

Rationale for the Proposed  
Repeal of Hawaii Administrative Rules, Title 11, Chapter 281 and  
Adoption of Hawaii Administrative Rules, Title 11, Chapter 280.1  
Regarding Underground Storage Tanks (USTs)

Hawaii is an approved state for the Environmental Protection Agency's (EPA's) national underground storage tank (UST) program implementing the Resource Conservation and Recovery Act (RCRA), Subtitle I. To maintain EPA approval and funding for this program, Hawaii is required by the Code of Federal Regulations, Title 40 Part 281 (40 CFR 281) to adopt state rules equivalent to and at least as stringent as the program's federal regulations, which are found in 40 CFR 280, by October 13, 2018. In addition, a March 23, 2018 order from the Environmental Court, First Circuit, State of Hawaii (Civil No. 17-1-1350-08 JPC) requires the Department of Health to adopt rules by July 15, 2018 requiring that all USTs be "replaced or upgraded...to prevent releases for their operating life."

The proposed replacement of chapter 11-281, HAR with chapter 11-280.1, HAR is in response to changes made by EPA to 40 CFR Part 280. Chapter 11-281, HAR was based on the contents of the corresponding federal regulations at the time of its adoption in 2000 and was updated in 2013 in response to RCRA Subtitle I amendments made by the Energy Policy Act of 2005. The proposed new chapter 11-280.1, HAR incorporates material from current federal regulations (which became effective October 13, 2015) with appropriate modifications, bringing the department's regulations up to date with numerous changes in federal regulations.

The new federal rules improve environmental protection by increasing emphasis on properly operating and maintaining equipment. The lack of proper operation and maintenance of UST systems has been found to be one of the main causes of release of regulated substances to the environment. New requirements such as regular release detection equipment testing, walkthrough inspections, and proper operation and maintenance are key for preventing and quickly identifying releases. The proposed state-specific modifications to the federal rules include additional requirements for airport hydrant systems and field-constructed tanks installed prior to the effective date of the rules.

The proposed chapter has been organized and numbered to conform with the general organization of the federal rules in 40 CFR 280. This means that some material that is the same or similar in chapter 11-281 is found in a different part of the proposed chapter 11-280.1. For example, operator training requirements currently found in §11-281-46 are being moved to subchapter 10, which corresponds to 40 CFR subpart J. Permitting requirements currently found in chapter 11-281 subchapter 3 are being moved to subchapter 12 because there are no corresponding federal requirements. The chapter has also been organized to make it clear that the whole chapter applies to airport hydrant systems and UST systems with field-constructed tanks (see section B.9 below). Codes of practice based on the federal rules are included in a separate section at the end of each applicable subchapter. Section numbers listed below refer to section numbers in the proposed rules, unless otherwise indicated.

A. The following changes are being made for consistency with the federal regulations (40 CFR part 280), to improve environmental protection, simplify and clarify the regulations, and

maintain EPA approval and funding of the state UST program.

1. The following new definitions are added in §12 from 40 CFR 280:

- “Belowground release”
- “Class A operator”, “Class B operator”, “Class C operator”
- “Connected piping”
- “Containment sump”
- “Dispenser system”
- “Hazardous substance UST system”
- “Noncommercial purposes”
- “On the premises where stored”
- “Under-dispenser containment” or “UDC”
- “Underground release”
- “Upgrade”

2. The following new requirements are added from 40 CFR 280:

- In one year, release detection for UST systems installed before August 9, 2013 that store fuel solely for use by emergency power generators [§10(a)(1)(B)].
- Phase out of ball floats for overfill protection [§20(d)(3)].
- Notification before change to storing a regulated substance containing >10% ethanol or >20% biodiesel; documentation of compatibility [§32].
- Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced, not repaired [§33(3)].
- Following repair to spill or overfill prevention equipment, the repaired equipment must be tested or inspected [§33(8)].
- Sump testing once every three years for sumps that are part of interstitial monitoring for piping, unless the sump is double walled and the integrity of both walls of a double-walled containment sump is monitored annually; associated recordkeeping [§35(a)(2)].
- Inspection of overfill prevention equipment every three years; associated recordkeeping [§35(a)(3)].
- Recordkeeping requirement associated with existing requirement for annual testing of spill prevention equipment [§35(c)].
- Monthly and annual walkthrough inspections; associated recordkeeping [§36].
- Regulations regarding lender liability [subchapter 9].
- Additional regulation of airport hydrant systems and UST systems with field-

constructed tanks:

- Spill & overflow control and under-dispenser containment [ §§20(d), 21(b)(2)(B), 21(c)(2)]
- Compatibility [§32]
- Notification, reporting, and recordkeeping [§34]
- Equipment operation, repair, testing, and maintenance [ §§30, 31, 33, 35, 37]
- Walkthrough inspections [§36]
- Release detection [subchapter 4]
- Secondary containment and interstitial monitoring for tanks installed after the effective date of the new rules [ §§21(d)(2)(A), 41(a)(2)(B), 41(a)(3)(B)]
- Financial Responsibility [subchapter 8]
- Operator Training [subchapter 10]
- Permitting [subchapter 12]

3. The following existing requirements have been modified to conform with 40 CFR 280:

- Earlier reporting of spill or overflow response actions (20 days), initial release abatement steps (20 days), initial site characterization (45 days), and free product removal (45 days) [ §§53, 62, 63, and 64].
- Training programs for Class A and Class B Operators must include reporting, recordkeeping, testing, inspections, and environmental and regulatory consequences of releases [§242].
- Re-training timeline for Class A and Class B Operators of UST system determined to be out of compliance reduced to 30 days (from 90 days); the department has the option to waive the retraining requirement for Class A or B operators or both [§244].

4. The following clarifications and minor changes have been made to conform with 40 CFR 280:

- Replace “inner and outer walls” with “inner wall” in technical specifications for secondary containment [§24(b)(2)].
- Add technical specifications to requirements for automatic tank gauging (ATG) and interstitial monitoring when each is being used to meet release detection requirements [§43(4), 43(7)].
- Allow statistical inventory reconciliation (SIR); add technical specifications to requirements for SIR being used to meet release detection requirements [§43(8)].
- Add clarification of certain conditions under which a suspected release may be resolved within 24 hours and not require notification and further investigation [§50].
- Allow site assessments performed before installation of groundwater or vapor monitoring systems to be used for closure if those systems are operating and indicate no release has occurred [§72(a)].
- Allow out of state trustees (financial institutions) regulated by state authority [ §§102, 103].

- Add specific list of release detection components to test annually and specific information about release detection recordkeeping [§§40(a)(4), 45].
- Remove requirement to keep copies of operating manuals for leak detection equipment [§34; §11-281-45(b)(7)].
- Remove requirement to submit written performance claims for release detection equipment; instead, documentation must be retained for the life of the equipment [§§40(5) and 45(1); §11-281-51(a)(3)].

B. In addition to changes consistent with the 2015 federal regulations, the following state-initiated changes are being made for the reasons described below.

1. In ten years, require secondary containment and interstitial monitoring for all petroleum USTs and piping, except safe suction piping and tanks and piping associated with airport hydrant systems and field-constructed tanks [§§21(d)(1)(B), 41(a)(1)(B), 41(b)(2)].

There is no federal counterpart to this requirement. The 2015 federal regulations require secondary containment and interstitial monitoring only for tanks and piping installed after the effective date of the new regulations. Data collected by EPA show a higher number of releases from single-walled tanks compared with secondarily contained tanks (80 FR 41566, p. 41573). Secondary containment will reduce the chances of release to the environment by containing leaks within a secondary area and detecting them before they reach the environment. Many states already require secondary containment for all factory-built tanks (i.e., typical petroleum USTs at gas stations), with requirements that have been in place for ten years or longer. In addition, by the time this requirement is in effect, all single walled USTs operating within the state will be over 30 years old, and most will be 40 or more years old. Secondary containment and interstitial monitoring are already required for tanks and piping installed on or after August 9, 2013, except for airport hydrant systems and UST systems with field-constructed tanks. See number 6 below regarding airport hydrant systems and UST systems with field-constructed tanks.

2. Require repaired spill or overfill prevention equipment to be tested or inspected before return to use [§33(8)].

The new federal requirement for testing or inspecting of repaired spill or overfill prevention equipment allows the testing/inspection to take place up to 30 days following the repair. The state is requiring the testing/inspection of this equipment to be completed prior to return to use to ensure that the repair has been completed properly. This is more environmentally protective and is consistent with other state repair requirements that are more stringent than the corresponding federal rules.

3. Require inspection/testing and maintenance of under-dispenser containment sensor (if the sensor is required under §21(c)) and associated recordkeeping [§37].

Section 21(c) requires under-dispenser containment sumps for all dispenser systems installed on or after August 9, 2013 and requires these sumps to be monitored for leaks

from the dispenser system with a sensing device that signals the operator of the presence of regulated substances (see §11-281-19), but there are currently no associated operation, maintenance, or recordkeeping standards. The new requirements for these sensors are similar to the requirements that apply to all release detection equipment.

4. Update site cleanup criteria: Default Tier 1 Screening Levels table [§65.3(e)].

These screening levels have been updated in accordance with the currently available screening levels from the EAL Surfer (Department of Health Hazard Evaluation and Emergency Response Office), which are frequently updated based on the latest science.

5. Require permits for airport hydrant systems and UST systems with field-constructed tanks [subchapter 12].

The permitting requirement for USTs is a state requirement that does not have a counterpart in the federal regulations. The 2015 federal regulations require notification for airport hydrant systems and field-constructed tanks, so the state regulations will require both notification and permitting for these tanks. The permitting requirement will apply to tanks installed before the effective date of the new rules one year after the effective date of the new rules.

6. In twenty years, require secondary containment or approved alternative design for airport hydrant systems and UST systems with field-constructed tanks installed before the effective date of the new regulations, except safe suction piping and piping associated with airport hydrant systems and field-constructed tanks with a capacity larger than 50,000 gallons [§§21(d)(2)(B), 41(b)(4)(B)].

There is no federal counterpart to this requirement. The 2015 federal regulations require secondary containment and interstitial monitoring only for tanks and piping installed after the effective date of the new regulations. For large volume field-constructed tanks, there are no design standards or commercially available products to retrofit existing tanks with secondary containment and interstitial monitoring. The department recognizes that airport hydrant systems and UST systems with field-constructed tanks, especially very large volume tanks, present special engineering challenges. Long piping runs and varying piping diameter may in some cases make secondary containment inadvisable and the challenges of tank and piping size, high product throughput, and fluctuating temperature and pressure in piping runs may make conventional release detection methods impractical or impossible (see 80 FR 41566, pp. 41591-41596; 76 FR 71708 pp. 71715-71716, 71728-71730, 71733-71734).

The department proposes to require either secondary containment with interstitial monitoring or a tank design and release detection method approved by the department. This new requirement is environmentally protective because the department can oversee the development of alternatives, and it allows for the development of alternatives which may be superior to applying existing secondary containment technology to very large tanks for which this technology was not designed. This oversight will include already

ongoing departmental and EPA oversight of development and selection of tank upgrade alternatives for the Red Hill bulk fuel storage facility under the Administrative Order on Consent (“AOC”; department docket number 15-UST-EA-01) and will also include any other facilities that fall under this requirement and choose to develop an approved alternative.

Tanks and piping for airport hydrant systems and USTs with field-constructed tanks installed after the effective date of the rules must have secondary containment and interstitial monitoring, except safe suction piping and piping associated with airport hydrant systems or field-constructed tanks with a capacity greater than 50,000 gallons [§§21(d)(2)(A), 41(b)(4)(B)]. The department will not require secondary containment and interstitial monitoring for piping associated with airport hydrant systems of field-constructed tanks with a capacity larger than 50,000 gallons, consistent with EPA’s determination that secondary containment and interstitial monitoring are not appropriate for this piping (see 80 FR 41566, pp. 41591-41596; 76 FR 71708 pp. 71715-71716, 71728-71730, 71733-71734).

7. Increase permit fees [§335].

The permit fees have not been increased since 2000. While the fees are being doubled, the largest dollar amount increase is still only \$200, making the permit applicable fee only \$400, a modest amount for a permit that typically lasts five years and can cover numerous tanks within one UST system.

8. Remove appendices containing notification forms and field citations list [chapter 11-281 subchapter 11].

The forms and list of field citations are being removed from the appendices to allow the department to update the forms and list as needed without going through the HAR rulemaking process. The forms will be updated at the time the new regulations become effective and will be posted on the UST program website. Future updates to the forms will also be posted to the website. Field citation procedures will remain the same, but citations and associated penalty amounts will be changing. Penalty amounts have been essentially the same since 2000 and are no longer adequate as deterrents. The UST program expects to publish a new schedule of field citations and penalty amounts on its website at least thirty days prior to any changes in penalty amounts.

9. Reorganize the chapter for clarity

- Organize the chapter to make it clear that the whole chapter applies to airport hydrant systems and UST systems with field-constructed tanks [§10(a)(1), throughout chapter].

40 CFR 280 subpart K describes all requirements for airport hydrant fuel distribution systems and UST systems with field-constructed tanks. This subpart, particularly the applicability dates covered in 40 CFR §280.251, is very difficult to understand.

While the proposed rules generally conform to the organization of 40 CFR 280, the chapter has been organized to make it easier to understand. Subchapter 11, which would correspond to the federal subpart K, is reserved. The applicability section covering the entire chapter (§10) specifies applicability dates for certain sections and subchapters for certain UST systems and all information specific to airport hydrant systems and UST systems with field-constructed tanks is found throughout the chapter in the applicable subchapters and sections that apply to all UST systems.

- Place requirements with phased-in applicability based on installation dates in upgrade section [§21]

The upgrade section (corresponding to 40 CFR §280.21) was previously removed from the state rules because all UST systems were required to meet the standards in §§11-281-12 and 11-281-13, making the allowed upgrade alternatives obsolete. However, the 2015 federal rules added requirements with phased-in applicability based on installation dates in 40 CFR §280.20. These requirements, commonly understood as upgrades, have been placed in §21(c) and (d).

#### 10. Make clarifications and corrections

- Add the following definitions not found in 40 CFR §280.12 to §12:
  - “EPA” is simply defined as the United States Environmental Protection Agency for clarity when this acronym is used throughout chapter 11-280.1.
  - “Hazardous substance” definition is derived from the federal definition of “hazardous substance UST system” in 40 CFR §280.12 but is separated from that definition for clarity.
  - “Temporary closure” or temporarily closed” is not defined in 40 CFR 280. There is currently no lower limit to the length of tank inactivity that defines when a tank is considered temporarily closed, which makes it difficult to determine when owners and operators are required to notify of temporary closure (§34(a)(2)) and when tank lines and ancillary equipment must be capped and secured (§70(b)). This new definition clarifies that a tank is considered temporarily closed if it is inactive (not receiving or dispensing regulated substance) for sixty days or longer.
- Clarify labeling requirement for overfill alarms [§20(d)(4)].

An existing requirement for overfill alarms to be “clearly labeled” does not specify what the label must say. This requirement is being changed to add the words “overfill alarm” as the required label, making it easier for owners and operators to ensure that they are in compliance.
- Reinstate exceptions allowing use of manual tank gauging and tank tightness testing as forms of release detection for specific tanks installed before August 9, 2013 [§41(a)(1)(A)(i) and (ii)].

These two exceptions to §41(a)(1)(A) were mistakenly deleted in 2013 and are being reinstated as follows:

(i) Tank tightness testing, combined with monthly inventory control or manual tank gauging, is only permissible for tanks installed before August 9, 2013 and less than ten years old. This exception is also applied to airport hydrant systems and field-constructed tanks with a capacity less than or equal to 50,000 gallons installed before the effective date of the new rules. The exception will phase out on August 9, 2023 for most tanks and ten years after the effective date of the rules for airport hydrant systems and field-constructed tanks.

(ii) Manual tank gauging is allowed only for tanks with a capacity of 550 gallons or less and tanks with a capacity between 551 and 1,000 gallons meeting specified tank diameter criteria.