within the conditions of operation (temperature, air feed rate, etc.) specified in the permit.

(d) Fugitive emissions from the combustion zone must be controlled by:

(1) Keeping the combustion zone totally sealed against fugitive emissions; or

(2) Maintaining a combustion zone pressure lower than atmospheric pressure; or

(3) An alternate means of control demonstrated (with Part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(e) An incinerator must be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits established under subsection (a).

(f) An incinerator must cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.345)

§11-264-346 [Reserved]

§11-264-347 Monitoring and inspections. (a) The owner or operator must conduct, as a minimum, the following monitoring while incinerating hazardous waste:

(1) Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the facility permit must be monitored on a continuous basis.

(2) CO must be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere.

(3) Upon request by the director, sampling and analysis of the waste and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the performance standards of section 11-264-343.

(b) The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) must be subjected to thorough visual inspection, at least daily, for leaks, spills, fugitive emissions, and signs of tampering.

(c) The emergency waste feed cutoff system and associated alarms must be tested at least weekly to verify operability, unless the applicant demonstrates to the director that weekly inspections will unduly restrict or upset operations and that

less frequent inspection will be adequate. At a minimum, operational testing must be conducted at least monthly.

(d) This monitoring and inspection data must be recorded and the records must be placed in the operating log required by section 11-264-73. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.347)

§11-264-348 -- §11-264-350 [Reserved]

§11-264-351 Closure. At closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.351)

SUBCHAPTERS P - R

[RESERVED]

SUBCHAPTER S

CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

§11-264-552 Corrective Action Management Units (CAMU).

(a) For the purpose of implementing remedies under section 11-264-101 or HRS section 342J-36, the director may designate an area at the facility as a corrective action management unit, as defined in section 11-260-10, in accordance with the requirements of this section. One or more CAMUs may be designated at a facility.

(1) Placement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes.

(2) Consolidation or placement of remediation wastes into or within a CAMU does not constitute creation of a unit subject to minimum technology requirements.

(b)(1) The director may designate a regulated unit (as defined in paragraph 11-264-90(a)(2)) as a CAMU, or may incorporate a regulated unit into a CAMU, if:

(i) The regulated unit is closed or closing, meaning it has begun the closure process under section 11-264-113 or 11-265-113; and

(ii) Inclusion of the regulated unit will enhance implementation of effective, protective and reliable remedial actions for the facility.

(2) The subchapter F, G, and H requirements and the unit-specific requirements of chapter 11-264 or 11-265 that applied to that regulated unit will continue to apply to that portion of the CAMU after incorporation into the CAMU.

(c) The director shall designate a CAMU in accordance with the following:

(1) The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies;

(2) Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;

(3) The CAMU shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility;

(4) Areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize future releases, to the extent practicable;

(5) The CAMU shall expedite the timing of remedial activity implementation, when appropriate and practicable;

(6) The CAMU shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU; and

(7) The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.

(d) The owner/operator shall provide sufficient information to enable the director to designate a CAMU in accordance with the criteria in section 11-264-552.

(e) The director shall specify, in the permit or order, requirements for CAMUs to include the following:

(1) The areal configuration of the CAMU.

(2) Requirements for remediation waste management to include the specification of applicable design, operation and closure requirements.

(3) Requirements for ground water monitoring that are sufficient to:

(i) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the CAMU; and

(ii) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the CAMU in which wastes will remain in place after closure of the CAMU.

(4) Closure and post-closure requirements.

(i) Closure of corrective action management units shall:

(A) Minimize the need for further maintenance; and

(B) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.

(ii) Requirements for closure of CAMUs shall include the following, as appropriate and as deemed necessary by the director for a given CAMU:

(A) Requirements for excavation, removal, treatment or containment of wastes;

(B) For areas in which wastes will remain after closure of the CAMU, requirements for capping of such areas; and

(C) Requirements for removal and decontamination of equipment, devices, and structures used in remediation waste management activities within the CAMU.

(iii) In establishing specific closure requirements for CAMUs under subsection 11-264-552(e), the director shall consider the following factors:

(A) CAMU characteristics;

(B) Volume of wastes which remain in place after closure;

(C) Potential for releases from the CAMU;

(D) Physical and chemical characteristics of the waste;

(E) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and

(F) Potential for exposure of humans and environmental receptors if releases were to occur from the CAMU.

(iv) Post-closure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be

performed to ensure the integrity of any cap, final cover, or other containment system.

(f) The director shall document the rationale for designating CAMUs and shall make such documentation available to the public.

(g) Incorporation of a CAMU into an existing permit must be approved by the director according to the procedures for department-initiated permit modifications under section 11-270-41, or according to the permit modification procedures of section 11-270-42.

(h) The designation of a CAMU does not change the department's existing authority to address clean-up levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.552)

§11-264-553 Temporary Units (TU). (a) For temporary tanks and container storage areas used for treatment or storage of hazardous remediation wastes, during remedial activities required under section 11-264-101 or HRS section 342J-36, the director may determine that a design, operating, or closure standard applicable to such units may be replaced by alternative requirements which are protective of human health and the environment.

(b) Any temporary unit to which alternative requirements are applied in accordance with subsection (a) shall be:

(1) Located within the facility boundary; and
(2) Used only for treatment or storage of remediation wastes.

(c) In establishing standards to be applied to a temporary unit, the director shall consider the following factors:

(1) Length of time such unit will be in operation;
(2) Type of unit;
(3) Volumes of wastes to be managed;
(4) Physical and chemical characteristics of the wastes to be managed in the unit;
(5) Potential for releases from the unit;
(6) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases; and
(7) Potential for exposure of humans and environmental receptors if releases were to occur from the unit.

(d) The director shall specify in the permit or order the length of time a temporary unit will be allowed to operate, to be no longer than a period of one year. The director shall also specify the design, operating, and closure requirements for the unit.

(e) The director may extend the operational period of a temporary unit once for no longer than a period of one year beyond that originally specified in the permit or order, if the director determines that:

(1) Continued operation of the unit will not pose a threat to human health and the environment; and

(2) Continued operation of the unit is necessary to ensure timely and efficient implementation of remedial actions at the facility.

(f) Incorporation of a temporary unit or a time extension for a temporary unit into an existing permit shall be:

(1) Approved in accordance with the procedures for department-initiated permit modifications under section 11-270-41; or

(2) Requested by the owner/operator as a Class II modification according to the procedures under section 11-270-42.

(g) The director shall document the rationale for designating a temporary unit and for granting time extensions for temporary units and shall make such documentation available to the public. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.553)

SUBCHAPTERS T - V

[RESERVED]

SUBCHAPTER W

DRIP PADS

§11-264-570 Applicability. (a) The requirements of this subchapter apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and/or surface water run-off to an associated collection system. Existing drip pads are those constructed before December 6, 1990 and those for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990. All other drip pads are new drip pads. The requirement at paragraph 11-264-573(b)(3) to install a leak collection system applies only to those drip pads that are constructed after December 24, 1992 except for those constructed after December 24, 1992 for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 24, 1992.

(b) The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so

that neither run-off nor run-on is generated is not subject to regulation under subsection 11-264-573(e) or subsection 11-264-573(f), as appropriate.

(c) The requirements of this subchapter are not applicable to the management of infrequent and incidental drippage in storage yards provided that:

(1) The owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan must describe how the owner or operator will do the following:

(i) Clean up the drippage;

(ii) Document the cleanup of the drippage;

(iii) Retain documents regarding cleanup for three years; and

(iv) Manage the contaminated media in a manner consistent with State regulations. [Eff 6/18/94; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.570)

§11-264-571 Assessment of existing drip pad integrity. (a) For each existing drip pad as defined in section 11-264-570, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of this subchapter, except the requirements for liners and leak detection systems of subsection 11-264-573(b). No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of section 11-264-573 are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of section 11-264-573, except the standards for liners and leak detection systems, specified in subsection 11-264-573(b).

(b) The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of subsection 11-264-573(b), and submit the plan to the director no later than two years before the date that all repairs, upgrades, and modifications are complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of section 11-264-573. The plan must be reviewed and certified by an independent qualified registered professional engineer.

(c) Upon completion of all upgrades, repairs, and modifications, the owner or operator must submit to the director, the as-built drawings for the drip pad together with a certification by an independent qualified registered professional engineer attesting that the drip pad conforms to the drawings.

(d) If the drip pad is found to be leaking or unfit for use, the owner or operator must comply with the provisions of subsection 11-264-573(m) or close the drip pad in accordance with section 11-264-575. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.571)

§11-264-572 Design and installation of new drip pads. Owners and operators of new drip pads must ensure that the pads are designed, installed, and operated in accordance with one of the following:

(a) all of the requirements of sections 11-264-573 (except paragraph 11-264-573(a)(4)), 11-264-574 and 11-264-575, or

(b) all of the requirements of sections 11-264-573 (except subsection 11-264-573(b)), 11-264-574 and 11-264-575. [Eff 6/28/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264-572)

§11-264-573 Design and operating requirements. (a) Drip pads must:

(1) Be constructed of non-earthen materials, excluding wood and non-structurally supported asphalt;

(2) Be sloped to free-drain treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system;

(3) Have a curb or berm around the perimeter;

(4) (i) Have a hydraulic conductivity of less than or equal to $1x10^{-7}$ centimeters per second, e.g., existing concrete drip pads must be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to $1x10^{-7}$ centimeters per second such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed to an associated collection system. This surface material must be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material must be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to

existing drip pads and those drip pads for which the owner or operator elects to comply with subsection 11-264-572(b) instead of subsection 11-264-572(a).

(ii) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this section, except for subsection (b).

(5) Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, and the stress of daily operations, e.g., variable and moving loads such as vehicle traffic, movement of wood, etc.

(b) If an owner/operator elects to comply with subsection 11-264-572(a) instead of subsection 11-264-572(b), the drip pad must have:

(1) A synthetic liner installed below the drip pad that is designed, constructed, and installed to prevent leakage from the drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or groundwater or surface water during the active life of the facility. The liner must be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from vehicular traffic on the drip pad);

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

(iii) Installed to cover all surrounding earth that could come in contact with the waste or leakage; and

(2) A leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system must be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad;

(ii) Designed and operated to function without clogging through the scheduled closure of the drip pad; and

(iii) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

(3) A leakage collection system immediately above the liner that is designed, constructed, maintained and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time, and quantity of any leakage collected in this system and removed must be documented in the operating log.

(c) Drip pads must be maintained such that they remain free of cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the drip pad.

(d) The drip pad and associated collection system must be designed and operated to convey, drain, and collect liquid resulting from drippage or precipitation in order to prevent run-off.

(e) Unless protected by a structure, as described in subsection 11-264-570(b), the owner or operator must design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a twenty-four hour, twenty-five year storm, unless the system has sufficient excess capacity to contain any run-off that might enter the system.

(f) Unless protected by a structure or cover as described in subsection 11-264-570(b), the owner or operator must design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a twenty-four hour, twenty-five year storm.

(g) The drip pad must be evaluated to determine that it meets the requirements of subsections (a) through (f) and the owner or operator must obtain a statement from an independent, qualified registered professional engineer certifying that the drip pad design meets the requirements of this section.

(h) Drippage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

(i) The drip pad surface must be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous waste or other materials are removed, with residues being properly managed as hazardous waste, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous waste or other materials on the drip pad. The owner or operator must document the date and time of each cleaning and the cleaning procedure used in the facility's operating log. The owner/operator must determine if the residues are hazardous as per section 11-262-11 and, if so, must manage them under chapters 11-261 through 11-268, 11-270, and HRS section 342J-6.5.

(j) Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

(k) After being removed from the treatment vessel, treated wood from pressure and non-pressure processes must be held on the drip pad until drippage has ceased. The owner or operator must maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.

(l) Collection and holding units associated with run-on and run-off control systems must be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.

(m) Throughout the active life of the drip pad and as specified in the permit, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:

(1) Upon detection of a condition that may have caused or has caused a release of hazardous waste (e.g., upon detection of leakage in the leak detection system), the owner or operator must:

(i) Enter a record of the discovery in the facility operating log;

(ii) Immediately remove the portion of the drip pad affected by the condition from service;

(iii) Determine what steps must be taken to repair the drip pad and clean up any leakage from below the drip pad, and establish a schedule for accomplishing the repairs;

(iv) Within twenty-four hours after discovery of the condition, notify the director of the condition and, within ten working days, provide written

notice to the director with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.

(2) The director will review the information submitted, make a determination regarding whether the pad must be removed from service completely or partially until repairs and clean up are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(3) Upon completing all repairs and clean up, the owner or operator must notify the director in writing and provide a certification signed by an independent, qualified registered professional engineer, that the repairs and clean up have been completed according to the written plan submitted in accordance with subparagraph (m)(1)(iv).

(n) Should a permit be necessary, the director will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

(o) The owner or operator must maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past, a description of drippage management practices, and a description of treated wood storage and handling practices. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.573)

§11-264-574 <u>Inspections.</u> (a) During construction or installation, liners and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of section 11-264-573 by an independent qualified, registered professional engineer. This certification must be maintained at the facility as part of the facility operating record. After installation, liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

(b) While a drip pad is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions or improper operation of run-on and run-off control systems;

(2) The presence of leakage in and proper functioning of leak detection system;

(3) Deterioration or cracking of the drip pad surface. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.574)

§11-264-575 Closure. (a) At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (pad, liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leakage, and manage them as hazardous waste.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection (a), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must close the facility and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills (section 11-264-310). For permitted units, the requirement to have a permit continues throughout the post-closure period. In addition, for the purpose of closure, post-closure, and financial responsibility, such a drip pad is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subchapters G and H of this chapter.

(c)(1) The owner or operator of an existing drip pad, as defined in section 11-264-570, that does not comply with the liner requirements of paragraph 11-264-573(b)(1) must:

(i) Include in the closure plan for the drip pad under section 11-264-112 both a plan for complying with subsection (a) and a contingent plan for complying with subsection (b) in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under section 11-264-118 for complying with subsection (b) in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under sections 11-264-112 and 11-264-144 for closure and post-closure care of a drip pad subject to this subsection must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under subsection (a). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.575)

SUBCHAPTER X

MISCELLANEOUS UNITS

§11-264-600 Applicability. The requirements in this subchapter apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as section 11-264-1 provides otherwise. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.600)

§11-264-601 Environmental performance standards. A miscellaneous unit must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions shall include those requirements of subchapters I through O and AA through CC of this chapter, chapter 11-270, and 40 C.F.R. 146 that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to:

(a) Prevention of any releases that may have adverse effects on human heath or the environment due to migration of waste constituents in the ground water or subsurface environment, considering:

(1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;

(2) The hydrologic and geologic characteristics of the unit and the surrounding area;

(3) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water;

(4) The quantity and direction of ground-water flow;

(5) The proximity to and withdrawal rates of current and potential ground-water users;

(6) The patterns of land use in the region;

(7) The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;

(8) The potential for health risks caused by human exposure to waste constituents; and

(9) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(b) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface considering:

(1) The volume and physical and chemical characteristics of the waste in the unit;
(2) The effectiveness and reliability of containing, confining, and collecting systems and structures in preventing migration;
(3) The hydrologic characteristics of the unit and the surrounding area, including the topography of the land around the unit;
(4) The patterns of precipitation in the region;
(5) The quantity, quality, and direction of ground-water flow;
(6) The proximity of the unit to surface waters;
(7) The current and potential uses of nearby surface waters and any water quality standards established for those surface waters;
(8) The existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;
(9) The patterns of land use in the region;
(10) The potential for health risks caused by human exposure to waste constituents; and
(11) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(c) Prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering:

(1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols and particulates;
(2) The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;
(3) The operating characteristics of the unit;
(4) The atmospheric, meteorologic, and topographic characteristics of the unit and the surrounding area;
(5) The existing quality of the air, including other sources of contamination and their cumulative impact on the air;
(6) The potential for health risks caused by human exposure to waste constituents; and

(7) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.601)

§11-264-602 Monitoring, analysis, inspection, response, reporting, and corrective action. Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with sections 11-264-601, 11-264-15, 11-264-33, 11-264-75, 11-264-76, 11-264-77, and 11-264-101 as well as meet any additional requirements needed to protect human health and the environment as specified in the permit. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.602)

§11-264-603 Post-closure care. A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with section 11-264-601 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or ground water that cannot be completely removed or decontaminated during closure, then that unit must also meet the requirements of section 11-264-601 during post-closure care. The post-closure plan under section 11-264-118 must specify the procedures that will be used to satisfy this requirement. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.603)

SUBCHAPTERS Y-Z

[RESERVED]

SUBCHAPTER AA

AIR EMISSION STANDARDS FOR PROCESS VENTS

§11-264-1030 Applicability. (a) The rules in this subchapter apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in section 11-264-1).

(b) Except for subsections 11-264-1034(d) and (e), this subchapter applies to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with

organic concentrations of at least ten ppmw, if these operations are conducted in one of the following:

(1) A unit that is subject to the permitting requirements of chapter 11-270, or

(2) A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of section 11-262-34(a) (i.e., a hazardous waste recycling unit that is not a "90-day" tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of chapter 11-270, or

(3) A unit that is exempt from permitting under the provisions of section 11-262-34(a) (i.e., a 90-day tank or container) and is not a recycling unit under the provisions of section 11-261-6.

(c) For the owner and operator of a facility subject to this subchapter and who received a final permit under RCRA section 3005 prior to December 6, 1996, the requirements of this subchapter shall be incorporated into the permit when a State hazardous waste management permit is issued under section 11-271-15 or the EPA-issued RCRA permit is reissued in accordance with the requirements of section 11-271-15 or reviewed in accordance with the requirements of section 11-270-50(d). Until such date when the owner and operator receives a final permit incorporating the requirements of this subchapter, the owner and operator is subject to the requirements of chapter 11-265, subchapter AA.

(d) The requirements of sections 11-264-1032 through 11-264-1036 apply to process vents on hazardous waste recycling units previously exempt under paragraph 11-261-6(c)(1). Other exemptions under section 11-261-4 and subsection 11-264-1(g) are not affected by these requirements.

(e) The requirements of this subchapter do not apply to the process vents at a facility where the facility owner or operator certifies that all of the process vents that would otherwise be subject to this subchapter are equipped with and operating air emission controls in accordance with the process vent requirements of an applicable Federal Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 shall be kept with, or made readily available with, the facility operating record. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1030)

§11-264-1031 Definitions. As used in this subchapter, all terms not defined herein shall have the meaning given them in HRS chapter 342J and Hawaii Administrative Rules chapters 11-260 through 11-266.

"Air stripping operation" is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

"Bottoms receiver" means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

"Closed-vent system" means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

"Condenser" means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

"Connector" means flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

"Continuous recorder" means a data-recording device recording an instantaneous data value at least once every fifteen minutes.

"Control device" means an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale (e.g., a primary condenser on a solvent recovery unit) is not a control device.

"Control device shutdown" means the cessation of operation of a control device for any purpose.

"Distillate receiver" means a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

"Distillation operation" means an operation, either batch or continuous, separating one or more feed stream(s) into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

"Double block and bleed system" means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

"Equipment" means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange, and any control devices or systems required by this subchapter.

"Flame zone" means the portion of the combustion chamber in a boiler occupied by the flame envelope.

"Flow indicator" means a device that indicates whether gas flow is present in a vent stream.

"First attempt at repair" means to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

"Fractionation operation" means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

"Hazardous waste management unit shutdown" means a work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit for less than twenty-four hours is not a hazardous waste management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous waste management unit shutdowns.

"Hot well" means a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

"In gas/vapor service" means that the piece of equipment contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.

"In heavy liquid service" means that the piece of equipment is not in gas/vapor service or in light liquid service.

"In light liquid service" means that the piece of equipment contains or contacts a waste stream where the vapor pressure of one or more of the organic components in the stream is greater than 0.3 kilopascals (kPa) at twenty degrees Celsius, the total concentration of the pure organic components having a vapor pressure greater than 0.3 kilopascals (kPa) at twenty degrees Celsius is equal to or greater than twenty percent by weight, and the fluid is a liquid at operating conditions.

"In situ sampling systems" means nonextractive samplers or in-line samplers.

"In vacuum service" means that equipment is operating at an internal pressure that is at least 5 kPa below ambient pressure.

"Malfunction" means any sudden failure of a control device or a hazardous waste management unit or failure of a hazardous waste management unit to operate in a normal or usual manner, so that organic emissions are increased.

"Open-ended valve or line" means any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

"Pressure release" means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

"Process heater" means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

"Process vent" means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

"Repaired" means that equipment is adjusted, or otherwise altered, to eliminate a leak.

"Sensor" means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

"Separator tank" means a device used for separation of two immiscible liquids.

"Solvent extraction operation" means an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one or more components into the solvent.

"Startup" means the setting in operation of a hazardous waste management unit or control device for any purpose.

"Steam stripping operation" means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

"Surge control tank" means a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

"Thin-film evaporation operation" means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

"Vapor incinerator" means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

"Vented" means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading (working losses) or by natural means

such as diurnal temperature changes. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1031)

§11-264-1032 Standards: Process vents. (a) The owner or operator of a facility with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous wastes with organic concentrations of at least ten ppmw shall either:

(1) Reduce total organic emissions from all affected process vents at the facility below 1.4 kg/h (3 lb/h) and 2.8 Mg/yr (3.1 tons/yr), or

(2) Reduce, by use of a control device, total organic emissions from all affected process vents at the facility by ninety-five weight percent.

(b) If the owner or operator installs a closed-vent system and control device to comply with the provisions of subsection (a) the closed-vent system and control device must meet the requirements of section 11-264-1033.

(c) Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests must conform with the requirements of subsection 11-264-1034(c).

(d) When an owner or operator and the director do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in subsection 11-264-1034(c) shall be used to resolve the disagreement. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1032)

§11-264-1033 Standards: Closed-vent systems and control devices.

(a)(1) Owners or operators of closed-vent systems and control devices used to comply with provisions of this chapter shall comply with the provisions of this section.

(2) (i) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this subchapter on the effective date that the facility becomes subject to the provisions of this subchapter must prepare an implementation schedule

that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this subchapter for installation and startup.

(ii) Any unit that begins operation after December 21, 1990, and is subject to the provisions of this subchapter when operation begins, must comply with the rules immediately (i.e., must have control devices installed and operating on startup of the affected unit); the 30-month implementation schedule does not apply.

(iii) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to this subchapter shall comply with all requirements of this subchapter as soon as practicable but no later than 30 months after the amendment's effective date. When control equipment required by this subchapter can not be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this subchapter. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

(iv) Owners and operators of facilities and units that become newly subject to the requirements of this subchapter after December 8, 1997, due to an action other than those described in subparagraph (a)(2)(iii) must comply with all applicable requirements immediately (i.e., must have control devices installed and operating on the date the facility or unit becomes subject to this subchapter; the 30-month implementation schedule does not apply).

(b) A control device involving vapor recovery (e.g., a condenser or adsorber) shall be designed and operated to recover the organic vapors vented to it with an efficiency of ninety-five weight percent or greater unless the total organic emission

limits of paragraph 11-264-1032(a)(1) for all affected process vents can be attained at an efficiency less than ninety-five weight percent.

(c) An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) shall be designed and operated to reduce the organic emissions vented to it by ninety-five weight percent or greater; to achieve a total organic compound concentration of twenty ppmv, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to 3 percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of seven-hundred and sixty degrees Celsius. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(d)(1) A flare shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (e)(1), except for periods not to exceed a total of five minutes during any two consecutive hours.

(2) A flare shall be operated with a flame present at all times, as determined by the methods specified in subparagraph (f)(2)(iii).

(3) A flare shall be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (e)(2).

(4) (i) A steam-assisted or nonassisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3), less than 18.3 m/s (60 ft/s), except as provided in subparagraphs (d)(4)(ii) and (iii).

(ii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3), equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3), less than the velocity, V_{max}, as determined by the method specified in paragraph (e)(4) and less than 122 m/s (400 ft/s) is allowed.

(5) An air-assisted flare shall be designed and operated with an exit velocity less than the velocity, V_{max}, as determined by the method specified in paragraph (e)(5).

(6) A flare used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(e)(1) Reference Method 22 in 40 CFR Part 60 shall be used to determine the compliance of a flare with the visible emission provisions of this subchapter. The observation period is two hours and shall be used according to Method 22.

(2) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \left[\sum_{i=1}^{n} C_i H_i \right]$$

where:

H_T=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at twenty-five degrees Celsius and seven-hundred and sixty mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is twenty degrees Celsius;

K=Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is twenty degrees Celsius;

C_i=Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946-82 (incorporated by reference as specified in section 11-260-11); and

H_i=Net heat of combustion of sample component i, kcal/9 mol at twenty-five degrees Celsius and seven-hundred and sixty mm Hg. The heats of combustion may be determined using ASTM D 2382-83 (incorporated by reference as specified in section 11-260-11) if published values are not available or cannot be calculated.

(3) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR Part 60 as

appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(4) The maximum allowed velocity in m/s, V_{max}, for a flare complying with subparagraph (d)(4)(iii) shall be determined by the following equation:

$$Log_{10}(V_{max}) = (H_T + 28.8)/31.7$$

where:

28.8=Constant,

31.7=Constant,

H_T=The net heating value as determined in paragraph (e)(2).

(5) The maximum allowed velocity in m/s, V_{max}, for an air-assisted flare shall be determined by the following equation:

$$V_{max} = 8.706 + 0.7084\ (H_T)$$

where:

8.706=Constant,

0.7084=Constant,

H_T=The net heating value as determined in paragraph (e)(2).

(f) The owner or operator shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:

(1) Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

(2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(i) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous

recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(ii) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(iv) For a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. The temperature sensor shall be installed at a location in the furnace downstream of the combustion zone.

(v) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used.

(vi) For a condenser, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or

(B) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in degrees Celsius or ±0.5 degrees Celsius, whichever is greater. The temperature sensor shall be installed at a

location in the exhaust vent stream from the condenser exit (i.e., product side).

(vii) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or

(B) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

(3) Inspect the readings from each monitoring device required by paragraphs (f)(1) and (2) at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.

(g) An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of clause 11-264-1035(b)(4)(iii)(F).

(h) An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

(1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than twenty percent of the time required to consume the total carbon working capacity established as a requirement of clause 11-264-1035(b)(4)(iii)(G), whichever is longer.

(2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of clause 11-264-1035(b)(4)(iii)(G).

(i) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will

ensure that the control device is operated in conformance with these standards and the control device's design specifications.

(j) An owner or operator of an affected facility seeking to comply with the provisions of this chapter by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

(k) A closed-vent system shall meet either of the following design requirements:

(1) A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background as determined by the procedure in section 11-264-1034(b), and by visual inspections; or

(2) A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(l) The owner or operator shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

(1) Each closed-vent system that is used to comply with paragraph (k)(1) shall be inspected and monitored in accordance with the following requirements:

(i) An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in section 11-264-1034(b) to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

(ii) After initial leak detection monitoring required in subparagraph (l)(1)(i), the owner or operator shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a

bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in section 11-264-1034(b) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

(B) Closed-vent system components or connections other than those specified in clause (1)(1)(ii)(A) shall be monitored annually and at other times as requested by the director, except as provided for in subsection (o), using the procedures specified in section 11-264-1034(b) to demonstrate that the components or connections operate with no detectable emissions.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of paragraph (1)(3).

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 11-264-1035.

(2) Each closed-vent system that is used to comply with paragraph (k)(2) shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.

(ii) The owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (1)(3).

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 11-264-1035.

(3) The owner or operator shall repair all detected defects as follows:

(i) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in subparagraph (l)(3)(iii).

(ii) A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(iii) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(iv) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in section 11-264-1035.

(m) Closed-vent systems and control devices used to comply with provisions of this subchapter shall be operated at all times when emissions may be vented to them.

(n) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

(1) Regenerated or reactivated in a thermal treatment unit that meets one of the following:

(i) The owner or operator of the unit has been issued either a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 264, subpart X or a State hazardous waste permit under section 11-271-15 which implements the requirements of subchapter X; or

(ii) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of subchapters AA and CC of either this chapter or of chapter 11-265; or

(iii) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

(2) Incinerated in a hazardous waste incinerator for which the owner or operator either:

(i) Has been issued either a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 264, subpart O or a State hazardous waste permit under section 11-271-15 which implements the requirements of subchapter O; or

(ii) Has designed and operates the incinerator in accordance with the interim status requirements of chapter 11-265, subchapter O.

(3) Burned in a boiler or industrial furnace for which the owner or operator either:

(i) Has been issued either a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 266, subpart H or a State hazardous waste permit under section 11-271-15 which implements the requirements of chapter 11-266, subchapter H; or

(ii) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of chapter 11-266, subchapter H.

(o) Any components of a closed-vent system that are designated, as described in section 11-264-1035(c)(9), as unsafe to monitor are exempt from the requirements of clause (1)(1)(ii)(B) if:

(1) The owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with clause (1)(1)(ii)(B); and

(2) The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in clause (1)(1)(ii)(B) as frequently as practicable during safe-to-monitor times. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1033)

§11-264-1034 <u>Test methods and procedures.</u> (a) Each owner or operator subject to the provisions of this subchapter shall comply with the test methods and procedures requirements provided in this section.

(b) When a closed-vent system is tested for compliance with no detectable emissions, as required in subsection 11-264-1033(1), the test shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR Part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air (less than ten ppm of hydrocarbon in air).

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand ppm methane or n-hexane.

(5) The background level shall be determined as set forth in Reference Method 21.

(6) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with five-hundred ppm for determining compliance.

(c) Performance tests to determine compliance with subsection 11-264-1032(a) and with the total organic compound concentration limit of subsection 11-264-1033(c) shall comply with the following:

(1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:

(i) Method 2 in 40 CFR Part 60 for velocity and volumetric flow rate.

(ii) Method 18 in 40 CFR Part 60 for organic content.

(iii) Each performance test shall consist of three separate runs; each run conducted for at least 1 hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis.

(iv) Total organic mass flow rates shall be determined by the following equation:

$$E_h = Q_{2sd} \left\{ \sum_{i=1}^{n} C_i MW_i \right\} [0.0416] [10^{-6}]$$

where:

E_h=Total organic mass flow rate, kg/h;

Q_{sd}=Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n=Number of organic compounds in the vent gas;

C_i=Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i=Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416=Conversion factor for molar volume, kg-mol/m^3 (@ 293 K and 760 mm Hg);

10^{-6}=Conversion from ppm, ppm^{-1}.

(v) The annual total organic emission rate shall be determined by the following equation:

$$E_A = (E_h)(H)$$

where:

E_A=Total organic mass emission rate, kg/y;

E_h=Total organic mass flow rate for the process vent, kg/h;

H=Total annual hours of operations for the affected unit, h.

(vi) Total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates (E_h as determined in subparagraph (c)(1)(iv)) and by summing the annual total organic mass emission rates (E_A, as determined in subparagraph (c)(1)(v)) for all affected process vents at the facility.

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not

constitute representative conditions for the purpose of a performance test.

(3) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods specified in paragraph (c)(1).

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the director's approval, be determined using the average of the results of the two other runs.

(d) To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this subchapter, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than ten ppmw using one of the following two methods:

(1) Direct measurement of the organic concentration of the waste using the following procedures:

(i) The owner or operator must take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.

(ii) For waste generated onsite, the grab samples must be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite, the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060 or 8260 of SW-846 (incorporated by reference under section 11-260-11).

(iv) The arithmetic mean of the results of the analyses of the four samples shall apply for each waste stream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.

(2) Using knowledge of the waste to determine that its total organic concentration is less than ten ppmw. Documentation of the waste determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a waste stream having a total organic content less than ten ppmw, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than ten ppmw shall be made as follows:

(1) By the effective date that the facility becomes subject to the provisions of this subchapter or by the date when the waste is first managed in a waste management unit, whichever is later, and

(2) For continuously generated waste, annually, or

(3) Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

(f) When an owner or operator and the director do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least ten ppmw based on knowledge of the waste, the procedures in Method 8260 of SW-846 (incorporated by reference under section 11-260-11) may be used to resolve the dispute. [Eff 6/18/94; am 3/13/99; comp

SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1034)

§11-264-1035 Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subchapter shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this subchapter may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators must record the following information in the facility operating record:

(1) For facilities that comply with the provisions of paragraph 11-264-1033(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of this subchapter.

(2) Up-to-date documentation of compliance with the process vent standards in section 11-264-1032, including:

(i) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan).

(ii) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or

operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

(3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include:

(i) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

(ii) A detailed engineering description of the closed-vent system and control device including:

(A) Manufacturer's name and model number of control device.

(B) Type of control device.

(C) Dimensions of the control device.

(D) Capacity.

(E) Construction materials.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with section 11-264-1033 shall include the following information:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by subsection 11-264-1033(k).

(iii) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of ''APTI Course 415: Control of Gaseous Emissions'' (incorporated by reference as specified in section 11-260-11) or other engineering texts acceptable to the director that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with clauses

(b)(4)(iii)(A) through (b)(4)(iii)(G) may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified below.

(A) For a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

(D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in subsection 11-264-1033(d).

(E) For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity,

and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(iv) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five percent or greater unless the total organic concentration limit of subsection 11-264-1032(a) is achieved at an efficiency less than ninety-five weight percent or the total organic emission limits of subsection 11-264-1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than ninety-five weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(vi) If performance tests are used to demonstrate compliance, all test results.

(c) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of this chapter shall be recorded and kept up-to-date in the facility operating record. The information shall include:

(1) Description and date of each modification that is made to the closed-vent system or control device design.

(2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with paragraphs 11-264-1033(f)(1) and (f)(2).

(3) Monitoring, operating, and inspection information required by subsections 11-264-1033(f) through (k).

(4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(i) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of seven-hundred and sixty degrees Celsius period when the combustion temperature is below seven-hundred and sixty degrees Celsius.

(ii) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of ninety-five weight percent or greater period when the combustion zone temperature is more than twenty-eight degrees Celsius below the design average combustion zone temperature established as a requirement of clause (b)(4)(iii)(A).

(iii) For a catalytic vapor incinerator, period when:

(A) Temperature of the vent stream at the catalyst bed inlet is more than twenty-eight degrees Celsius below the average temperature of the inlet vent stream established as a requirement of clause (b)(4)(iii)(B), or

(B) Temperature difference across the catalyst bed is less than eighty percent of the design average temperature difference established as a requirement of clause (b)(4)(iii)(B).

(iv) For a boiler or process heater, period when:

(A) Flame zone temperature is more than twenty-eight degrees Celsius below the design average flame zone temperature established as a requirement of clause (b)(4)(iii)(C), or

(B) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of clause (b)(4)(iii)(C).

(v) For a flare, period when the pilot flame is not ignited.

(vi) For a condenser that complies with clause 11-264-1033(f)(2)(vi)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than twenty percent greater than the design outlet organic compound concentration level established as a requirement of clause (b)(4)(iii)(E).

(vii) For a condenser that complies with clause 11-264-1033(f)(2)(vi)(B), period when:

(A) Temperature of the exhaust vent stream from the condenser is more than six degrees Celsius above the design average exhaust vent stream temperature established as a requirement of clause (b)(4)(iii)(E); or

(B) Temperature of the coolant fluid exiting the condenser is more than six degrees Celsius above the design average coolant fluid temperature at the condenser outlet established as a requirement of clause (b)(4)(iii)(E).

(viii) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with clause 11-264-1033(f)(2)(vii)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than twenty percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of clause (b)(4)(iii)(F).

(ix) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with clause 11-264-1033(f)(2)(vii)(B), period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of clause (b)(4)(iii)(F).

(5) Explanation for each period recorded under paragraph (4) of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

(6) For a carbon adsorption system operated subject to requirements specified in subsection 11-264-1033(g) or paragraph 11-264-1033(h)(2), date when existing carbon in the control device is replaced with fresh carbon.

(7) For a carbon adsorption system operated subject to requirements specified in paragraph 11-264-1033(h)(1), a log that records:

(i) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.

(ii) Date when existing carbon in the control device is replaced with fresh carbon.

(8) Date of each control device startup and shutdown.

(9) An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to section 11-264-1033(o) shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of section 11-264-1033(o), an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

(10) When each leak is detected as specified in section 11-264-1033(l), the following information shall be recorded:

(i) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(d) Records of the monitoring, operating, and inspection information required by paragraphs (c)(3) through (c)(10) shall

be maintained by the owner or operator for at least 3 years following the date of each occurrence, measurement, maintenance, corrective action, or record.

(e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the director will specify the appropriate recordkeeping requirements.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in section 11-264-1032 including supporting documentation as required by paragraph 11-264-1034(d)(2) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, shall be recorded in a log that is kept in the facility operating record. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1035)

§11-264-1036 Reporting requirements. (a) A semiannual report shall be submitted by owners and operators subject to the requirements of this subchapter to the director by dates specified by the director. The report shall include the following information:

(1) The EPA identification number, name, and address of the facility.

(2) For each month during the semiannual reporting period, dates when the control device exceeded or operated outside of the design specifications as defined in paragraph 11-264-1035(c)(4) and as indicated by the control device monitoring required by subsection 11-264-1033(f) and such exceedances were not corrected within twenty-four hours, or that a flare operated with visible emissions as defined in subsection 11-264-1033(d) and as determined by Method 22 monitoring, the duration and cause of each exceedance or visible emissions, and any corrective measures taken.

(b) If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications as defined in paragraph 11-264-1035(c)(4) for more than twenty-four hours or a flare does not operate with visible emissions as defined in subsection 11-264-1033(d), a report to the director is not required. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1036)

§11-264-1037 -- §11-264-1049 [Reserved]

SUBCHAPTER BB

AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

§11-264-1050 Applicability. (a) The rules in this subchapter apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in section 11-264-1).

(b) Except as provided in subsection 11-264-1064(k), this subchapter applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least ten percent by weight that are managed in one of the following:

(1) A unit that is subject to the permitting requirements of chapter 11-270, or

(2) A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of section 11-262-34(a) (i.e., a hazardous waste recycling unit that is not a "90-day" tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of chapter 11-270, or

(3) A unit that is exempt from permitting under the provisions of section 11-262-34(a) (i.e., a "90-day" tank or container) and is not a recycling unit under the provision of section 11-261-6.

(c) For the owner or operator of a facility subject to this subchapter and who received a final permit under RCRA section 3005 prior to December 6, 1996, the requirements of this subchapter shall be incorporated into the permit when a State hazardous waste management permit is issued under section 11-271-15 or the EPA-issued RCRA permit is reissued in accordance with the requirements of section 11-271-15 or reviewed in accordance with the requirements of section 11-270-50(d). Until such date when the owner or operator receives a final permit incorporating the requirements of this subchapter, the owner or operator is subject to the requirements of 40 CFR part 265, subchapter BB.

(d) Each piece of equipment to which this subchapter applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

(e) Equipment that is in vacuum service is excluded from the requirements of section 11-264-1052 to section 11-264-1060 if it is identified as required in paragraph 11-264-1064(g)(5).

(f) Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year is excluded from the requirements of sections 11-264-1052 through 11-264-1060 if it is identified, as required in section 11-264-1064(g)(6). [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1050)

§11-264-1051 Definitions. As used in this subchapter, all terms shall have the meaning given them in section 11-264-1031, HRS chapter 342J, and chapters 11-260 through 11-266. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1051)

§11-264-1052 Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in subsection 11-264-1063(b), except as provided in subsections (d), (e), and (f).

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of ten-thousand ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 11-264-1059.

(2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than five calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of subsection (a), provided the following requirements are met:

(1) Each dual mechanical seal system must be:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure, or

(ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of section 11-264-1060, or

(iii) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

(2) The barrier fluid system must not be a hazardous waste with organic concentrations ten percent or greater by weight.

(3) Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5) (i) Each sensor as described in paragraph (d)(3) must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.

(ii) The owner or operator must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6) (i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in subparagraph (d)(5)(ii), a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 11-264-1059.

(iii) A first attempt at repair (e.g., relapping the seal) shall be made no later than five calendar days after each leak is detected.

(e) Any pump that is designated, as described in paragraph 11-264-1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than five-hundred ppm above background, is exempt from the requirements of subsections (a), (c), and (d) if the pump meets the following requirements:

(1) Must have no externally actuated shaft penetrating the pump housing.

(2) Must operate with no detectable emissions as indicated by an instrument reading of less than five-hundred ppm above background as measured by the methods specified in subsection 11-264-1063(c).

(3) Must be tested for compliance with paragraph (e)(2) initially upon designation, annually, and at other times as requested by the director.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of section 11-264-1060, it is exempt from the requirements of subsections (a) through (e). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1052)

§11-264-1053 <u>Standards: Compressors.</u> (a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in subsections (h) and (i).

(b) Each compressor seal system as required in subsection (a) shall be:

(1) Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure, or

(2) Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of section 11-264-1060, or

(3) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to atmosphere.

(c) The barrier fluid must not be a hazardous waste with organic concentrations ten percent or greater by weight.

(d) Each barrier fluid system as described in subsections (a) through (c) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in subsection (d) shall be checked daily or shall be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor must be checked daily.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 11-264-1059.

(2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of subsections (a) and (b) if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of section 11-264-1060, except as provided in subsection (i).

(i) Any compressor that is designated, as described in paragraph 11-264-1064(g)(2), for no detectable emissions as indicated by an instrument reading of less than five-hundred ppm above background is exempt from the requirements of subsections (a) through (h) if the compressor:

(1) Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than five-hundred ppm above background, as measured by the method specified in subsection 11-264-1063(c).

(2) Is tested for compliance with paragraph (i)(1) initially upon designation, annually, and at other times as requested by the director. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1053)

§11-264-1054 Standards: Pressure relief devices in gas/vapor service. (a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than five-hundred ppm above background, as measured by the method specified in subsection 11-264-1063(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than five-hundred ppm above background, as soon as practicable, but no later than five calendar days after each pressure release, except as provided in section 11-264-1059.

(2) No later than five calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than five-hundred ppm above background, as measured by the method specified in subsection 11-264-1063(c).

(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in section 11-264-1060 is exempt from the requirements of subsections (a) and (b). [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1054)

§11-264-1055 Standards: Sampling connection systems. (a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in subsection (a) shall meet one of the following requirements:

(1) Return the purged process fluid directly to the process line;

(2) Collect and recycle the purged process fluid; or

(3) Be designed and operated to capture and transport all the purged process fluid to a waste management unit

that complies with the applicable requirements of sections 11-264-1084 through 11-264-1086 or a control device that complies with the requirements of section 11-264-1060.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of subsections (a) and (b). [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1055)

§11-264-1056 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with subsection (a) at all other times. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1056)

§11-264-1057 Standards: Valves in gas/vapor service or in light liquid service. (a) Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks by the methods specified in subsection 11-264-1063(b) and shall comply with subsections (b) through (e), except as provided in subsections (f), (g), and (h), and sections 11-264-1061 and 11-264-1062.

(b) If an instrument reading of ten-thousand ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months,

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than fifteen calendar days after the leak is detected, except as provided in section 11-264-1059.

(2) A first attempt at repair shall be made no later than five calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts.

(2) Replacement of bonnet bolts.

(3) Tightening of packing gland nuts.

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in paragraph 11-264-1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than five-hundred ppm above background, is exempt from the requirements of subsection (a) if the valve:

(1) Has no external actuating mechanism in contact with the hazardous waste stream.

(2) Is operated with emissions less than five-hundred ppm above background as determined by the method specified in subsection 11-264-1063(c).

(3) Is tested for compliance with paragraph (f)(2) initially upon designation, annually, and at other times as requested by the director.

(g) Any valve that is designated, as described in paragraph 11-264-1064(h)(1), as an unsafe-to-monitor valve is exempt from the requirements of subsection (a) if:

(1) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection (a).

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in paragraph 11-264-1064(h)(2), as a difficult-to-monitor valve is exempt from the requirements of subsection (a) if:

(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface.

(2) The hazardous waste management unit within which the valve is located was in operation before June 21, 1990.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1057)

§11-264-1058 <u>Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors.</u> (a) Pumps and valves

in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within five days by the method specified in subsection 11-264-1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

(b) If an instrument reading of ten-thousand ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 11-264-1059.

(2) The first attempt at repair shall be made no later than five calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under subsection 11-264-1057(e).

(e) Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined) is exempt from the monitoring requirements of subsection (a) and from the recordkeeping requirements of section 11-264-1064. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1058)

§11-264-1059 <u>Standards: Delay of repair.</u> (a) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous waste management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous waste management unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous waste management unit and that does not continue to contain or contact hazardous waste with organic concentrations at least 10 percent by weight.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with section 11-264-1060.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a hazardous waste management unit shutdown will be allowed for a valve if valve assembly

replacement is necessary during the hazardous waste management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will not be allowed unless the next hazardous waste management unit shutdown occurs sooner than 6 months after the first hazardous waste management unit shutdown. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1059)

§11-264-1060 Standards: Closed-vent systems and control devices. (a) Owners or operators of closed-vent systems and control devices subject to this subchapter shall comply with the provisions of section 11-264-1033.

(b) (1) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this subchapter on the effective date that the facility becomes subject to the provisions of this subchapter must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this subchapter for installation and startup.

(2) Any unit that begins operation after December 21, 1990, and is subject to the provisions of this subchapter when operation begins, must comply with the rules immediately (i.e., must have control devices installed and operating on startup of the affected unit); the 30-month implementation schedule does not apply.

(3) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to this subchapter shall comply with all requirements of this subchapter as soon as practicable but no later than 30 months after the amendment's effective date. When control equipment required by this subchapter can not be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award or contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this subchapter. The

owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

(4) Owners and operators of facilities and units that become newly subject to the requirements of this subchapter after December 8, 1997, due to an action other than those described in paragraph (b)(3) must comply with all applicable requirements immediately (i.e., must have control devices installed and operating on the date the facility or unit becomes subject to this subchapter; the 30-month implementation schedule does not apply). [Eff 6/18/94; am 3/13/99; comp SEP 20 1999](Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1060)

§11-264-1061 Alternative standards for valves in gas/vapor service or in light liquid service: percentage of valves allowed to leak. (a) An owner or operator subject to the requirements of section 11-264-1057 may elect to have all valves within a hazardous waste management unit comply with an alternative standard that allows no greater than 2 percent of the valves to leak.

(b) The following requirements shall be met if an owner or operator decides to comply with the alternative standard of allowing 2 percent of valves to leak:

(1) An owner or operator must notify the director that the owner or operator has elected to comply with the requirements of this section.

(2) A performance test as specified in subsection (c) shall be conducted initially upon designation, annually, and at other times requested by the director.

(3) If a valve leak is detected, it shall be repaired in accordance with subsections 11-264-1057(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves subject to the requirements in section 11-264-1057 within the hazardous waste management unit shall be monitored within 1 week by the methods specified in subsection 11-264-1063(b).

(2) If an instrument reading of ten-thousand ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves subject to the requirements in section 11-264-1057 for which leaks are detected by the total number of valves subject to the requirements in section 11-264-1057 within the hazardous waste management unit.

(d) If an owner or operator decides to comply with this section no longer, the owner or operator must notify the director in writing that the work practice standard described in

subsections 11-264-1057(a) through (e) will be followed. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1061)

§11-264-1062 Alternative standards for valves in gas/vapor service or in light liquid service: skip period leak detection and repair.

(a)(1) An owner or operator subject to the requirements of section 11-264-1057 may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3).

(2) An owner or operator must notify the director before implementing one of the alternative work practices.

(b)(1) An owner or operator shall comply with the requirements for valves, as described in section 11-264-1057, except as described in paragraphs (b)(2) and (b)(3).

(2) After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, an owner or operator may begin to skip one of the quarterly leak detection periods (i.e., monitor for leaks once every six months) for the valves subject to the requirements in section 11-264-1057.

(3) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, an owner or operator may begin to skip three of the quarterly leak detection periods (i.e., monitor for leaks once every year) for the valves subject to the requirements in section 11-264-1057.

(4) If the percentage of valves leaking is greater than 2 percent, the owner or operator shall monitor monthly in compliance with the requirements in section 11-264-1057, but may again elect to use this section after meeting the requirements of paragraph 11-264-1057(c)(1). [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1062)

§11-264-1063 Test methods and procedures. (a) Each owner or operator subject to the provisions of this subchapter shall comply with the test methods and procedures requirements provided in this section.

(b) Leak detection monitoring, as required in sections 11-264-1052 through 11-264-1062, shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR Part 60.
(2) The detection instrument shall meet the performance criteria of Reference Method 21.
(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
(4) Calibration gases shall be:
(i) Zero air (less than 10 ppm of hydrocarbon in air).
(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten-thousand ppm methane or n-hexane.
(5) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(c) When equipment is tested for compliance with no detectable emissions, as required in subsections 11-264-1052(e) and 11-264-1053(i), section 11-264-1054, and subsection 11-264-1057(f), the test shall comply with the following requirements:
(1) The requirements of paragraphs (b)(1) through (4) shall apply.
(2) The background level shall be determined as set forth in Reference Method 21.
(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) In accordance with the waste analysis plan required by subsection 11-264-13(b), an owner or operator of a facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following:
(1) Methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85 (incorporated by reference under section 11-260-11);
(2) Method 9060 or 8260 of SW-846 (incorporated by reference under section 11-260-11); or
(3) Application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced. Documentation of a waste determination by knowledge is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by

direct measurement to have a total organic content less than 10 percent, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the determination can be revised only after following the procedures in paragraph (d)(1) or (d)(2).

(f) When an owner or operator and the director do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in paragraph (d)(1) or (d)(2) can be used to resolve the dispute.

(g) Samples used in determining the percent organic content shall be representative of the highest total organic content hazardous waste that is expected to be contained in or contact the equipment.

(h) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86 (incorporated by reference under section 11-260-11).

(i) Performance tests to determine if a control device achieves 95 weight percent organic emission reduction shall comply with the procedures of paragraphs 11-264-1034(c)(1) through (c)(4). [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1063)

§11-264-1064 Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subchapter shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this subchapter may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators must record the following information in the facility operating record:

(1) For each piece of equipment to which Subchapter BB of chapter 11-264 applies:

(i) Equipment identification number and hazardous waste management unit identification.

(ii) Approximate locations within the facility (e.g., identify the hazardous waste management unit on a facility plot plan).

(iii) Type of equipment (e.g.. a pump or pipeline valve).

(iv) Percent-by-weight total organics in the hazardous waste stream at the equipment.

(v) Hazardous waste state at the equipment (e.g., gas/vapor or liquid).

(vi) Method of compliance with the standard (e.g., ''monthly leak detection and repair'' or ''equipped with dual mechanical seals'').

(2) For facilities that comply with the provisions of paragraph 11-264-1033(a)(2), an implementation schedule as specified in paragraph 11-264-1033(a)(2).

(3) Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in paragraph 11-264-1035(b)(3).

(4) Documentation of compliance with section 11-264-1060, including the detailed design documentation or performance test results specified in paragraph 11-264-1035(b)(4).

(c) When each leak is detected as specified in sections 11-264-1052, 11-264-1053, 11-264-1057, and 11-264-1058, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with subsection 11-264-1058(a), and the date the leak was detected, shall be attached to the leaking equipment.

(2) The identification on equipment, except on a valve, may be removed after it has been repaired.

(3) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in subsection 11-264-1057(c) and no leak has been detected during those 2 months.

(d) When each leak is detected as specified in sections 11-264-1052, 11-264-1053, 11-264-1057, and 11-264-1058, the following information shall be recorded in an inspection log and shall be kept in the facility operating record:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date evidence of a potential leak was found in accordance with subsection 11-264-1058(a).

(3) The date the leak was detected and the dates of each attempt to repair the leak.

(4) Repair methods applied in each attempt to repair the leak.

(5) ''Above ten-thousand'' if the maximum instrument reading measured by the methods specified in subsection 11-264-1063(b) after each repair attempt is equal to or greater than ten-thousand ppm.

(6) ''Repair delayed'' and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak.

(7) Documentation supporting the delay of repair of a valve in compliance with subsection 11-264-1059(c).

(8) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown.

(9) The expected date of successful repair of the leak if a leak is not repaired within fifteen calendar days.

(10) The date of successful repair of the leak.

(e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of section 11-264-1060 shall be recorded and kept up-to-date in the facility operating record as specified in subsection 11-264-1035(c). Design documentation is specified in paragraphs 11-264-1035(c)(1) and (c)(2) and monitoring, operating, and inspection information in paragraphs 11-264-1035(c)(3) through (c)(8).

(f) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the director will specify the appropriate recordkeeping requirements.

(g) The following information pertaining to all equipment subject to the requirements in sections 11-264-1052 through 11-264-1060 shall be recorded in a log that is kept in the facility operating record:

(1) A list of identification numbers for equipment (except welded fittings) subject to the requirements of this subchapter.

(2) (i) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of subsections 11-264-1052(e), 11-264-1053(i), and 11-264-1057(f).

(ii) The designation of this equipment as subject to the requirements of subsection 11-264-1052(e), 11-264-1053(i), or 11-264-1057(f) shall be signed by the owner or operator.

(3) A list of equipment identification numbers for pressure relief devices required to comply with subsection 11-264-1054(a).

(4) (i) The dates of each compliance test required in subsections 11-264-1052(e) and 11-264-1053(i), section 11-264-1054, and subsection 11-264-1057(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) Identification, either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year.

(h) The following information pertaining to all valves subject to the requirements of subsections 11-264-1057(g) and (h) shall be recorded in a log that is kept in the facility operating record:

(1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.

(2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(i) The following information shall be recorded in the facility operating record for valves complying with section 11-264-1062:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(j) The following information shall be recorded in a log that is kept in the facility operating record:

(1) Criteria required in subparagraph 11-264-1052(d)(5)(ii) and paragraph 11-264-1053(e)(2) and an explanation of the design criteria.

(2) Any changes to these criteria and the reasons for the changes.

(k) The following information shall be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability section of this subchapter and other specific subchapters:

(1) An analysis determining the design capacity of the hazardous waste management unit.

(2) A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in sections 11-264-1052

through 11-264-1060 and an analysis determining whether these hazardous wastes are heavy liquids.

(3) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in sections 11-264-1052 through 11-264-1060. The record shall include supporting documentation as required by paragraph 11-264-1063(d)(3) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action (e.g., changing the process that produced the waste) that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in sections 11-264-1052 through 11-264-1060, then a new determination is required.

(l) Records of the equipment leak information required by subsection (d) and the operating information required by subsection (e) need be kept only three years.

(m) The owner or operator of a facility with equipment that is subject to this subchapter and to regulations at 40 CFR part 60, part 61, or part 63 may elect to determine compliance with this subchapter either by documentation pursuant to section 11-264-1064, or by documentation of compliance with the regulations at 40 CFR part 60, part 61, or part 63 pursuant to the relevant provisions of the regulations at 40 CFR part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 shall be kept with or made readily available with the facility operating record. [Eff 6/18/94; am 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1064)

§11-264-1065 <u>Reporting requirements.</u> (a) A semiannual report shall be submitted by owners and operators subject to the requirements of this subchapter to the director by dates specified by the director. The report shall include the following information:

(1) The EPA identification number, name, and address of the facility.

(2) For each month during the semiannual reporting period:

(i) The equipment identification number of each valve for which a leak was not repaired as required in subsection 11-264-1057(d).

(ii) The equipment identification number of each pump for which a leak was not repaired as required in subsection 11-264-1052(c) and paragraph 11-264-1052(d)(6).

(iii) The equipment identification number of each compressor for which a leak was not repaired as required in subsection 11-264-1053(g).

(3) Dates of hazardous waste management unit shutdowns that occurred within the semiannual reporting period.

(4) For each month during the semiannual reporting period, dates when the control device installed as required by section 11-264-1052, 11-264-1053, 11-264-1054, or 11-264-1055 exceeded or operated outside of the design specifications as defined in subsection 11-264-1064(e) and as indicated by the control device monitoring required by section 11-264-1060 and was not corrected within twenty-four hours, the duration and cause of each exceedance, and any corrective measures taken.

(b) If, during the semiannual reporting period, leaks from valves, pumps, and compressors are repaired as required in subsections 11-264-1057(d), 11-264-1052(c) and paragraph 11-264-1052(d)(6), and subsection 11-264-1053(g), respectively, and the control device does not exceed or operate outside of the design specifications as defined in subsection 11-264-1064(e) for more than twenty-four hours, a report to the director is not required. [Eff SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1065)

§11-264-1066 -- §11-264-1079 [Reserved]

SUBCHAPTER CC

AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS

§11-264-1080 Applicability. (a) The requirements of this subchapter apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either subchapter I, J, or K except as section 11-264-1 and subsection (b) provide otherwise.

(b) The requirements of this subchapter do not apply to the following waste management units at the facility:

(1) A waste management unit that holds hazardous waste placed in the unit before December 6, 1996, and in which no hazardous waste is added to the unit on or after December 6, 1996.

(2) A container that has a design capacity less than or equal to 0.1 m^3.

(3) A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun

implementing or completed closure pursuant to an approved closure plan.

(4) A surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(5) A waste management unit that is used solely for on-site treatment or storage of hazardous waste that is generated as the result of implementing remedial activities required under the corrective action authorities of RCRA sections 3004(u), 3004(v) or 3008(h), CERCLA authorities, section 342J-36, HRS, or similar federal or State authorities.

(6) A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Federal Atomic Energy Act and the Federal Nuclear Waste Policy Act.

(7) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Federal Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of section 11-264-1084(i), except as provided in section 11-264-1082(c)(5).

(8) A tank that has a process vent as defined in section 11-264-1031.

(c) For the owner and operator of a facility subject to this subchapter and who received a final permit under RCRA section 3005 prior to December 6, 1996, the requirements of this subchapter shall be incorporated into the permit when a State hazardous waste management permit is issued under section 11-271-15 or the EPA-issued RCRA permit is reissued in accordance with the requirements of section 11-271-15 or reviewed in accordance with the requirements of section 11-270-50. Until such date when the State hazardous waste permit is issued under section 11-271-15 or the EPA-issued RCRA permit is reissued in accordance with the requirements of section 11-271-15 or reviewed in accordance with the requirements of section 11-270-50, the owner and operator are subject to the requirements of chapter 11-265, subchapter CC.

(d) The requirements of this subchapter, except for the recordkeeping requirements specified in section 11-264-1089(i), are administratively stayed for a tank or a container used for

the management of hazardous waste generated by organic peroxide manufacturing and its associated laboratory operations when the owner or operator of the unit meets all of the following conditions:

(1) The owner or operator identifies that the tank or container receives hazardous waste generated by an organic peroxide manufacturing process producing more than one functional family of organic peroxides or multiple organic peroxides within one functional family, that one or more of these organic peroxides could potentially undergo self-accelerating thermal decomposition at or below ambient temperatures, and that organic peroxides are the predominant products manufactured by the process. For the purpose of meeting the conditions of this paragraph, "organic peroxide" means an organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

(2) The owner or operator prepares documentation, in accordance with the requirements of section 11-264-1089(i), explaining why an undue safety hazard would be created if air emission controls specified in sections 11-264-1084 through 11-264-1087 are installed and operated on the tanks and containers used at the facility to manage the hazardous waste generated by the organic peroxide manufacturing process or processes meeting the conditions of paragraph (d)(1).

(3) The owner or operator notifies the director in writing that hazardous waste generated by an organic peroxide manufacturing process or processes meeting the conditions of paragraph (d)(1) are managed at the facility in tanks or containers meeting the conditions of paragraph (d)(2). The notification shall state the name and address of the facility, and be signed and dated by an authorized representative of the facility owner or operator. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1080)

§11-264-1081 <u>Definitions.</u> As used in this subchapter, all terms shall have the meaning given to them in section 11-265-1081, chapter 342J, HRS, and chapters 11-260 through 11-266. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1081)

§11-264-1082 Standards: General. (a) This section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to this subchapter.

(b) The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in sections 11-264-1084 through 11-264-1087, as applicable to the hazardous waste management unit, except as provided for in subsection (c).

(c) A tank, surface impoundment, or container is exempt from standards specified in sections 11-264-1084 through 11-264-1087, as applicable, provided that the waste management unit is one of the following:

(1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in section 11-264-1083(a). The owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit.

(2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

(i) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit (C_t) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in section 11-264-1083(b).

(ii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 100 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in section 11-264-1083(b).

(iii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in section 11-264-1083(b).

(iv) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:

(A) The organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the organic biodegradation efficiency (R_{bio}) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in section 11-264-1083(b).

(B) The total actual organic mass biodegradation rate (MR_{bio}) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in section 11-264-1083(b).

(v) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:

(A) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units which use air emission controls in accordance with the standards specified in sections 11-264-1084 through 11-264-1087, as applicable to the waste management unit.

(B) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere. DOH considers a

drain system that meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems to be a closed system.

(C) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or 500 ppmw, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in section 11-264-1083(a). The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in section 11-264-1083(b).

(vi) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination shall be determined using the procedures specified in sections 11-264-1083(b) and 11-264-1083(a), respectively.

(vii) A hazardous waste incinerator for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 264, subpart O;

(B) Has designed and operates the incinerator in accordance with the interim status requirements of chapter 11-265, subchapter O; or

(C) Been issued a State hazardous waste management permit under chapter 11-270 which implements the requirements of chapter 11-264, subchapter O.

(viii) A boiler or industrial furnace for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 266, subpart H;

(B) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of chapter 11-266, subchapter H; or

(C) Been issued a State hazardous waste management permit under chapter 11-270 which implements the requirements of chapter 11-266, subchapter H.

(ix) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of subparagraphs (c)(2)(i) through (c)(2)(vi), the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

(A) If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method at section 4.4 of Method 25D in 40 CFR part 60, appendix A, or a value of 25 ppmw, whichever is less.

(B) If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant value at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as 1.8 x 10^{-6} atmospheres/gram-mole/m^3) at 25 degrees Celsius.

(3) A tank or surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of subparagraph (c)(2)(iv).

(4) A tank, surface impoundment, or container for which all hazardous waste placed in the unit either:

(i) Meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in chapter 11-268--Land Disposal Restrictions under Table "Treatment Standards for Hazardous Waste" in section 11-268-40; or

(ii) The organic hazardous constituents in the waste have been treated by the treatment technology established by the EPA for the waste in section 11-268-42(a), or have been removed or destroyed by an equivalent method of treatment approved by EPA pursuant to 40 CFR 268.42(b) and approved by the State pursuant to section 11-268-51.

(5) A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:

(i) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart FF--National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;

(ii) The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996 and

(iii) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.

(d) The director may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this section as follows:

(1) The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of section 11-264-1083(a). The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of section 11-264-1083(b).

(2) In performing a waste determination pursuant to paragraph (d)(1), the sample preparation and analysis shall be conducted as follows:

(i) In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in subparagraph (d)(2)(ii).

(ii) If the director determines that the method used by the owner or operator was not appropriate for the

hazardous waste managed in the tank, surface impoundment, or container, then the director may choose an appropriate method.

(3) In a case when the owner or operator is requested to perform the waste determination, the director may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

(4) In a case when the results of the waste determination performed or requested by the director do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of paragraph (d)(1) shall be used to establish compliance with the requirements of this subchapter.

(5) In a case when the owner or operator has used an averaging period greater than 1 hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the director may elect to establish compliance with this subchapter by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a 1-hour period as follows:

(i) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of section 11-264-1083(a).

(ii) Results of the waste determination performed or requested by the director showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw shall constitute noncompliance with this subchapter except in a case as provided for in subparagraph (d)(5)(iii).

(iii) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than 1 hour to be less than 500 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given 1-hour period may be equal to or greater than 500 ppmw, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (e.g., test results, measurements, calculations, and other documentation) and recorded in the facility records in accordance

with the requirements of sections 11-264-1083(a) and 11-264-1089 shall be considered by the director together with the results of the waste determination performed or requested by the director in establishing compliance with this subchapter. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1082)

§11-264-1083 Waste determination procedures. (a) Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination.

(1) An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of section 11-264-1082(c)(1) from using air emission controls in accordance with standards specified in sections 11-264-1084 through 11-264-1087, as applicable to the waste management unit.

(2) For a waste determination that is required by paragraph (a)(1), the average VO concentration of a hazardous waste at the point of waste origination shall be determined in accordance with the procedures specified in sections 11-265-1084(a)(2) through (a)(4).

(b) Waste determination procedures for treated hazardous waste.

(1) An owner or operator shall perform the applicable waste determination for each treated hazardous waste placed in waste management units exempted under the provisions of sections 11-264-1082(c)(2)(i) through (c)(2)(vi) from using air emission controls in accordance with standards specified in sections 11-264-1084 through 11-264-1087, as applicable to the waste management unit.

(2) The waste determination for a treated hazardous waste shall be performed in accordance with the procedures specified in sections 11-265-1084(b)(2) through (b)(9), as applicable to the treated hazardous waste.

(c) Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.

(1) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with standards specified in section 11-264-1084(c).

(2) The maximum organic vapor pressure of the hazardous waste may be determined in accordance with the procedures specified in sections 11-265-1084(c)(2) through (c)(4).

(d) The procedure for determining no detectable organic emissions for the purpose of complying with this subchapter shall be conducted in accordance with the procedures specified in section 11-265-1084(d). [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1083)

§11-264-1084 Standards: Tanks. (a) The provisions of this section apply to the control of air pollutant emissions from tanks for which section 11-264-1082(b) references the use of this section for such air emission control.

(b) The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable:

(1) For a tank that manages hazardous waste that meets all of the conditions specified in subparagraphs (b)(1)(i) through (b)(1)(iii), the owner or operator shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in subsection (c) or the Tank Level 2 controls specified in subsection (d).

(i) The hazardous waste in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:

(A) For a tank design capacity equal to or greater than 151 m^3, the maximum organic vapor pressure limit for the tank is 5.2 kPa.

(B) For a tank design capacity equal to or greater than 75 m^3 but less than 151 m^3, the maximum organic vapor pressure limit for the tank is 27.6 kPa.

(C) For a tank design capacity less than 75 m^3, the maximum organic vapor pressure limit for the tank is 76.6 kPa.

(ii) The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with subparagraph (b)(1)(i).

(iii) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process, as defined in section 11-265-1081.

(2) For a tank that manages hazardous waste that does not meet all of the conditions specified in subparagraphs (b)(1)(i) through (b)(1)(iii), the owner or operator shall control air pollutant emissions from the tank by

using Tank Level 2 controls in accordance with the requirements of subsection (d). Examples of tanks required to use Tank Level 2 controls include: A tank used for a waste stabilization process; and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in subparagraph (b)(1)(i).

(c) Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in paragraphs (c)(1) through (c)(4):

(1) The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in section 11-264-1083(c). Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in subparagraph (b)(1)(i), as applicable to the tank.

(2) The tank shall be equipped with a fixed roof designed to meet the following specifications:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).

(ii) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(iii) Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be either:

(A) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the

perimeter of the opening and the closure device; or

(B) Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and shall be operating whenever hazardous waste is managed in the tank, except as provided for in clauses (c)(2)(iii)(B)(1) and (2).

(1) During periods when it is necessary to provide access to the tank for performing the activities of clause (c)(2)(iii)(B)(2), venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device.

(2) During periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

(iv) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(3) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(i) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations.

Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of tank.

(ii) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(iii) Opening of a safety device, as defined in section 11-265-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator shall inspect the air emission control equipment in accordance with the following requirements.

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or

missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except under the special conditions provided for in subsection (l).

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection (k).

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in section 11-264-1089(b).

(d) Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in subsection (e);

(2) A tank equipped with an external floating roof in accordance with the requirements specified in subsection (f);

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in subsection (g);

(4) A pressure tank designed and operated in accordance with the requirements specified in subsection (h); or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in subsection (i).

(e) The owner or operator who controls air pollutant emissions from a tank using a fixed roof with an internal floating roof shall meet the requirements specified in paragraphs (e)(1) through (e)(3).

(1) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in section 11-265-1081; or

(B) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed (i.e., no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure

beneath the rim exceeds the manufacturer's recommended setting.

(3) The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:

(i) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: The internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) The owner or operator shall inspect the internal floating roof components as follows except as provided in subparagraph (e)(3)(iii):

(A) Visually inspect the internal floating roof components through openings on the fixed-roof (e.g., manholes and roof hatches) at least once every 12 months after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 10 years.

(iii) As an alternative to performing the inspections specified in subparagraph (e)(3)(ii) for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 5 years.

(iv) Prior to each inspection required by subparagraph (e)(3)(ii) or (e)(3)(iii), the owner or operator shall notify the director in advance of each inspection to provide the director with the opportunity to have an observer present during the inspection. The owner or operator shall notify the director of the date and location of the inspection as follows:

(A) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the director at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in clause (e)(3)(iv)(B).

(B) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the director as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the director at least 7 calendar days before refilling the tank.

(v) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection (k).

(vi) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in section 11-264-1089(b).

(4) Safety devices, as defined in section 11-265-1081, may be installed and operated as necessary on any tank complying with the requirements of subsection (e).

(f) The owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in paragraphs (f)(1) through (f)(3).

(1) The owner or operator shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in

section 11-265-1081. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters (cm).

(iii) The external floating roof shall meet the following specifications:

(A) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.

(C) Each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.

(D) Each automatic bleeder vent and each rim space vent shall be equipped with a gasket.

(E) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(F) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(G) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

(H) Each slotted guide pole shall be equipped with a gasketed float or other device which

closes off the liquid surface from the atmosphere.

(I) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access.

(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access.

(viii) Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows:

(i) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

(A) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following

installation of the floating roof and, thereafter, at least once every 5 years.

(B) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

(C) If a tank ceases to hold hazardous waste for a period of 1 year or more, subsequent introduction of hazardous waste into the tank shall be considered an initial operation for the purposes of clauses (f)(3)(i)(A) and (f)(3)(i)(B).

(D) The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

(1) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports.

(2) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.

(3) For a seal gap measured under paragraph (f)(3), the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(4) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in subparagraph (f)(1)(ii).

(E) In the event that the seal gap measurements do not conform to the specifications in subparagraph (f)(1)(ii), the owner or operator shall repair the defect in accordance with the requirements of subsection (k).

(F) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in section 11-264-1089(b).

(ii) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: Holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection (l).

(C) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection (k).

(D) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in section 11-264-1089(b).

(iii) Prior to each inspection required by subparagraph (f)(3)(i) or (f)(3)(ii), the owner or operator shall notify the director in advance of each inspection to provide the director with the opportunity to have an observer present during the inspection. The owner or operator shall notify the

director of the date and location of the inspection as follows:

(A) Prior to each inspection to measure external floating roof seal gaps as required under subparagraph (f)(3)(i), written notification shall be prepared and sent by the owner or operator so that it is received by the director at least 30 calendar days before the date the measurements are scheduled to be performed.

(B) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the director at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in clause (f)(3)(iii)(C).

(C) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the director as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the director at least 7 calendar days before refilling the tank.

(4) Safety devices, as defined in section 11-265-1081, may be installed and operated as necessary on any tank complying with the requirements of subsection (f).

(g) The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in paragraphs (g)(1) through (g)(3).

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace

underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of section 11-264-1087.

(2) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of a tank.

(ii) Opening of a safety device, as defined in section 11-265-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in section 11-264-1087.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection (l).

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection (k).

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in section 11-264-1089(b).

(h) The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in section 11-264-1083(d).

(3) Whenever a hazardous waste is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except in the event that a safety

device, as defined in section 11-265-1081, is required to open to avoid an unsafe condition.

(i) The owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in paragraphs (i)(1) through (i)(4).

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in section 11-264-1087.

(3) Safety devices, as defined in section 11-265-1081, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of paragraphs (i)(1) and (i)(2).

(4) The owner or operator shall inspect and monitor the closed-vent system and control device as specified in section 11-264-1087.

(j) The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in paragraph (j)(2), to the tank from another tank subject to this section or from a surface impoundment subject to section 11-264-1085 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems.

(2) The requirements of paragraph (j)(1) do not apply when transferring a hazardous waste to the tank under any of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in section 11-264-1082(c)(1) at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in section 11-264-1082(c)(2).

(iii) The hazardous waste meets the requirements of section 11-264-1082(c)(4).

(k) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(4), (e)(3), (f)(3), or (g)(3) as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (k)(2).

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(l) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this subchapter, subsequent inspection and monitoring may be performed at intervals longer than 1 year under the following special conditions:

(1) In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(i) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(ii) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of this subchapter, as frequently as practicable

during those times when a worker can safely access the cover.

(2) In the case when a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank (e.g., fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1084)

§11-264-1085 Standards: Surface impoundments. (a) The provisions of this section apply to the control of air pollutant emissions from surface impoundments for which section 11-264-1082(b) references the use of this section for such air emission control.

(b) The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:

(1) A floating membrane cover in accordance with the provisions specified in subsection (c); or

(2) A cover that is vented through a closed-vent system to a control device in accordance with the provisions specified in subsection (d).

(c) The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in paragraphs (c)(1) through (c)(3).

(1) The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:

(i) The floating membrane cover shall be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid.

(ii) The cover shall be fabricated from a synthetic membrane material that is either:

(A) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (mm); or

(B) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in clause (c)(1)(ii)(A) and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(iii) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(iv) Except as provided for in subparagraph (c)(1)(v), each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(v) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(vi) The closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(2) Whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

(i) Opening of closure devices or removal of the cover is allowed at the following times:

(A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the

closure device in the closed position, as applicable.

(B) To remove accumulated sludge or other residues from the bottom of surface impoundment.

(ii) Opening of a safety device, as defined in section 11-265-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect the floating membrane cover in accordance with the following procedures:

(i) The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection (g).

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection (f).

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in section 11-264-1089(c).

(d) The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in paragraphs (d)(1) through (d)(3).

(1) The surface impoundment shall be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment.

(ii) Each opening in the cover not vented to the control device shall be equipped with a closure

device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions using the procedure specified in section 11-264-1083(d).

(iii) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of section 11-264-1087.

(2) Whenever a hazardous waste is in the surface impoundment, the cover shall be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:

(A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall

promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.

(B) To remove accumulated sludge or other residues from the bottom of the surface impoundment.

(ii) Opening of a safety device, as defined in section 11-265-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The surface impoundment cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in section 11-264-1087.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection (g).

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection (f).

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in section 11-264-1089(c).

(e) The owner or operator shall transfer hazardous waste to a surface impoundment subject to this section in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in paragraph (e)(2), to the surface impoundment from another surface impoundment subject to this section or from a tank subject to section 11-264-1084 shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with

this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems.

(2) The requirements of paragraph (e)(1) do not apply when transferring a hazardous waste to the surface impoundment under either of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in section 11-264-1082(c)(1) at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in section 11-264-1082(c)(2).

(iii) The hazardous waste meets the requirements of section 11-264-1082(c)(4).

(f) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(3) or (d)(3) as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (f)(2).

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the surface impoundment stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(g) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this subchapter, subsequent inspection and monitoring may be performed at intervals longer than 1 year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(1) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(2) Develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable section of this subchapter as frequently as practicable during those times when a

worker can safely access the cover. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1085)

§11-264-1086 Standards: Containers. (a) The provisions of this section apply to the control of air pollutant emissions from containers for which section 11-264-1082(b) references the use of this section for such air emission control.

(b) General requirements.

(1) The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in paragraph (b)(2) apply to the container.

(i) For a container having a design capacity greater than 0.1 m^3 and less than or equal to 0.46 m^3, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in subsection (c).

(ii) For a container having a design capacity greater than 0.46 m^3 that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in subsection (c).

(iii) For a container having a design capacity greater than 0.46 m^3 that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in subsection (d).

(2) When a container having a design capacity greater than 0.1 m^3 is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 3 standards specified in subsection (e) at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

(c) Container Level 1 standards.

(1) A container using Container Level 1 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on

packaging hazardous materials for transportation as specified in subsection (f).

(ii) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap).

(iii) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(2) A container used to meet the requirements of subparagraph (c)(1)(ii) or (c)(1)(iii) shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity, for as long as the container is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

(3) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as

applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty container as defined in section 11-261-7(b) may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in section 11-261-7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside

the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in section 11-265-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., does not meet the conditions for an empty container as specified in section 11-261-7(b)), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are

secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (i.e., the date the container becomes subject to the subchapter CC container standards). For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of the Uniform Hazardous Waste Manifest in the appendix to chapter 11-262 (EPA Forms 8700-22 and 8700-22A), as required under subchapter E, at section 11-264-71. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subparagraph (c)(4)(iii).

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subparagraph (c)(4)(iii).

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(5) The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 m^3 or greater, which do not meet applicable DOT regulations as specified in subsection (f), are not managing hazardous waste in light material service.

(d) Container Level 2 standards.

(1) A container using Container Level 2 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on

packaging hazardous materials for transportation as specified in subsection (f).

(ii) A container that operates with no detectable organic emissions as defined in section 11-265-1081 and determined in accordance with the procedure specified in subsection (g).

(iii) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in subsection (h).

(2) Transfer of hazardous waste in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that DOH considers to meet the requirements of this paragraph include using any one of the following: A submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

(3) Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the

container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty container as defined in section 11-261-7(b) may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in section 11-261-7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the

atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in section 11-265-1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within 24 hours after the container is accepted at the facility (i.e., does not meet the conditions for an empty container as specified in section 11-261-7(b)), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (i.e., the date the container becomes subject to the subchapter CC container standards). For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on Item 20 of

the Uniform Hazardous Waste Manifest in the appendix to chapter 11-262 (EPA Forms 8700-22 and 8700-22A), as required under subchapter E, at section 11-264-71. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subparagraph (d)(4)(iii).

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subparagraph (d)(4)(iii).

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(e) Container Level 3 standards.

(1) A container using Container Level 3 controls is one of the following:

(i) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of subparagraph (e)(2)(ii).

(ii) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of subparagraphs (e)(2)(i) and (e)(2)(ii).

(2) The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

(i) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40

CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of section 11-264-1087.

(3) Safety devices, as defined in section 11-265-1081, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of paragraph (e)(1).

(4) Owners and operators using Container Level 3 controls in accordance with the provisions of this subchapter shall inspect and monitor the closed-vent systems and control devices as specified in section 11-264-1087.

(5) Owners and operators that use Container Level 3 controls in accordance with the provisions of this subchapter shall prepare and maintain the records specified in section 11-264-1089(d).

(f) For the purpose of compliance with subparagraph (c)(1)(i) or (d)(1)(i), containers shall be used that meet the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178--Specifications for Packaging or 49 CFR part 179--Specifications for Tank Cars.

(2) Hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B--Exemptions; 49 CFR part 172--Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173--Shippers--General Requirements for Shipments and Packages; and 49 CFR part 180--Continuing Qualification and Maintenance of Packagings.

(3) For the purpose of complying with this subchapter, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in paragraph (f)(4).

(4) For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subchapter, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

(g) To determine compliance with the no detectable organic emissions requirement of subparagraph (d)(1)(ii), the procedure specified in section 11-264-1083(d) shall be used.

(1) Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: The interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(h) Procedure for determining a container to be vapor-tight using Method 27 of 40 CFR part 60, appendix A for the purpose of complying with subparagraph (d)(1)(iii).

(1) The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A.

(2) A pressure measurement device shall be used that has a precision of ±2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(3) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1086)

§11-264-1087 <u>Standards: Closed-vent systems and control devices.</u> (a) This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this subchapter.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in subsection (c).

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in section 11-264-1033(k).

(3) In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in subparagraph (b)(3)(i) or a seal or locking device as specified in subparagraph (b)(3)(ii). For the purpose of complying with this paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.

(i) If a flow indicator is used to comply with paragraph (b)(3), the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

(ii) If a seal or locking device is used to comply with paragraph (b)(3), the device shall be placed on the mechanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

(4) The closed-vent system shall be inspected and monitored by the owner or operator in accordance with the procedure specified in section 11-264-1033(l).

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of section 11-264-1033(c); or

(iii) A flare designed and operated in accordance with the requirements of section 11-264-1033(d).

(2) The owner or operator who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the requirements specified in subparagraphs (c)(2)(i) through (c)(2)(vi).

(i) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of subparagraph (c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable, shall not exceed 240 hours per year.

(ii) The specifications and requirements in subparagraphs (c)(1)(i), (c)(1)(ii), and (c)(1)(iii) for control devices do not apply during periods of planned routine maintenance.

(iii) The specifications and requirements in subparagraphs (c)(1)(i), (c)(1)(ii), and (c)(1)(iii) for control devices do not apply during a control device system malfunction.

(iv) The owner or operator shall demonstrate compliance with the requirements of subparagraph (c)(2)(i) (i.e., planned routine maintenance of a control device, during which the control device does not meet the specifications of subparagraph (c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable, shall not exceed 240 hours per year) by recording the information specified in section 11-264-1089(e)(1)(v).

(v) The owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

(vi) The owner or operator shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (i.e., periods when the control device is not operating or not operating normally) except in cases when it is necessary to vent the gases, vapors, and/or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.

(3) The owner or operator using a carbon adsorption system to comply with paragraph (c)(1) shall operate and maintain the control device in accordance with the following requirements:

(i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of section 11-264-1033(g) or 11-264-1033(h).

(ii) All carbon that is a hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of section 11-264-1033(n), regardless of the average volatile organic concentration of the carbon.

(4) An owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with paragraph (c)(1) shall operate and maintain the control device in accordance with the requirements of section 11-264-1033(j).

(5) The owner or operator shall demonstrate that a control device achieves the performance requirements of paragraph (c)(1) as follows:

(i) An owner or operator shall demonstrate using either a performance test as specified in subparagraph (c)(5)(iii) or a design analysis as specified in subparagraph (c)(5)(iv) the performance of each control device except for the following:

(A) A flare;

(B) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(C) A boiler or process heater into which the vent stream is introduced with the primary fuel;

(D) A boiler or industrial furnace burning hazardous waste for which the owner or operator has: (1) Been issued a final permit under 40 CFR part 270 and has designed and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H; or (2) Been issued a State hazardous waste management permit under chapter 11-270 and has designed and operates the unit in accordance with the requirements of chapter 11-266, subchapter H; or

(E) A boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in

accordance with the interim status requirements of chapter 11-266, subchapter H.

(ii) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in section 11-264-1033(e).

(iii) For a performance test conducted to meet the requirements of subparagraph (c)(5)(i), the owner or operator shall use the test methods and procedures specified in sections 11-264-1034(c)(1) through (c)(4).

(iv) For a design analysis conducted to meet the requirements of subparagraph (c)(5)(i), the design analysis shall meet the requirements specified in section 11-264-1035(b)(4)(iii).

(v) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of paragraph (c)(1) based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the owner or operator and the director do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of subparagraph (c)(5)(iii). The director may choose to have an authorized representative observe the performance test.

(7) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in sections 11-264-1033(f)(2) and 11-264-1033(l). The readings from each monitoring device required by section 11-264-1033(f)(2) shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of this section. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1087)

§11-264-1088 <u>Inspection and monitoring requirements.</u> (a) The owner or operator shall inspect and monitor air emission control equipment used to comply with this subchapter in accordance with the applicable requirements specified in sections 11-264-1084 through 11-264-1087.

(b) The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by subsection (a). The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under section 11-264-15. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1088)

§11-264-1089 Recordkeeping requirements. (a) Each owner or operator of a facility subject to requirements of this subchapter shall record and maintain the information specified in subsections (b) through (j), as applicable to the facility. Except for air emission control equipment design documentation and information required by subsections (i) and (j), records required by this section shall be maintained in the operating record for a minimum of 3 years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by subsections (i) and (j) shall be maintained in the operating record for as long as the waste management unit is not using air emission controls specified in sections 11-264-1084 through 11-264-1087 in accordance with the conditions specified in section 11-264-1080(d) or section 11-264-1080(b)(7), respectively.

(b) The owner or operator of a tank using air emission controls in accordance with the requirements of section 11-264-1084 shall prepare and maintain records for the tank that include the following information:

(1) For each tank using air emission controls in accordance with the requirements of section 11-264-1084, the owner or operator shall record:

(i) A tank identification number (or other unique identification description as selected by the owner or operator).

(ii) A record for each inspection required by section 11-264-1084 that includes the following information:

(A) Date inspection was conducted.

(B) For each defect detected during the inspection: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the requirements of section 11-264-1084, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(2) In addition to the information required by paragraph (b)(1), the owner or operator shall record the following information, as applicable to the tank:

(i) The owner or operator using a fixed roof to comply with the Tank Level 1 control requirements specified in section 11-264-1084(c) shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of section 11-264-1084(c). The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

(ii) The owner or operator using an internal floating roof to comply with the Tank Level 2 control requirements specified in section 11-264-1084(e) shall prepare and maintain documentation describing the floating roof design.

(iii) Owners and operators using an external floating roof to comply with the Tank Level 2 control requirements specified in section 11-264-1084(f) shall prepare and maintain the following records:

(A) Documentation describing the floating roof design and the dimensions of the tank.

(B) Records for each seal gap inspection required by section 11-264-1084(f)(3) describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in section 11-264-1084(f)(1), the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.

(iv) Each owner or operator using an enclosure to comply with the Tank Level 2 control requirements specified in section 11-264-1084(i) shall prepare and maintain the following records:

(A) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(B) Records required for the closed-vent system and control device in accordance with the requirements of subsection (e).

(c) The owner or operator of a surface impoundment using air emission controls in accordance with the requirements of section 11-264-1085 shall prepare and maintain records for the surface impoundment that include the following information:

(1) A surface impoundment identification number (or other unique identification description as selected by the owner or operator).

(2) Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in section 11-264-1085(c).

(3) A record for each inspection required by section 11-264-1085 that includes the following information:

(i) Date inspection was conducted.

(ii) For each defect detected during the inspection the following information: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of section 11-264-1085(f), the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(4) For a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the records specified in subsection (e).

(d) The owner or operator of containers using Container Level 3 air emission controls in accordance with the requirements of section 11-264-1086 shall prepare and maintain records that include the following information:

(1) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(2) Records required for the closed-vent system and control device in accordance with the requirements of subsection (e).

(e) The owner or operator using a closed-vent system and control device in accordance with the requirements of section 11-

264-1087 shall prepare and maintain records that include the following information:

(1) Documentation for the closed-vent system and control device that includes:

(i) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in subparagraph (e)(1)(ii) or by performance tests as specified in subparagraph (e)(1)(iii) when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in section 11-264-1035(b)(4). The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with section 11-264-1035(b)(4)(iii) and certification by the owner or operator that the control equipment meets the applicable specifications.

(iii) If performance tests are used, then a performance test plan as specified in section 11-264-1035(b)(3) and all test results.

(iv) Information as required by sections 11-264-1035(c)(1) and (c)(2), as applicable.

(v) An owner or operator shall record, on a semiannual basis, the information specified in clauses (e)(1)(v)(A) and (e)(1)(v)(B) for those planned routine maintenance operations that would require the control device not to meet the requirements of section 11-264-1087(c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6-month period. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of section 11-264-1087(c)(1)(i),

(c)(1)(ii), or (c)(1)(iii), as applicable, due to planned routine maintenance.

(vi) An owner or operator shall record the information specified in clauses (e)(1)(vi)(A) through (e)(1)(vi)(C) for those unexpected control device system malfunctions that would require the control device not to meet the requirements of section 11-264-1087(c)(1)(i), (c)(1)(ii), or (c)(1)(iii), as applicable.

(A) The occurrence and duration of each malfunction of the control device system.

(B) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

(C) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(vii) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with section 11-264-1087(c)(3)(ii).

(f) The owner or operator of a tank, surface impoundment, or container exempted from standards in accordance with the provisions of section 11-264-1082(c) shall prepare and maintain the following records, as applicable:

(1) For tanks, surface impoundments, and containers exempted under the hazardous waste organic concentration conditions specified in section 11-264-1082 (c)(1) or sections 11-264-1082(c)(2)(i) through (c)(2)(vi), the owner or operator shall record the information used for each waste determination (e.g., test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of section 11-264-1083.

(2) For tanks, surface impoundments, or containers exempted under the provisions of section 11-264-1082(c)(2)(vii) or (c)(2)(viii), the owner or operator shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

(g) An owner or operator designating a cover as "unsafe to inspect and monitor" pursuant to section 11-264-1084(l) or 11-264-1085(g) shall record in a log that is kept in the facility operating record the following information: The identification

numbers for waste management units with covers that are designated as "unsafe to inspect and monitor," the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(h) The owner or operator of a facility that is subject to this subchapter and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of this subchapter by documentation either pursuant to this subchapter, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this section.

(i) For each tank or container not using air emission controls specified in sections 11-264-1084 through 11-264-1087 in accordance with the conditions specified in section 11-264-1080(d), the owner or operator shall record and maintain the following information:

(1) A list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in section 11-264-1080(d)(1).

(2) A description of how the hazardous waste containing the organic peroxide compounds identified in paragraph (i)(1) are managed at the facility in tanks and containers. This description shall include:

(i) For the tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe for each tank: A facility identification number for the tank; the purpose and placement of this tank in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste managed in the tanks.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe: A facility identification number for the container or group of containers; the purpose and placement of this container, or group of containers, in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste handled in the containers.

(3) An explanation of why managing the hazardous waste containing the organic peroxide compounds identified in paragraph (i)(1) in the tanks and containers as described in paragraph (i)(2) would create an undue safety hazard if the air emission controls, as required under sections 11-264-1084 through 11-264-1087, are installed and operated on these waste management units.

This explanation shall include the following information:

(i) For tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the tanks would affect the tank design features and facility operating procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the tanks; and why installation of safety devices on the required air emission controls, as allowed under this subchapter, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers; and why installation of safety devices on the required air emission controls, as allowed under this subchapter, will not address those situations in which evacuation of containers equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

(j) For each hazardous waste management unit not using air emission controls specified in sections 11-264-1084 through 11-264-1087 in accordance with the requirements of section 11-264-1080(b)(7), the owner and operator shall record and maintain the following information:

(1) Certification that the waste management unit is equipped with and operating air emission controls in accordance with the requirements of an applicable Federal Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.

(2) Identification of the specific requirements codified under 40 CFR part 60, part 61, or part 63 with which the waste management unit is in compliance. [Eff 3/13/99; comp SEP 20 1999]
(Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35)
(Imp: 40 C.F.R. §264.1089)

§11-264-1090 Reporting requirements. (a) Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of section 11-264-1082(c) shall report to the director each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in section 11-264-1082 (c)(1) or (c)(2), as applicable. Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than 500 ppmw at the point of waste origination; or placing in the waste management unit a treated hazardous waste of which the organic content has been reduced by an organic destruction or removal process that fails to achieve the applicable conditions specified in sections 11-264-1082 (c)(2)(i) through (c)(2)(vi). The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(b) Each owner or operator using air emission controls on a tank in accordance with the requirements section 11-264-1084(c) shall report to the director each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in section 11-264-1084(b). The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(c) Each owner or operator using a control device in accordance with the requirements of section 11-264-1087 shall submit a semiannual written report to the director except as provided for in subsection (d). The report shall describe each occurrence during the previous 6-month period when either: (1) A control device is operated continuously for 24 hours or longer in noncompliance with the applicable operating values defined in section 11-264-1035(c)(4); or (2) A flare is operated with visible emissions for 5 minutes or longer in a two-hour period, as defined in section 11-264-1033(d). The report shall describe each occurrence during the previous 6-month period when a control device is operated continuously for 24 hours or longer in noncompliance with the applicable operating values defined in section 11-264-1035(c)(4) or when a flare is operated with

visible emissions as defined in section 11-264-1033(d). The written report shall include the EPA identification number, facility name and address, and an explanation why the control device could not be returned to compliance within 24 hours, and actions taken to correct the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(d) A report to the director in accordance with the requirements of subsection (c) is not required for a 6-month period during which all control devices subject to this subchapter are operated by the owner or operator such that:

(1) During no period of 24 hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in section 11-264-1035(c)(4); and

(2) No flare was operated with visible emissions for 5 minutes or longer in a two-hour period, as defined in section 11-264-1033(d). [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1090)

§11-264-1091 (Reserved)

SUBCHAPTER DD

CONTAINMENT BUILDINGS

§11-264-1100 Applicability. The requirements of this subchapter apply to owners or operators who store or treat hazardous waste in units designed and operated under section 11-264-1101. The owner or operator is not subject to the definition of land disposal in chapter 11-260 provided that the unit:

(a) Is a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;

(b) Has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel, wastes, and handling equipment within the unit;

(c) If the unit is used to manage liquids, has:

(1) A primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;

(2) A liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and

(3) A secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time, unless the unit has been granted a variance from the secondary containment system requirements under paragraph 11-264-1101(b)(4);

(d) Has controls sufficient to prevent fugitive dust emissions to meet the no visible emission standard in clause 11-264-1101(c)(1)(iv); and

(e) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1100)

§11-264-1101 Design and operating standards.

(a) All containment buildings must comply with the following design standards:

(1) The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on), and to assure containment of managed wastes.

(2) The floor and containment walls of the unit, including the secondary containment system if required under subsection (b) of this section, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. The department will consider standards established by professional organizations generally recognized by the industry such

as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of this subsection. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria:

(i) They provide an effective barrier against fugitive dust emissions under paragraph (c)(1)(iv); and

(ii) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

(3) Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

(4) A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

(b) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:

(1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface).

(2) A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building:

(i) The primary barrier must be sloped to drain liquids to the associated collection system; and

(ii) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time.

(3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

(i) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

(A) Constructed with a bottom slope of 1 percent or more; and

(B) Constructed of a granular drainage material with a hydraulic conductivity of $1X10^{-2}$ cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of $3X10^{-5}m^2$/sec or more.

(ii) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.

(iii) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of paragraph 11-264-193(d)(1). In addition, the containment building must meet the requirements of subsection 11-264-193(b) and paragraphs 11-264-193(c)(1) and (2) to be considered an acceptable secondary containment system for a tank.)

(4) For existing units other than 90-day generator units, the director may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this subchapter. In making this demonstration, the owner or operator must:

(i) Provide written notice to the director of their request. This notification must describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;

(ii) Respond to any comments from the director on these plans within 30 days; and

(iii) Fulfill the terms of the revised plans, if such plans are approved by the director.

(c) Owners or operators of all containment buildings must:

(1) Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:
   (i) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;
   (ii) Maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;
   (iii) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and
   (iv) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see 40 CFR Part 60, appendix A, Method 22-Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares). In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices (see 40 CFR Part 60 subpart 292 for guidance). This state of no visible emissions must be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.

(2) Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of subsections (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit.

(3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, must repair the condition promptly, in accordance with the following procedures.
   (i) Upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection

of leakage from the primary barrier) the owner or operator must:

(A) Enter a record of the discovery in the facility operating record;

(B) Immediately remove the portion of the containment building affected by the condition from service;

(C) Determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and

(D) Within 7 days after the discovery of the condition, notify the director of the condition, and within 14 working days, provide a written notice to the director with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.

(ii) The director will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(iii) Upon completing all repairs and cleanup the owner or operator must notify the director in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with paragraph (c)(3)(i)(D) of this section.

(4) Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

(d) For containment buildings that contain areas both with and without secondary containment, the owner or operator must:

(1) Design and operate each area in accordance with the requirements enumerated in subsections (a) through (c) of this section;

(2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

(3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

(e) Notwithstanding any other provision of this subchapter the director may waive requirements for secondary containment for a permitted containment building where the owner operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1101)

§11-264-1102 Closure and post-closure care. (a) At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.,) contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 11-261-3(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in subchapters G and H of this chapter.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection (a) of this section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (section 11-264-310). In addition, for the purposes of closure, post-closure, and financial responsibility, such a containment building is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subchapters G and H of this chapter. [Eff 6/18/94; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1102)

§§11-264-1103 -- 11-264-1110 [Reserved]

SUBCHAPTER EE

HAZARDOUS WASTE MUNITIONS AND EXPLOSIVES STORAGE

§11-264-1200 Applicability. The requirements of this subchapter apply to owners or operators who store munitions and explosive hazardous wastes, except as section 11-264-1 provides otherwise. (NOTE: Depending on explosive hazards, hazardous waste munitions and explosives may also be managed in other types of

storage units, including containment buildings (chapter 11-264, subchapter DD), tanks (chapter 11-264, subchapter J), or containers (chapter 11-264, subchapter I); See Section 11-266-205 for storage of waste military munitions). [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1200)

§11-264-1201 Design and operating standards. (a) Hazardous waste munitions and explosives storage units must be designed and operated with containment systems, controls, and monitoring, that:

(1) Minimize the potential for detonation or other means of release of hazardous waste, hazardous constituents, hazardous decomposition products, or contaminated run-off, to the soil, ground water, surface water, and atmosphere;

(2) Provide a primary barrier, which may be a container (including a shell) or tank, designed to contain the hazardous waste;

(3) For wastes stored outdoors, provide that the waste and containers will not be in standing precipitation;

(4) For liquid wastes, provide a secondary containment system that assures that any released liquids are contained and promptly detected and removed from the waste area, or vapor detection system that assures that any released liquids or vapors are promptly detected and an appropriate response taken (e.g., additional containment, such as overpacking, or removal from the waste area); and

(5) Provide monitoring and inspection procedures that assure the controls and containment systems are working as designed and that releases that may adversely impact human health or the environment are not escaping from the unit.

(b) Hazardous waste munitions and explosives stored under this subchapter may be stored in one of the following:

(1) Earth-covered magazines. Earth-covered magazines must be:

(i) Constructed of waterproofed, reinforced concrete or structural steel arches, with steel doors that are kept closed when not being accessed;

(ii) Designed and constructed:

(A) To be of sufficient strength and thickness to support the weight of any explosives or munitions stored and any equipment used in the unit;

(B) To provide working space for personnel and equipment in the unit; and

(C) To withstand movement activities that occur in the unit; and

(iii) Located and designed, with walls and earthen covers that direct an explosion in the unit in a safe direction, so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.

(2) Above-ground magazines. Above-ground magazines must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.

(3) Outdoor or open storage areas. Outdoor or open storage areas must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.

(c) Hazardous waste munitions and explosives must be stored in accordance with a Standard Operating Procedure specifying procedures to ensure safety, security, and environmental protection. If these procedures serve the same purpose as the security and inspection requirements of section 11-264-14, the preparedness and prevention procedures of chapter 11-264, subchapter C, and the contingency plan and emergency procedures requirements of chapter 11-264, subchapter D, then these procedures will be used to fulfill those requirements.

(d) Hazardous waste munitions and explosives must be packaged to ensure safety in handling and storage.

(e) Hazardous waste munitions and explosives must be inventoried at least annually.

(f) Hazardous waste munitions and explosives and their storage units must be inspected and monitored as necessary to ensure explosives safety and to ensure that there is no migration of contaminants out of the unit. [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1201)

§11-264-1202 Closure and post-closure care. (a) At closure of a magazine or unit which stored hazardous waste under this subchapter, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste, and manage them as hazardous waste unless section 11-261-3(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for magazines or units must meet all of the requirements specified in subchapters G and H, except that the owner or operator may defer closure of the unit as long as it remains in service as a munitions or explosives magazine or storage unit.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection (a), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he or she must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (section 11-264-310). [Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: 40 C.F.R. §264.1202)

SUBCHAPTER FF

APPENDICES

§11-264-1300 Appendices. Appendices I, IV, V, and IX to 40 CFR Part 264, revised as of May 25, 1998, and Appendix X, are made a part of this chapter. These Appendices are entitled:

Appendix I - Recordkeeping Instructions
Appendix IV - Cochran's Approximation to the Behrens-Fisher Students' T-Test
Appendix V - Examples of Potentially Incompatible Waste
Appendix IX - Ground-Water Monitoring List
Appendix X - EPA Form 8700-13B

[Eff 3/13/99; comp SEP 20 1999] (Auth: HRS §§342J-4, 342J-31, 342J-34, 342J-35) (Imp: None)

DEPARTMENT OF HEALTH

The compilation of chapter 11-264, Hawaii Administrative Rules, on the Summary page dated SEP 2 1999, was adopted on SEP 2 1999. No public notice was provided and no public hearing was conducted.

This compilation shall take effect ten days after filing with the Office of the Lieutenant Governor.

BRUCE S. ANDERSON, Ph.D., M.P.H.
Director of Health

APPROVED AS TO FORM:

Adina L.K. Cunningham
Deputy Attorney General

BENJAMIN J. CAYETANO
Governor
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Date: 9/8/99

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Filed

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