

Response to comments

Hawaii Department of Health

Proposed repeal of Hawaii Administrative Rules chapter 11-281 and adoption of chapter 11-280.1

Notes:

Comments have been summarized. All written comments received and the transcript of the public hearing held on May 31, 2018 are available at <http://health.hawaii.gov/shwb/ust-har/>.

All section and subchapter numbers refer to the proposed chapter 11-280.1, Hawaii Administrative Rules (HAR), unless otherwise noted.

Commenter: Holly Dagostino, Par Petroleum

Comment #1: §70(b)(3) does not say exactly the same thing as §34(b)(4), so this makes it unclear what triggers the requirement to submit a notification of temporary closure (60 days or 90 days of closure) and when that notification is due.

Response: Thank you for pointing out this inconsistency. This has been corrected by removing §70(b)(3) and rewording §34(b)(4) to clarify the intent that notification be provided to the department within thirty days of the UST system having met the definition of temporary closure. Please note that the definition of temporary closure has been changed (see response to comment #8).

Comment #2: §34(d)(5) cross reference to §35(c) is incorrect.

Response: Thank you. This reference has been corrected to §35(b).

Comment #3: §32(c) cross reference to §34(b) is incorrect.

Response: Thank you. This reference has been corrected to §34(d).

Comment #4: The current regulation does not distinguish between “dispensers” and “dispenser systems.” It requires UDCs [under-dispenser containment] and UDC sensors for any “dispenser” installed after 8/9/13. This is slightly different than the new requirement in §21(c), which requires UDCs and UDC sensors only for “dispenser systems” installed after 8/9/13. Am I misinterpreting it?

§11-281-03 (current):

“Dispenser” means equipment that is used to transfer a regulated substance from underground piping, through a rigid or flexible hose or piping located aboveground, to a point of use outside of the underground storage tank system such as a motor vehicle.

§12 (proposed):

“Dispenser” means equipment located aboveground that dispenses regulated substances from the UST system.

“Dispenser system” means the dispenser and the equipment necessary to connect the dispenser to the underground storage tank system. The equipment necessary to connect the dispenser to the underground storage tank system includes check valves, shear valves, unburied risers or flexible connectors, or other transitional components that are underneath the dispenser and connect the dispenser to the underground piping.

Response: The definition of “dispenser” in §11-281-03 is consistent with the definition of “dispenser system” proposed in §12. Therefore, there is no practical change to the requirement for under-dispenser containment located in §11-281-19 and §25(a) and (c) [moved from proposed §21(c)(1) and (3)]. The new definitions distinguishing between dispenser and dispenser system are consistent with definitions in the federal UST regulations. This distinction is necessary because pursuant to §25, replacement of only the dispenser (aboveground dispensing equipment) does not trigger the requirement for under-dispenser containment, while replacement of the dispenser system does.

Commenter: Par Petroleum

Comment #5: In order to comply with the requirements of the currently effective regulation, HAR §11-281-19, UST owners/operators who replaced dispensers after 8/9/13 have installed “stand-alone” liquid sensors in UDC sumps. Stand-alone sensors immediately shut down AC power to the dispenser when fluid is detected in the dispenser pan.

The draft §37(a)(3), requires UST owners/operators to “generate a record of the status of the under-dispenser containment and the sensor’s proper operation at least every thirty days.” For owners who utilize stand-alone sensors, it is not possible to generate a record of the dispenser sensor status because the sensors are not connected to the tank monitoring system console. To re-wire an existing UST system to connect the UDC sensors to the console is impractical and would require significant and costly construction and electrical work at the facility.

Due to the considerations mentioned above, Par requests that the Department consider revising or removing the requirement in §37(a)(3).

Response: Thank you for pointing this out. The department has decided not to impose the requirement to generate a record of status or proper operation, deleting §37(a)(3) and allowing “stand-alone” sensors in UDCs. We have added text to §37(b) indicating that *if* the sensors are connected to record-producing equipment (i.e., the tank monitoring system console), the

records produced must be kept for three years. We encourage sites with new UST system installations to wire UDC sensors to the tank monitoring system console.

Comment #6: Draft §35(a)(2)(B) describes integrity testing that will be required for containment sumps that are used for interstitial monitoring of piping. Acceptable methods of integrity testing are included in §35(a)(1)(B)(i) to (iii), and the accepted code of practice, Petroleum Equipment Institute (PEI) Publication RP1200, is referenced in §38(f). The hydrostatic test procedure in PEI RP1200 specifies that the sump shall be filled with water to 4 inches above the highest penetration.

Petroleum Marketers Association of America (PMAA) has developed guidance on a low-liquid level test which has been endorsed by EPA and has been accepted in other states. The PMAA guidance specifies that an automatic shut-off sensor shall be used in conjunction with the low-liquid test. The test procedure requires the sump to be filled only to the point of the sensor activation. In addition to being equally as protective of the environment as the high-liquid level test, there are several benefits of low-liquid testing, including the production of less waste water compared with PEI RP1200.

Par requests that the Department consider approving an alternate method of sump integrity testing, specifically a low-liquid level test.

Response: The department appreciates the time and effort taken by the commenter to explain the details of this request. The department is considering the request, but staff with the appropriate expertise need time to complete additional research and the department is not able to make a positive determination by the deadline for completion of this response to comments. This request to approve an alternative method to meet the requirements of §35(a)(2)(B) using §35(a)(1)(B)(iii) does not impact the regulations themselves, so the department's response is not included in this document. The department will respond directly to the requester and post its determination on the UST program's website (<http://health.hawaii.gov/shwb/underground-storage-tanks/>) as soon as possible.

Commenter: Sierra Club members [copies or variations of the comment below were submitted by 114 individuals during the public comment period using a petition-style e-mail form letter from everyaction.com]

Comment #7: As a concerned resident that depends on Hawai'i's groundwater aquifers as my primary source of drinking water, I strongly urge the Department of Health to take the needed steps through this rulemaking process to protect Hawai'i's water from contamination. The Health Department should shorten the time frame—from 20 years to 10 years—for bringing field-constructed underground storage tanks into compliance with state regulations on underground storage tanks.

My concerns arise primarily from field-constructed underground storage tank facilities, such as the U.S. Navy's Red Hill Bulk Fuel Storage Facility, that has a long history of leaking fuel into the environment and sits directly above O'ahu's primary drinking aquifer. The Red Hill facility is not alone, there are a handful of other field-constructed tank facilities that also continue to pose a threat to our environment. The people of Hawai'i cannot wait another 20 years for critical upgrades and leak prevention and detection systems to be installed to these facilities.

Response: This comment appears to be based on the misperception that the field-constructed tanks at Red Hill are entirely unregulated, do not meet performance standards that apply to all USTs, and have no release detection systems in place. This is not the case. The tanks are currently subject to §§11-281-12 and 11-281-13 and subchapters 6, 7, and 8 of chapter 11-281, Hawaii Administrative Rules, and the tanks currently meet performance standards for corrosion protection and use a release detection method that is consistent with both the federal and state rules. Red Hill has, and has always had, corrosion protection as that concept is defined in both the federal and state rules because the steel tanks are encased in concrete and are not in contact with the corrosion-causing soil. Additionally, Red Hill utilizes a system of release detection whereby the volume of stored fuel is routinely measured and inventory is statistically reconciled to detect a possible release. The proposed rules are designed to enhance the performance and protective measures already in place at Red Hill.

Field-constructed tanks installed before the effective date of the new regulations (including the USTs at the Red Hill Bulk Fuel Storage Facility) are subject to the following requirements which must be implemented in accordance with the following schedule:

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Table 1

Applicable <u>immediately</u> on effective date of new rules:	Applicable <u>one year</u> after effective date of new rules:	Applicable <u>twenty years</u> after effective date of new rules:
<ul style="list-style-type: none"> • Under-dispenser containment for new dispenser systems [§25] • General operating requirements [subchapter 3] <p>Requirements substantially similar to requirements already applicable:</p> <ul style="list-style-type: none"> • Corrosion protection for tanks and piping [§21(a)(2)(A), §20(b) and (c); current §§11-281-12 and 11-281-13] • Release reporting, investigation, and confirmation [subchapter 5; current chapter 11-281 subchapter 6] • Release response action [subchapter 6; current chapter 11-281 subchapter 7] • Closure [subchapter 7; current chapter 11-281 subchapter 8] 	<ul style="list-style-type: none"> • Spill and overfill requirements [§§21(a)(2)(B), 20(d)] • Release detection [subchapter 4] • Financial responsibility [subchapter 8] • Operator training [subchapter 10] • Permits [subchapter 12] 	<ul style="list-style-type: none"> • Secondary containment or alternative tank and piping design [§21(c); moved from proposed §21(d)(2)(B)]

As you can see from the table above, the vast majority of the new requirements will be effective immediately or within one year. Some of these “new” requirements are, in fact, already in place by virtue of being equivalent to provisions found in our existing chapter 11-281, HAR. For the requirements that will apply one year from the effective date of the new rules, this one year delay serves the purpose of allowing the time necessary to complete tasks required to enable these requirements to be implemented. These tasks include but are not limited to:

- Procurement and installation of spill and overfill equipment
- Procurement and installation of release detection equipment
- Setting up financial assurance mechanisms
- Design of appropriate curricula by operator training providers
- Submission of permit applications and departmental review of applications

For those requirements with a one year delay, this is an accelerated deadline for compliance as compared to the federal rules, which afford owners and operators of existing field-constructed tanks three years after the effective date to come into compliance. Note that with respect to financial responsibility, §90(b) exempts the federal and state governments from the requirement to provide a financial assurance mechanism such as insurance or a surety bond. Other types of owners and operators must comply with subchapter 8.

Installation of secondary containment or alternative tank and piping designs [§21(c); moved from proposed §21(d)(2)(B)] is the only new requirement for existing field-constructed tanks (e.g., Red Hill) that becomes applicable twenty years after the effective date of the new rules. And, for context, it should be understood that there is no corresponding federal requirement to upgrade field-constructed tanks in this way.

While the department understands the public's desire to require immediate secondary containment or alternative design retrofits for existing field-constructed tanks, there is no current technology or existing industry standard for designing and constructing such retrofits for large field-constructed tanks. In 2015, the Navy entered into a comprehensive, enforceable agreement with the department and the EPA known as the AOC (Administrative Order on Consent; department docket number 15-UST-EA-01). The AOC requires either completed upgrades or closure of all existing Red Hill tanks by 2037 and requires re-evaluation of tank upgrade technologies on a periodic basis throughout its duration.

Based upon the information available to the department at the time, the deadlines memorialized in the AOC were appropriate and based upon reasonable estimates of the time necessary to design, construct, engage pilot projects, and procure federal funds related to upgrading Red Hill. Nothing DOH has learned about the logistics of design and construction at Red Hill during the time spent working to implement the AOC since 2015 suggests that 20 years is unreasonable. To the contrary, the well-documented difficulties of working in the conditions present at Red Hill makes the original schedule for upgrading the Red Hill tanks appear relatively aggressive in light of the physical constraints. Consequently, the new rules purposely adopt this same AOC schedule for upgrading the design of existing field-constructed tanks.

Furthermore, adopting regulations that conflict with the AOC timeline could potentially derail the tank upgrade alternative decision-making process currently underway and interfere with the department and EPA's oversight of the Navy's research and decision-making processes by encouraging the Navy to utilize federal law to exempt itself from state regulation altogether (see response to comment #38). The department is committed to adopting a regulatory approach with respect to field-constructed tanks (e.g., Red Hill) that remains consistent with its responsibility to protect human health and the environment but stops short of unreasonably and unjustifiably interfering with the Navy's ability to operate its facility in the interests of our national defense. The proposed rules do this by encouraging the Navy to continue to cooperate with state government and EPA, through the AOC, on the development and implementation of improvements to Red Hill that are site-specific and appropriately customized in a way that the rules alone cannot be.

The AOC has been instrumental in compelling the Navy to improve operations and fuel monitoring at the Red Hill facility and evaluate and improve overall design and operational strategy above and beyond any current or proposed regulatory requirement. This comprehensive evaluation of the Red Hill facility not only includes the upgrade design of the tanks, but also associated release detection methods, operation controls, response actions, and appropriate redundancies.

Ensuring the Navy's compliance with both the AOC and the proposed rules provides the best protection of the state's drinking water resources at Red Hill. The department expects many of the Red Hill tanks to meet the requirements of §21(c) [moved from proposed §21(d)(2)(B)] well before the deadline of twenty years after the effective date of the new rules, but believes that twenty years is a reasonable timeline for upgrades to *all* of the tanks to be completed.

Information about the AOC and the department's efforts related to Red Hill is available here: <http://health.hawaii.gov/shwb/ust-red-hill-project-main/>

Commenter: United States Department of the Navy

Comment #8: Thorough inspection, repair, and maintenance form an important part of the DOH and EPA approved Tank Inspection, Repair, and Maintenance (TIRM) program submitted to regulators by the Navy and Defense Logistics Agency (DLA) [under the Red Hill AOC]. Each scheduled "clean, inspect, and repair" cycle of a tank requires several years to implement. We respectfully request clarification of how §70 functions with respect to the approved TIRM process. We further suggest revising the definition at §12:

"Temporary closure" or "temporarily closed" means that owners and operators do not deposit regulated substances into the UST or tank system nor dispense regulated substances from the UST or tank system for sixty days or longer and the removal of fuel is not a part of a repair or maintenance effort.

Response: The department's concept of temporary closure includes all reasons that a tank is not being used in accordance with its normal operational parameters, including but not limited to when tank is taken out of service for maintenance or repair. The temporarily closed status of a tank does not, as a practical matter, impose any additional requirements or obligations, except the notification requirements in §34(a)(2). If a tank is taken out of service because it stops meeting applicable design, construction, and installation requirements in subchapter 2 or when the tank does not yet meet new requirements that begin to apply, the tank must meet the applicable requirements within one year, be permanently closed, or receive an extension of the twelve-month temporary closure period.

In discussing the question of how owners and operators of tanks that are temporarily closed may be affected by the specific wording of the definition of "temporary closure," it has come to

the department's attention that the sixty-day time frame may have unintended consequences for owners and operators of field-constructed tanks and tanks storing fuel for use by emergency generators. Most USTs store fuel for frequent dispensing, such as at a corner gas station. However, field-constructed tanks and emergency generator tanks are intended to store fuel for infrequent use and, in normal operation, may not receive or dispense fuel for a long period of time. The department had originally proposed to define temporary closure as that moment in time when a tank had neither dispensed nor received fuel for a period of fifteen days or more, but received comments during informational meetings during the drafting process that suggested that this time period was too short to reflect operational needs in the case of emergency generators. The public hearing draft's sixty days, upon additional review of the operational needs of owners and operators of both emergency generator and field-constructed tanks, appears also to be too short, again, because these tanks are used for relatively long-term fuel storage. Therefore, the department has decided to amend the proposed definition to better account for the differing operational parameters of different types of USTs under their normal operating conditions, as follows:

“Temporary closure” or “temporarily closed” means that owners and operators do not deposit regulated substances into the UST or tank system nor dispense regulated substances from the UST or tank system for sixty days or longer[-], except for UST systems that store fuel solely for use by emergency power generators and UST systems with field-constructed tanks. For UST systems that store fuel solely for use by emergency power generators and UST systems with field-constructed tanks, “temporary closure” or “temporarily closed” means that the UST or tank system is empty, as defined in section 11-280.1-70(a), and owners and operators do not deposit regulated substances into the UST or tank system for sixty days or longer.

Comment #9: We respectfully support the intent of these proposed rules, but can only do so if the proposed rules do not conflict with an existing legally enforceable settlement and upgrade plan, the 2015 Red Hill Administrative Order on Consent (AOC) signed with the State Department of Health (DOH) and the U.S. Environmental Protection Agency (EPA). The AOC imposed wide ranging requirements on the Navy and Defense Logistics Agency with detailed deliverables and deadlines. The AOC requires evaluation and action in seven areas: Tank inspection, repair and maintenance; Tank upgrade alternatives; Release detection and tank tightness testing; Corrosion and metal fatigue practices; Investigation and remediation of releases; Groundwater protection and evaluation; and a Risk and vulnerability assessment.

[The commenter provided additional information about the ongoing work at the Red Hill Bulk Fuel Storage Facility under and the AOC, an analysis of how the terms of the AOC in the seven areas listed above are consistent with and go beyond the requirements in the proposed rules, and comments on the strategic importance of the Red Hill facility for the US Pacific Command. The full comment can be found in the written comments PDF.]

Response: These comments do not directly address or suggest changes to the proposed rules, so the department is not providing a response.

Comment #10: Applicability of metal tanks and piping encased or surrounded by concrete: The preamble of 40 CFR 280 includes the following statement: “Metal tanks and piping which are encased or surrounded by concrete have no metal in contact with the ground and are not subject to the corrosion protection requirements.” The Navy recommends similar language be added to §10, Applicability.

Response: A metal tank encased by concrete would meet the corrosion protection performance standards under §20(b)(3), i.e., the tank does not need corrosion protection because it is clad or jacketed with a non-corrodible material. Piping encased in concrete is not in contact with the ground, so §20(c) would not apply based on the language in the introductory paragraph of §20(c). For context, §31 (“Operation and maintenance of corrosion protection”) makes it clear that corrosion protection systems are in place only where metal is in contact with the ground:

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

The commenter’s proposed language is not necessary and would be out of place in §10, given the existing structure of the applicability section.

Comment #11: Release detection for UST systems that store fuel solely for use by emergency power generators: These UST systems installed before August 9, 2013 will be required to have release detection within one year after the effective date of the new state UST rules.

The Navy plans to replace these emergency generator USTs with tanks that comply with the new rules. One year may not be enough time for the existing emergency generator USTs to be replaced. The Navy recommends DOH allow at least two years after the effective date of the new state UST rules for existing emergency generator USTs to have release detection.

Response: The department’s records indicate that of the 246 USTs statewide storing fuel solely for use by emergency generators that were installed before August 9, 2013, only 8 tanks are lacking release detection equipment. The Navy does operate several emergency generator tanks, but the department’s records indicate that all but one of these tanks already have release detection equipment installed that will meet the requirements in subchapter 4. One year is sufficient time to install release detection equipment on this existing tank, or to replace the tank if the Navy chooses to do so.

The three-year phase-in in the federal rules is a maximum allowable time limit for states with approved programs (i.e., three years from the effective date of the state’s rules; see 40 CFR §281.33(b)(2)). The current state rules (chapter 11-281, HAR) implemented the requirement for newly installed UST systems storing fuel for use by emergency generators to have release detection on August 9, 2013, before the federal regulations (October 13, 2015). As in the case of

the installation cut-off date for this requirement, the state is choosing to adopt rules more stringent than the federal regulations in order to be more environmentally protective.

Commenter: City and County of Honolulu, Department of Environmental Services, Division of Wastewater Treatment & Disposal

Comment #12: For spill prevention equipment testing, the DOH requirement is every 365 days while the EPA requirement is every 3 years beginning no later than 3 years after the effective date of the regulation. We agree with the basis of the EPA requirement that the 3-year testing frequency (along with periodic walkthrough inspections) is adequate to ensure that spill prevention equipment will contain any drips or spills during fuel delivery. Also, we agree with EPA's alignment of periodic spill, overflow, and containment sump testing [every three years, beginning no later than 3 years after the effective date] as it will be easier to comply with the requirements. We therefore suggest adoption of the EPA requirement.

Response: The requirement for annual tightness testing of spill prevention equipment became effective on August 9, 2013 [§11-281-41(c)(2)] and the proposed change §35(a)(1) adds the alternative to monitor double-walled spill prevention equipment every thirty-one days. Since this requirement is already in effect and the department has received no comments indicating that the annual testing is problematic, we will retain this requirement that is more stringent than the federal regulations. While spill prevention equipment testing must be completed more frequently than the new containment sump testing and overflow prevention equipment inspection requirements [§35(a)(2) and (3)], it can easily be aligned with other annual requirements, such as the annual walkthrough inspection.

Comment#13: For release detection, the DOH requirement for emergency generator tanks is to meet the requirement no later than 1 year after the effective date while the EPA requirement is to meet the requirement no later than 3 years after the effective date.

On the release detection equipment operability testing, both DOH and EPA have the same requirement for annual testing frequency, but the DOH requires testing to begin 1 year after the effective date while EPA requires testing to begin 3 years after the effective date. We suggest adoption of the EPA requirements.

Response: The Division of Wastewater Treatment & Disposal (WTD) does operate many emergency generator tanks, but department staff confirmed with WTD staff that all of these tanks already have release detection equipment installed that will meet the requirements in subchapter 4. See response to comment #11.

Comment #14: DOH requires USTs installed prior to 8/9/13 to be provided with secondary containment not later than 10 years after the effective date of the new rules while EPA requires new and replaced tanks (after 4/11/16) to be provided with secondary containment. [Note: This commenter is discussing USTs other than field-constructed tanks and those associated with

airport hydrant systems.] DOH cites EPA's data showing higher number of releases from single walled tanks and piping compared with secondarily contained systems as among the bases for proposing to require secondary containment covering existing USTs. EPA has also considered this data but notes that retrofitting single walled tanks with secondary containment would be a significant financial burden for owners and operators. It is expected that single walled tanks will be replaced as they age and when replaced they must be secondarily contained. We suggest adoption of the EPA secondary containment requirements.

Response: The department already requires secondary containment for tanks and piping, for UST systems other than airport hydrant systems and UST systems with field-constructed tanks, installed on or after August 9, 2013 [§11-281-17(a)]. The new requirement is to provide secondary containment for tanks installed before August 9, 2013, for UST systems other than airport hydrant systems and UST systems with field-constructed tanks [§21(b), moved from proposed §21(d)(1)(B)]. 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. Because it is possible to purchase a pre-fabricated replacement tank designed with secondary containment for a typical UST with fuel capacity of 10,000 gallons or less, and these products are readily available, the only reason not to replace single-walled tanks "as they age" is the financial burden this replacement poses. Requiring timely upgrade of these older tanks, where replacement tanks are readily available and can be purchased "off the shelf," is reasonable in spite of the financial burden because the ten-year phase-in provides owners and operators the time necessary to plan for this expense. The department conducted an analysis of the impact of this requirement on small businesses, as defined in §201M-1, Hawaii Revised Statutes (HRS), and prepared a Pre-Public Hearing Small Business Impact Statement (available here: <http://health.hawaii.gov/shwb/ust-har/>). The Small Business Regulatory Review Board reviewed the proposed rules and Small Business Impact Statement and approved the proposed rules to continue for public hearing. The department has not received any comments indicating that the requirement to provide secondary containment for USTs other than field-constructed tanks and USTs associated with airport hydrant systems imposes too great a burden on small businesses.

Comment #15: DOH requires piping installed before 8/9/13 must be provided with secondary containment not later than 10 years after the effective date of the new rules while EPA requires secondary containment for the entire piping run when 50 percent or more of a piping run is replaced. Based on EPA study, replacement cost of an entire piping run is equal to repair cost when approximately 60% of a piping run is repaired, hence its requirement for the entire piping run to be secondarily contained is when 50% or more of a piping run is replaced. We suggest adoption of the EPA secondary containment requirements.

Response: The department already requires secondary containment for piping, for UST systems other than airport hydrant systems and UST systems with field-constructed tanks, installed on or after August 9, 2013 [§11-281-17(e)]. The proposed new requirement is to provide secondary containment for piping installed before August 9, 2013, for UST systems other than airport hydrant systems and UST systems with field-constructed tanks [§21(b), moved from proposed §21(d)(1)(B)]. The intent of this requirement is to require upgrade of all single-walled piping by

ten years after the effective date of the rules. Practically speaking, this is likely to be accomplished by replacing old piping with new secondarily contained piping. The EPA definition of replacement is difficult to measure and enforce in the field and allows replacement of a substantial portion (<50%) of the piping run with new single-walled piping. The existing, more stringent state rules are intended to encourage owners and operators of UST systems to replace the entire piping run with double-walled piping when replacement of any segment of the run is necessary. The department has not received any comments indicating that replacement of piping with new, double-walled piping for the entire piping run within ten years poses an undue financial burden.

Comment #16: For monthly and annual walkthrough inspections, DOH requires the inspections to begin not later than 1 year after the effective date while EPA requires the inspections to begin no later than 3 years after the effective date. Based on comments received, EPA made the requirement for the inspections to begin no later than 3 years after the effective date, to align all operation and maintenance requirements. As mentioned above, this will make compliance easier and also provide enough time to know the tasks involved. We therefore suggest your adoption of the EPA regulation requiring walkthrough inspections to begin no later than 3 years after the effective date.

Response: The department received comments during the informational meetings held in January and February 2018 asking for more than one month from the effective date of the rules to complete the first monthly walkthrough inspection, and as a result changed the effective date of this requirement to one year after the effective date of the proposed rules. The department believes that one year is sufficient preparation time for owners and operators to create an inspection checklist and train staff in the new requirements. There are many existing operation and maintenance requirements that occur on an annual basis, including testing of spill prevention equipment and release detection equipment. The annual walkthrough inspection can be scheduled in alignment with other annual requirements.

Comment #17: DOH requires Class A & B operators designated on or after effective date of new rules to meet the revised training requirements within 30 days of assuming duties; Class C operators designated after the effective date to be trained before assuming duties. DOH also needs time to re-evaluate all training programs to ensure that they conform with the new requirements. On the other hand, EPA requires compliance with training requirements 3 years after the effective date. Considering the need for revision of training programs by training providers and re-evaluation of the programs by DOH, more time should be allowed for completion of operators training after the effective date. We therefore suggest that DOH adopt the EPA requirement for operators' training to meet revised requirements to begin 3 years after the effective date.

Response: Operator training is new in the October 13, 2015 federal regulations, but was already implemented in state rules on August 9, 2013 [§11-281-46]. The three-year phase-in in the federal rules is for the operator training program in its entirety, and so does not make sense for the state rules. Since training is already required and the requirements already in place are very

similar to the new requirements based on the federal rules, the department seeks to ensure a smooth and quick transition to the new operator training standards. There are no changes to the training requirements for Class C Operators, so currently approved programs will remain approved when the new rules become effective. Providers of training have been given notice of the upcoming changes to the regulations since December 20, 2017 and have already submitted their revised Class A and B Operator training materials to the department. The department will complete its review and approval of eligible training programs prior to the effective date of the new rules, so Operators who need to receive training immediately following the effective date should not encounter difficulty finding approved training programs. In addition, operator training completed before the effective date of the new regulations will be honored by the department until the operator's next required training renewal (one year for Class C Operators, five years for Class A and Class B Operators).

Commenter: Liz Bogdanski

Comment #18: Each of the requirements for the release detection testing and the walkthrough inspections are different, i.e. monthly, thirty days, 31 days. This generates possible confusion and should be changed to 31 days for consistency and to clarify the intent of the regulations.

Response: The intent of all requirements to complete a task every 30 or 31 days is that the task (i.e. walkthrough inspection) be completed on a regular basis, at least once a month. EPA chose to specify every 30 days to make it clear that walkthrough inspections must be scheduled at regular intervals, not simply at any time during each month (i.e., January 31, February 1, March 31, April 1 is not an acceptable monthly inspection schedule). In response to comments received during the informational meetings held in January and February 2018, the department changed the new requirement for monthly walkthrough inspections from "at a minimum...every thirty days" to "...every thirty-one days." This will allow facilities to schedule inspections on the same date each calendar month and remain in compliance.

Since the same logic also applies to release detection requirements that must be completed at least every 30 days, the department is making the suggested change to 31 days. The department received approval from EPA to change all instances of 30 days to 31 days in the state rules to clarify the intent explained above; EPA considers this wording to be as stringent as the federal rules. "Monthly" and "at least every 31 days" are treated as interchangeable; the term monthly is used when naming a requirement that must be completed at least every 31 days (i.e., "monthly walkthrough inspection").

Commenter: Department of Transportation Harbors Division

Comment #19: Can the requirements for release detection be changed to once a month or every 31 days to be consistent with the monthly walkthrough inspection? Under the requirement to read the tank monitoring system console at least every 30 days it is hard to

provide training guidelines to ensure it is done this often, unless we require it to be done twice a month.

Response: See the response to comment #18.

Commenter: Honolulu Board of Water Supply

Comment #20: The proposed rules deviate from the organizational structure of the 2015 EPA UST rule revisions. Existing federal UST rules generally aggregate the requirements for the previously deferred USTs into a single location: Subpart K-UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems. The proposed rules, in contrast, have removed subchapter 11 contained in the draft rules dated December 20, 2017, which had mirrored federal Subpart K, and appear to have dispersed those requirements throughout other subchapters.

Previously deferred facilities with field-constructed tanks greater than 50,000 gallons comprise a considerable risk to Hawaii's drinking water resources. As such, it is critical that every regulatory requirement for field-constructed tanks be provided in a clear, unambiguous, and concise manner. Owners and operators of field-constructed UST systems should be able to find all the provisions for these important installations in one location in the new state rules. The BWS has found the newest version of the proposed chapter, which relies on multiple exemptions and cross-references to other regulatory provisions to establish the requirements for these types of facilities, to be cumbersome and confusing.

As currently written, the proposed rules also make it difficult to compare requirements for previously deferred tanks to the current federal rules. DOH should provide a crosswalk table that cross-references all the proposed rule provisions to their federal counterparts and identify all new proposed rule provisions that do not appear in the federal rules. Such a table would be useful for determining whether the proposed rules are at least as stringent as federal UST regulations in 40 CFR Part 280.

Response: [References to field-constructed tanks alone should be understood to refer also to airport hydrant systems because they are regulated in the same manner; these two UST system types are what the commenter refers to as "previously deferred USTs."] We strongly disagree with the characterization of the reorganization of proposed chapter 11-280.1 as "relying on multiple exemptions and cross-references." The chapter was reorganized specifically to make clear which regulations are applicable to field-constructed tanks and to reduce the voluminous cross-references in the federal rules as much as practicable. While some cross-references remain, we are confident that the overall effect of the reorganization is to improve the readability of the proposed chapter as a whole, relative to the federal source material, and to make it easier to find the specific requirements for UST systems with field-constructed tanks by searching the correct subject matter section. The content of what was subchapter 11 in the December 2017 draft of the proposed rules (corresponding to 40 CFR part 280 subpart K) has

been redistributed throughout the proposed chapter 11-280.1 in the appropriately titled section based on subject matter, as noted in the document titled “Proposed chapter 11-280.1, HAR – Explanation of changes made from December 2017 draft to public hearing draft” and shared with the public on May 18, 2018. The following table shows where provisions from the federal 40 CFR part 280 subpart K are located in the proposed state rules.

Table 2

Federal citation 40 CFR §280. ____	State citation §11-280.1- ____, HAR
250	12
251(a) to (c)	10(a)(1)(A)
251(d)	26(g) [moved from proposed 25(g)] Note: This is not a requirement, but a code of practice that can be used to meet performance standards in §20.
252(a)	20(g)(2)(B) and (C) and 21(c)(2) and (3) [moved from proposed 21(d)(2)(A)(ii) and (iii), 21(d)(2)(B)(ii) and (iii)]
252(b)(1)	21(a)(2)(A) [moved from proposed 21(b)(2)(A)] Note: Field-constructed tanks are required to meet the standards in §20(b) and (c), so the alternatives provided in §280.252(b)(1)(ii) do not appear.
252(b)(2)	21(a)(2)(B) [moved from proposed 21(b)(2)(B)]
252(c)	36(a)(4)
252(d)(1) introductory paragraph	41(a)(2) and (3)
252(d)(1)(i) to (vi)	43(10)(A) to (F)
252(d)(2) introductory paragraph	41(b)(4) and (5)
252(d)(2)(i) to (iv)	44(4)(A) to (D)
252(d)(3)	45
252(e)	73(b)

While it might appear convenient at first glance that requirements for UST systems with field-constructed tanks are located in one place [40 CFR part 280 subpart K], in actuality, the federal rules require far more cross-referencing than the state rules because subpart K relies on other sections for many of the substantive requirements. In the federal rules [40 CFR part 280], in order to follow a requirement for a field-constructed UST you must start by pairing §280.10 and §280.251, then go back to the rest of the chapter, keeping in mind the caveats contained in §280.252.

In contrast to the way subpart K of the federal rules forces you to jump back to previous sections in different subparts to find the relevant material, in the proposed state rules, you turn

directly to the appropriate subject area to read how the requirements of that section apply specifically to field-constructed tanks. The effective dates covered in federal §280.251 are addressed in state §10 and the differences covered in federal §280.252 have been moved to the appropriate places throughout the state chapter. This new organization makes it clearer that the entire chapter 11-280.1, HAR, applies to field-constructed tanks and keeps all information about a particular topic together in one place.

While the department acknowledges that the different organizational structure of the federal and proposed state rules may make it somewhat more difficult to do a comparison between the two, this comparison has been done by the department and by EPA staff to ensure that the proposed state rules are at least as stringent as the federal rules, which is a requirement of state program approval under 40 CFR part 281. Table 2 should assist those interested in comparing the provisions relating specifically to field-constructed tanks in the federal and proposed state rules.

More importantly, it is far more critical to the effectiveness of these proposed rules that they be easier to use, implement, and enforce than that they be easily compared to their source material. We are confident that owners and operators, the department, and the public will find the new organizational structure of the proposed rules far more user-friendly and easily understood than the federal rules. For example, if you want to know the release detection requirements for field-constructed tanks storing over 50,000 gallons of petroleum, in the proposed state rules you need only look in subchapter 4 and particularly at §41(a), where the release detection requirements for *all* petroleum USTs are located. In contrast, the federal rules require you to read and understand how to combine 40 CFR §280.41(a) and §280.252(d)(1) to get the same information. The specifications for allowed release detection methods are in §43 in the proposed state rules. In the federal rules, they are located in both §280.43 and §280.252(d)(1).

The following table allows for a direct comparison of the release detection requirements for field-constructed tanks with capacities greater than 50,000 and installed before the effective date of the state rules, or federal installation cut-off date, as applicable.

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Table 3

State	Federal
<p>§41(a)(3) UST systems with field-constructed tanks with a capacity greater than 50,000 gallons: (A) Tanks installed before the effective date of these rules must be monitored for releases at least every thirty-one days using one of the methods listed in section 11-280.1-43(4), (7), (8), and (9) or use one or a combination of the methods of release detection listed in section 11-280.1-43(10)</p>	<p>§252(d)(1): ...Owners and operators of field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in subpart D (except § 280.43(e) and (f) must be combined with inventory control as stated below) or use one or a combination of the following alternative methods of release detection:..[252(d)(1)(i) to (vi)] [in subpart D] §41(a)(1): Tanks installed on or before April 11, 2016 must be monitored for releases at least every 30 days using one of the methods listed in § 280.43(d) through (i) except that: (i) UST systems that meet the performance standards in §280.20 or §280.21, and the monthly inventory control requirements in § 280.43(a) or (b), may use tank tightness testing (conducted in accordance with §280.43(c)) at least every 5 years until 10 years after the tank was installed; and (ii) Tanks with capacity of 550 gallons or less and tanks with a capacity of 551 to 1,000 gallons that meet the tank diameter criteria in § 280.43(b) may use manual tank gauging (conducted in accordance with § 280.43(b)).</p>

Comment #21: The proposed rules deviate from certain substantive requirements of the 2015 EPA UST rule revisions. [This comment was embedded in another comment about requirements for field-constructed tanks installed before the effective date of the proposed rules (see comment #20), so the department is understanding it to relate specifically to requirements for those tanks.]

Response: The substantive requirements in the proposed state rules that differ from the federal rules are either more stringent than the federal rules or apply the same requirement on a shorter timeline than the federal rules. The following table shows differences between the state and federal rules for field-constructed tanks installed before the effective date of the rules.

Table 4

State citation §11-280.1, HAR	Federal
§21(a)(2)(A) [moved from proposed §21(b)(2)(A)] effective immediately	Effective three years from the effective date of the rules, equivalent standards OR corrosion protection upgrade alternatives provided in §280.252(b)(1)(ii)
§21(a)(2)(B) [moved from proposed §21(b)(2)(B)] effective one year from effective date of the rules	Effective three years from the effective date of the rules
§21(c) [moved from proposed §21(d)(2)(B)] effective twenty years from the effective date of the rules	There is no federal requirement corresponding to the state requirement for secondary containment or alternative design upgrade
Subchapter 3 effective immediately <ul style="list-style-type: none"> • §36 effective one year from effective date of the new rules for all tanks 	Effective three years from the effective date of the federal rules
§33 Repairs to tanks, piping, secondary containment areas, and spill and overfill prevention equipment must be tested prior to return to use	Repairs must be tested within 30 days
§34(a) Notification of changes in tank information	There is no federal requirement corresponding to the state's notification requirements
§35(a)(1) Spill prevention equipment annual test	Equipment tested every three years
§37 Inspection and maintenance of UDC sensors	There is no federal requirement corresponding to the state's UDC sensor requirements
Subchapter 4 Release detection effective one year from the effective date of the rules	Effective three years from the effective date of the rules
§41(a)(3) Release detection options listed in 40 CFR §280.41(a)(1)(i) and (ii) do not apply to field-constructed tanks over 50,000 gallons (option (ii) would not apply anyway because it is restricted by tank size)	§41(a)(1)(i) and (ii) Release detection options for tanks installed prior to April 11, 2016: <ul style="list-style-type: none"> (i) Until ten years after tank installation, a tank meeting the performance standards and monthly inventory control requirements may use tank tightness testing every 5 years (ii) Tanks with capacity of 550 gallons or less and tanks with a capacity of 551 to 1,000 gallons that meet the tank diameter criteria in §280.43(b) may use manual tank gauging
§52(c) Report to department of release investigation that determined no release occurred	There is no federal requirement corresponding to the state's requirement for this report
§§61.1, 65.1, 65.2, 65.3 Release response	There are no federal requirements

action: posting of signs, notification of confirmed releases, quarterly release response reporting, site cleanup criteria	corresponding to the state release response requirements listed
Subchapter 8 Financial responsibility effective one year from the effective date of the rules	Effective three years from the effective date of the rules
Subchapter 10 Operator training effective one year from the effective date of the rules	Effective three years from the effective date of the rules
§244 Re-training of Class A and B Operators every five years, Class C Operators annually	There are no federal requirements corresponding to the state operator re-training requirements
Subchapter 12 Permitting requirements effective one year after the effective date of the rules	There are no federal requirements comparable to the state permitting process. The federal notification requirement (§280.22) is applicable three years from the effective date of the federal rules.

Comment #22: The Board of Water Supply does not support the twenty-year secondary containment deadline for field-constructed USTs set forth in the proposed §21(d)(2)(B). The potential impacts to the groundwater beneath field-constructed USTs, like those at the Red Hill Bulk Fuel Storage Facility, pose an unacceptable risk to our critical drinking water resources. DOH should shorten the twenty-year allowance for upgrading previously deferred systems with secondary containment to ten years.

Response: See response to comment #7.

Comment #23: The proposed §21(d)(2)(B) includes an exemption to the secondary containment requirement at the department’s sole discretion, without specifying the requisite level of justification for such a determination. The Board of Water Supply does not believe that a broad exemption to the secondary containment mandate should be included in state UST rules.

In the event any such exemption is to be retained within the regulatory framework, a requirement should be included that the administrative determination be justified with rigorous scientific, engineering, and risk analyses that clearly demonstrate that the alternative design meets or exceeds the performance associated with secondary containment devised and constructed in accordance with these or successor rules. In particular, it should be established that any alternate design results in an equivalent degree of human health and environmental protection and does not present a greater danger to human health or the environment.

Response: This comment is based upon the false premise that there exists a legal requirement that existing field-constructed tanks be retrofitted with secondary containment—there is no such requirement. In the federal UST rules, the only requirement for secondary containment is for new tanks installed after April 11, 2016. In §21(c) [moved from proposed §21(d)(2)(B)], the department is proposing to require tank design upgrades to field-constructed tanks installed

before the effective date of the rules, which may take the form of secondary containment, but this is a requirement which is more stringent than the federal rules. There are no national standards or federal requirements for retrofitting existing field-constructed tanks with secondary containment, internal lining, or tank upgrades other than cathodic protection (which the state already requires).

Broadly speaking, as a design concept, secondary containment is preferable to other potential upgrade designs, and it is defined generally by specifications already included in the rules (§24). For this reason, the department has chosen to include meeting the secondary containment standards in §24 as an option for upgrading field-constructed tanks in §21(c) that does not require specific departmental review. Any upgrade option that is selected for the Red Hill tanks, however, including secondary containment, will be subject to departmental and EPA oversight under the AOC. It is important to remember that §21(c) is not written exclusively for Red Hill and allows an option for upgrades to other field-constructed tanks that does not require extensive departmental involvement so long as the upgrade selected meets the definition of secondary containment in §24.

Secondary containment retrofits have not been done on the scale of the Red Hill tanks, so to require secondary containment as the only upgrade option for field-constructed tanks would have the undesirable regulatory effect of discouraging the development of other technologies and methods. Just as with any other upgrade design, if the Navy chooses secondary containment retrofits for Red Hill, they will actually have to figure out how to design and install a secondary containment retrofit for these tanks. The department is leaving open the possibility for the Navy to engineer an alternative solution—an upgrade design that the department deems adequately protective, or perhaps even superior to applying existing secondary containment technology to very large tanks for which this technology was not designed.

Because there is no standard for a secondary containment retrofit of large field-constructed tanks, nor have the design concepts that may be introduced via the AOC been fully developed, the department does not agree that measuring the “equivalency” of proposed upgrades to secondary containment serves a clear regulatory purpose.

See response to comment #41.

Comment #24: Proposed §21(d)(2)(B) allows the use of single-wall release detection systems for piping associated with field-constructed UST systems that are larger than 50,000 gallons. As with the tanks themselves, this exemption for large UST systems poses an unacceptable risk to drinking water resources as UST system piping is of equal or greater risk for a release. All piping that cannot be visually inspected, including piping in contact with soil or located within concrete cast against soil, should be upgraded with secondary containment on the same schedule required for the field-constructed tanks themselves.

Response: The department has chosen not to require secondary containment and interstitial monitoring for piping associated with field-constructed tanks with a capacity larger than 50,000

gallons, consistent with the federal regulations and EPA's determination that secondary containment and interstitial monitoring are not appropriate for this piping. 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. In effect, the department is adopting the EPA's clearly articulated position on the science and engineering related to this issue, which appears to be very well supported by the research available in the federal materials on this subject. [*Federal Register* at 80 FR 41566, pp. 41591-41596; 76 FR 71708 pp. 71715-71716, 71728-71730, 71733-71734]

Comment #25: Proposed §25 provides lists of published codes of practice, conformance with which “may be used to comply with” certain performance standards and requirements of the proposed rules. However, DOH itself has recognized that there is no existing industry standard for designing, constructing, or retrofitting large field-constructed USTs. DOH should provide its justification that the codes of practice referenced in §25(g) are sufficient performance standards under the circumstances present at and on the scale necessary for the RHBFSF [Red Hill Bulk Fuel Storage Facility]; otherwise, this provision should be deleted.

Response: The department has stated that we are unaware of established industry standards specifically for retrofitting existing large field-constructed tanks with secondary containment. The code of practice listed in §26(g) [moved from proposed §25(g)] is taken from the federal rules at 40 CFR §280.251(d) and may be used when designing, constructing, and installing new airport hydrant systems and UST systems with field-constructed tanks. The codes of practice at the end of subchapters 1 to 4 and 7 are not regulatory requirements themselves, but are provided as examples that may be used to meet the applicable requirements, in this case the performance standards in §20. These lists of codes of practice were updated by EPA when the federal UST regulations were revised in 2015, but they are not an exhaustive list of possible codes of practice that can be used to meet applicable requirements.

Comment #26: Given the considerable risk to human health and the environment, DOH should prohibit all requests for variances to allow large field-constructed USTs installed before the effective date of the new rule to remain in a single-walled configuration and operate without secondary containment. The language of proposed DOH rules §332 should be modified as follows:

Variances allowed. Provisions of chapter 342L, Hawaii Revised Statutes, and this chapter relating to USTs or tank systems which are more stringent than Title 40, part 280 of the Code of Federal Regulations, published by the Office of the Federal Register, as amended as of July 1, 2017, may be varied by the director in accordance with sections 342L-5 and 342L-6, Hawaii Revised Statutes, and this chapter; provided, however, that no variance shall be granted for UST systems with field-constructed tanks with a capacity greater

than 50,000 gallons to operate without secondary containment. No variance may be less stringent than the federal requirements.

Response: This comment again incorrectly assumes that there is a rule requiring secondary containment for all field-constructed tanks larger than 50,000 gallons. There is no such rule (see response to comment #23). In the federal UST rules, there is no requirement for secondary containment of tanks installed before April 11, 2016. In the proposed state rules, there is likewise no requirement for field-constructed tanks installed before the effective date of the rules to have secondary containment. UST system owners/operators would not need to request a variance to do something that is already permitted under state rules.

The department's authority to grant variances, which is derived from chapter 342L, HRS, is designed to enable the department to more effectively regulate USTs. The commenter's proposed modification to §332 limiting the department's regulatory authority would effectively substitute the Board of Water Supply's current preferences for the department's subject matter expertise and discretion. The department is not the object of these regulations, rather it is their enforcer and as such, and as a matter of public policy, will not adopt rules that would restrict the authority granted to it by the legislature. The statutes and rules regarding variances speak to the fact that, in a particular set of circumstances, granting a variance may be in the interest of public health and the environment and the department is the agency best equipped to make that determination. For further discussion on the subject of what a variance is and how it is properly used, see the response to comment #37.

Commenter: Katie Adamson, Aloha Petroleum

Comment #27: §35(a)(2)(B):

The containment sumps used for interstitial monitoring of piping are tested at least once every three years to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing in accordance with one of the criteria in paragraph (1)(B)(i) to (iii).

§35(a)(1)(B)(iii):

Requirements determined by the department to be no less protective of human health and the environment than the requirements listed in clauses (i) and (ii).

On page 11 of the Summary of Changes and Frequently Asked Questions (December 20, 2017) it states that, "To use option (iii), the department must have pre-approved the specific testing method." On March 19, 2018, Aloha Petroleum submitted an alternative test procedure for containment sump integrity testing to the State of Hawaii, Department of Health (DOH), Solid & Hazardous Waste Branch (Attachment 1). Aloha Petroleum requests approval to utilize low liquid level testing combined with a positive shutdown configuration as an alternative testing

method for containment sumps, as described in Attachment 1. [Attachment available in written testimony PDF.]

Response: See the response to comment #6.

Comment #28: §37(a):

Sensing devices for under-dispenser containment required by section 11-280.1-21(c) must:...

(3) Generate a record of the status of the under-dispenser containment and the sensor's proper operation at least every thirty days.

Not all under-dispenser containment sensors are electrically connected to the automatic tank gauge. These "stand-alone" under-dispenser containment sensors function by shutting down power to the specific dispenser when tripped by the presence of liquid. They do not generate a record of status or proper operation (i.e., sensor report, alarm report.) Under-dispenser containment sensors, including "stand-alone" sensors, are annually tested for functionality.

Response: See the response to comment #5.

Commenter: Melanie Lau

Comment #29: It concerns me that the 20 tanks at Red Hill are situated over the Halawa aquifer which supplies clean drinking water for people from Moanalua to Hawaii Kai. The Department of Health should continue to be a part of the task force charged with oversight of the Administrative Order on Consent regarding tank upgrades at Red Hill. I understand that repeal of chapter 11-281 and adoption of chapter 11-280.1 is mostly for "housekeeping" reasons, to align state regulations with updates to the US EPA federal UST program, but please be sure that the State does not give away its voice or control over field-constructed tanks (such as the Red Hill tanks) or the issue.

Response: The department shares these concerns about the tanks at Red Hill and is seeking to adopt the proposed rules as part of a larger effort to address them. The proposed rules will enable the department to retain its delegation as an EPA approved UST program under 40 CFR part 281 and are specifically designed to work in concert with the progress being made under the AOC.

This rulemaking includes new requirements that apply to the Red Hill tanks and makes certain existing requirements newly apply to the tanks (see Table 1 in response to comment #7). While the majority of the proposed rule changes follow updates to the federal UST program, the state rules are more stringent than the federal rules (see Table 4 in response to comment #21).

Comment #30: [The commenter suggested numerous questions regarding Red Hill for consideration by the Navy. The full comment can be found in the written comments PDF.]

Response: This comment does not directly address or suggest changes to the proposed rules, so the department is not providing a response.

Commenter: Department of Transportation

Comment #31: Request DOH develop a chart of requirements and deadlines to clarify and avoid confusion on when required actions are due or to be completed.

Response: The department will take this suggestion under advisement. The preparation of such a chart would require additional time and is not directly related to the development of the proposed rules.

Comment #32: §21(b)(2)(B) requires airport hydrant fuel distribution systems and UST systems with field-constructed tanks installed before the effective date of the rules to comply with the system performance standards under §20(d) not later than one year after the effective date of these rules. DOT requests the ability for State agencies to apply for an extension of the timeline for required upgrades.

Response: The State Department of Transportation (DOT) submitted this comment when they were unsure whether the Daniel K. Inouye International Airport (HNL) met the definition of a UST system. After department staff consulted with the State DOT and DOT Airports Division, a discussion between department staff and a representative of Hawaii Fueling Facility Corporation (HFFC), which operates HNL, confirmed that HFFC and the trade group Airlines for America (A4A) had already completed and updated an analysis of the tank and piping volumes at HNL and determined that less than ten percent of the system is underground. Therefore, the facility does not meet the definition of an airport hydrant fuel distribution system regulated under the proposed chapter 11-280.1. The department will retain the proposed effective date.

Comment #33: [The commenter provided numerous specific citations for sections where a change from “thirty” to “thirty-one” was recommended, mainly in §§41 to 44 pertaining to release detection and where the phrase “at least once every thirty days” is the required frequency of monitoring, in order to make these consistent with the walkthrough inspection interval of every thirty-one days. The full comment can be found in the written comments PDF.]

Response: See response to comment #18.

Commenter: Sierra Club of Hawaii

Comment #34: Thank you very much for incorporating our comment that the permitting timeframe for the Red Hill fuel tanks should be reduced. The new proposed rules reduce the timeframe from three years to one year for receiving a new permit on existing facilities that were previously exempted from permit requirements (§10(a)(1)(A)). This is an important and meaningful improvement from our perspective.

Response: Thank you. The department agrees that one year allows sufficient time for permit applications to be submitted and reviewed.

Comment #35: We are seeking the following change in the newly proposed version of the regulations in §21(d)(2)(B):

Not later than ~~twenty~~ ten years after the effective date of these rules, tanks and piping installed before the effective date of these rules must be provided with secondary containment that meets the requirements of section 11-280.1-24 or must utilize a design which the director determines is protective of human health and the environment.

- I. Ten years is a reasonable timeframe for compliance
- A. Risk to water supply is significant

The underground storage tanks at Red Hill continue to pose a serious threat to the aquifer. Each of the active underground storage tanks at the Red Hill Bulk Fuel Storage Facility can store up to 12.5 million gallons of fuel. Well-over one hundred million gallons of petroleum products are stored there at any given time. Failure to take immediate protective action is unreasonable.

Response: See response to comment #7.

Comment #36: We are seeking the following change in the newly proposed version of the regulations in HAR §11-280.1-21(d)(2)(B):

Not later than ~~twenty~~ ten years after the effective date of these rules, tanks and piping installed before the effective date of these rules must be provided with secondary containment that meets the requirements of section 11-280.1-24 or must utilize a design which the director determines is protective of human health and the environment.

- I. Ten years is a reasonable timeframe for compliance
- B. Timeframe consistent with Administrative Order on Consistent

In the AOC, paragraphs 8(b)(iii), 11, and 18(d) make clear that the Navy should anticipate new federal and state regulations for field-constructed underground storage tanks that will impose

new requirements on the Red Hill facility, consistent with the AOC.

The Health Department can impose a faster timeline because the AOC dictates only a final deadline of 22 years from the effective date. The Statement of Work provides that:

“implementation [of the AOC] will occur in phases so that all Tanks in operation will deploy [Best Available Practicable Technology], as approved by the Regulatory Agencies, within twenty-two (22) years.” Statement of Work, Red Hill Administrative Order on Consent, page 1 (emphasis added).

There is nothing in the AOC or Statement of Work that forbids the Red Hill Facility from being upgraded prior to the 22-year deadline.

Adopting regulations with the requirement for secondary containment in 10 years does not violate or jeopardize the AOC. Quite the opposite, adopting this timeframe in these regulations gives the Navy the kind of urgent justification needed to secure the necessary funding and expertise from the Department of Defense to either quickly upgrade the existing tanks or, if that is not possible, then begin the process of an orderly relocation of the fuel to a safer facility.

Response: The commenters are correct that the AOC does not limit the department’s rulemaking authority. The AOC was signed after EPA’s 2015 update to the federal UST rules was published in the *Federal Register*, so both the department and the Navy were aware at the time that state’s rules would need to be updated by October 13, 2018 [40 CFR §281.51(a)]. State rules must be no less stringent than the federal UST rules, and the 2015 federal rules include many new requirements for field-constructed tanks (and for all UST systems). The AOC language regarding new regulations is there simply to acknowledge the department’s existing authorities and responsibilities to make changes to the state UST rules.

The department respectfully disagrees that requiring upgrades to be completed within ten years is appropriate and would have no impact on the Navy’s compliance with the AOC. The department determined in 2015 that the timeline contained in the AOC is an appropriate schedule for completion of upgrades to all the Red Hill tanks because it accurately reflects reasonable estimates of the time necessary to implement them. The financial implications and physical challenges associated with tank upgrades have not changed. The Navy is already working to comply with specific deadlines for deliverables under the AOC Statement of Work.

Section 3 in the AOC Statement of Work (“Tank Upgrade Alternatives” (TUA)) provides for departmental oversight of the development of alternatives—a process which is already underway—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. The scoping, reporting, and decision meetings required under the AOC give the department and the EPA more opportunities to oversee and influence the Navy’s process, but also take more time than the Navy deciding and implementing a TUA on its own. The department believes that setting a new, dramatically shorter timeline than that agreed to in the

AOC significantly reduces the likelihood that the Navy would continue to implement the full scope of objectives outlined in the AOC Statement of Work.

The observation that “[t]here is nothing in the AOC or Statement of Work that forbids the Red Hill Facility from being upgraded prior to the 22-year deadline” ignores the entire purpose of the AOC, which was to create an enforceable deadline. The AOC permits the Navy to expedite work if it is able. It does not, however, envision the department unilaterally, and without justification, shortening the time the Navy was given to complete the tasks it agreed to perform. The Navy is well aware of the urgency conveyed in the many public comments the department received regarding Red Hill, including those which did not address the proposed regulations. The department expects many of the tanks to meet the upgrade requirements of §21(c) [moved from proposed §21(d)(2)(B)] well before both the AOC deadline and the regulatory deadline, but believes that twenty years is a reasonable timeline for upgrades to *all* of the tanks to be completed.

Comment #37: We are seeking the following change in the newly proposed version of the regulations in HAR §11-280.1-21(d)(2)(B):

Not later than twenty years after the effective date of these rules, tanks and piping installed before the effective date of these rules must be provided with secondary containment that meets the requirements of section 11-280.1-24 or must utilize a design which ~~the director determines is protective of human health and the environment~~ results in an equivalent degree of human health and environmental protection and does not present a greater danger to human health or the environment.

II. Variance language should match state law

State law provides the department with narrow discretion to allow alternatives to the specific requirements detailed in its regulations.

§342L-5, Hawaii Revised Statutes (HRS) states:

Variations allowed. Provisions under this chapter deemed more stringent than the federal rules established under Subtitle I of the federal Resource Conservation and Recovery Act, as added by the federal Hazardous and Solid Waste Amendments of 1984, may be varied by the department, when the variance results in an equivalent degree of human health and environmental protection and does not present a greater danger to human health or the environment.

The regulations cannot go beyond this statutory language. Adopting our proposed changes to regulations better reflects the department’s statutory authority for granting a variance for underground storage tanks via §342L-5, HRS.

Response: This comment confuses the statutory limitations on the department’s authority to issue variances [§342L-5, HRS] with the department’s authority to adopt rules [§§342L-3 and

342L-32, HRS]. The requirements in §21(c) [moved from proposed §21(d)(2)(B)], which involve upgrades to field-constructed tanks, constitute a rule and are therefore subject only to the statutory limitation on the department's rulemaking authority [§§342L-3 and 342L-32]. A variance, in contrast, is permission issued by the department to an owner or operator of a UST "authorizing the installation or operation of an underground storage tank or tank system in a manner deviating from full compliance with applicable standards" (i.e., the state rules) [§342L-6(c), HRS]. The department's rules, including §21(c), are not variances and thus are not subject to the limitations in §342L-5, HRS, in the manner suggested in this comment.

The equivalency standard in §342L-5, HRS, properly understood, compares the state rules with the federal rules. The department's discretion to issue a variance is limited to instances where the allowed deviation from the state rule, as compared to its federal counterpart, "results in an equivalent degree of human health and environmental protection" [§342L-5, HRS]. This standard places a limitation on the department's authority to issue variances, not the department's authority to adopt rules (this general authority is granted by §§342L-3 and 342L-32, HRS). The requirement in §21(c) that the commenter suggests rewording has nothing to do with the issuance of variances. Consequently, the equivalency standard for variances in §342L-5, HRS, is entirely inapplicable.

Furthermore, it is important to note that, to the extent that this comment is asking the department to draft §21(c) in view of the variance language in the statute, those variance provisions require the department to make a comparison between the state and federal rules and there is no federal requirement that corresponds to the upgrade requirement in §21(c). See response to comment #23.

Comment #38: We are seeking two changes in the newly proposed version of the regulations in HAR §11-280.1-21(d)(2)(B):

Not later than ~~twenty~~ ten years after the effective date of these rules, tanks and piping installed before the effective date of these rules must be provided with secondary containment that meets the requirements of section 11-280.1-24 or must utilize a design which ~~the director determines is protective of human health and the environment~~ results in an equivalent degree of human health and environmental protection and does not present a greater danger to human health or the environment.

III. Impose stricter requirements to protect water resources

The Navy has demonstrated that it can adapt to our high expectations to protect the environment. The U.S. Navy can and will do whatever is necessary to fulfill their mission and comply with state and federal law. We need to set high expectations for the Navy so we can guarantee O'ahu's water resources are fully protected for the long-term.

Response: See response to comments #7, #23, and #36. The department's approach to regulating the Navy's UST system at Red Hill takes into consideration the fact that one of the

federal laws governing federal facilities is a provision in the Resource Conservation and Recovery Act [42 United States Code §§6961(a) and 6991f(a)] that authorizes the President of the United States to exempt federal facilities, such as Red Hill, from both state and federal UST rules under certain conditions. The AOC is effective precisely because the Navy agreed to abide by its terms and is enforceable pursuant to those terms. The terms and conditions of the AOC acknowledge the physical and operational constraints present at Red Hill and the limitations of federal procurement and applicable funding mechanisms. The department's proposed rules reflect these considerations.

Commenter: Steve Jackson

Comment #39: The Hawaii Legislature indicated that Hawaii rules should be equal to federal rules. Please adopt rules identical to federal rules.

Response: The department's rulemaking authority in §342L-3 and §342L 32 does not limit the department's discretion to only being "equal" to the federal rules. Federal rules [40 CFR part 281] require the state UST rules to be no less stringent than the federal UST rules [40 CFR part 280], and specifically allow that state rules may also be more stringent than the federal rules. The state rules are already more stringent than the federal rules in several areas, such as permitting requirements. The proposed chapter 11-280.1 includes additional state rules which will be more stringent. For example, several of these differences are discussed in the "Rationale and list of changes" (at <http://health.hawaii.gov/shwb/ust-har/>) and in the responses to comments #12, #14, and #21. The department is confident that the ways in which the proposed state rules are more stringent than their federal counterparts is consistent with its legislative mandate to protect public health and the environment.

The following comments were given verbally at the public hearing on May 31, 2018. The comments have been summarized. Full comments can be found in the hearing transcript PDF.

Commenter: Erwin Kawata, Honolulu Board of Water Supply

Comment #40: [Commenter read from Board of Water Supply written comments. See comments #20 to #26.]

Response: See response to comments #20 to #26.

Commenter: David Kimo Frankel, Sierra Club

Comment #41: The focus of my comments is narrow, dealing with field-constructed tanks and that section of the rules, which is §21(d)(2)(B). More than 25 years ago, the legislature required the Department of Health to enact rules that required existing underground storage tanks be replaced or upgraded by December 22nd, 1998. And rather than doing that the Department of Health is proposing to allow the Navy until 2038, forty years after the legislative deadline.

Response: This comment appears to be based on a misunderstanding of the term upgrade. The legislative requirement the commenter refers to is in §342L-32(b)(3), HRS:

Existing underground storage tanks or existing tank systems shall be replaced or upgraded not later than December 22, 1998, to prevent releases for their operating life.

The language from the state statute above is taken directly from the federal requirement for state program approval in 40 CFR §281.31, “Upgrading existing UST systems,” which prior to 2015, read:

In order to be considered no less stringent than the corresponding federal upgrading requirements, the state must have requirements that ensure existing UST systems will be replaced or upgraded before December 22, 1998, to prevent releases for their operating life due to corrosion, and spills or overfills.

The upgrades referred to in 40 CFR §281.31 are those listed in §280.21 of the federal UST rules (§280.21 is also called “Upgrading of existing UST systems”) and pertain only to corrosion protection and spill and overflow prevention equipment.

The state UST program is an EPA-approved program, meaning the state rules must be at least as stringent as the federal rules so they can be approved by EPA to apply in lieu of the federal rules. The proposed requirement for existing field-constructed tanks to be upgraded with secondary containment or alternative tank and piping design that the commenter refers to [§21(c), moved from proposed §21(d)(2)(B)] has no counterpart in the federal requirements. No such upgrades are required for any tanks under the federal rules, nor have they ever been. In the federal rules, from which the state statutory language derives, “upgrade” means adding corrosion protection and spill and overflow prevention equipment to already installed UST systems.

The following table summarizes the upgrades required by the federal UST rules and how these apply to field-constructed tanks and approved state UST programs.

Table 5

Version of federal rules	1988	2015
Required upgrades	<ul style="list-style-type: none"> • Corrosion protection for tanks and piping [§280.21(b) and (c)] • Spill and overfill prevention equipment [§280.21(d)] 	<ul style="list-style-type: none"> • Corrosion protection for tanks and piping [§280.21(b) and (c)] • Spill and overfill prevention equipment [§280.21(d)]
Does requirement apply to field-constructed tanks?	No [§280.10(c)(5)]	Yes, with some differences <ul style="list-style-type: none"> • Corrosion protection for tanks and piping [§280.252(b)(1)] • Spill and overfill prevention equipment [§280.252(b)(2)]
Requirements for approved state programs	Upgrade requirements must apply by December 22, 1998, but do not apply to field constructed tanks	Upgrade requirements for field-constructed tanks must apply by October 13, 2021

In order to better distinguish between upgrades to existing (already installed) UST systems and requirements for new tanks or UST system components at the time of installation, the department is moving the proposed §21(c), 21(d)(1)(A), and 21(d)(2)(A) to §§25, 20(g)(1), and 20(g)(2), respectively. These requirements apply to new tanks, piping, and dispenser systems at the time of installation. So, while the requirements remain the same, the movement of these requirements will make it more obvious that the concept of “upgrades” applies only to existing UST systems. Requirements that apply to new tanks or UST system components at installation are a separate portion of the rules and should not be thought of as being upgrade requirements.

Comment #42: There is a standard in the new rule that is not as strict as the state statute that allows the Red Hill tanks to avoid secondary containment. The standard articulated in the proposed rule is that whatever they do is protective of human health and the environment. That standard is inconsistent with the statutory provision in §342L-5 [Hawaii Revised Statutes] and therefore is invalid.

Response: See response to comment #37.

Commenter: Alan Burdick, Sierra Club

Comment #43: I want to express concern that this is nominally a 20-year project. I expect that deadline will slip as all deadlines seem to slip. My concern is that you [Department of Health] are our only eyes and ears under our funny sort of federalism under our environmental laws. I ask that you ensure that these regulations require the Navy to provide you in a timely manner

all plans, communications between the Navy and the Pentagon and anyone else, all actual budgets, all actual funding, all contracting information, and all reports of actual work every step of the way with complete transparency throughout the this purported 20-year project. We want complete transparency. We want complete accountability. We do not want surprises. We don't want to be told 20 years from now that, "Oh no, no real progress has actually happened." You are our eyes and ears. You need to be our eyes and ears. You are the only ones who can hold the Navy accountable.

Response: See response to comment #7.

Commenter: Nathan Yuen, Sierra Club

Comment #44: So arguably in 1992 when the state legislature instructed the Department of Health to develop administrative rules, had things been done on time by 1998, and had sufficient time passed for the Navy to actually upgrade the tanks, which was a period of 6 years, arguably in 2014 that leak could have been stopped or could have been prevented. So to continue to provide even more time for the upgrade to occur, another 20 years, presents way more risk than we can afford. The aquifer at Pearl Harbor developed over hundreds of thousands, if not millions, of years and it's an irreplaceable resource for our islands. So I would like to see the tanks not be there at all, in fact moved to another location, but it's really a matter of money, and whether the federal government has that money or has the will to do that. Short of that, I think we need the double storage tanks.

Response: See responses to comments #7, #23, and #41.

Commenter: Jun Shin, Sierra Student Coalition

Comment #45: As an 18-year-old, in twenty years I'll be 38 years old and I really don't want to wait until I'm 38 to be dealing with this. By then I expect to have kids, or at least plan to have kids, and so I don't want to be in a position where I have to have my kids deal with this problem. And so I hope to see some action right now.

Response: See response to comment #7.

Commenter: Marti Townsend, Sierra Club

Comment #46: As the other testifiers have noted, 20 years is too long. The way the regulations were written previously was inconsistent with the statutes. Department of Health granted basically an exception to all field-constructed tanks and as a result of that, these tanks are not up to snuff as they should be and we are now handing the next generation a problem that they may not be able to solve. The challenge before us today here is to try and address it now as

opposed to pushing it off, pushing it down another 20 years. We've advocated for ten years as a reasonable expectation.

Response: See responses to comments #7 and #41.

Comment #47: I want to emphasize that requiring in the rules consistency with secondary containment, compliance with the expectations for all other underground storage tanks, requiring that sooner than 20 years is not inconsistent with the Administrative Order on Consent for Red Hill. This is because the way the order is written, it sets the 20-year deadline as a far-out deadline, it says that action shall be taken within that period.

Response: See response to comment #36.

Commenter: Katie Adamson, Aloha Petroleum

Comment #48: [Commenter summarized written comments submitted. See comments #27 and #28.]

Response: See responses to comments #27 and #28.

Commenter: Colleen Soares, Sierra Club

Comment #49: Department of Health and the Board of Water Supply both in the last few months have put out some fairly detailed letters, which you can see on their websites, asking the Navy to actually do what they said they would do, to share documents with the Department of Health and the Board of Water Supply. Board of Water Supply says, "we continue to ask the Navy distribute meeting handouts and other information documents two weeks prior to the start of each meeting," and that stakeholders—us—are afforded the opportunity to thoroughly review materials ahead of time. "And we also request that the Navy and its contractors provide copies of all materials disclosed at the meeting that they committed to share with subject matter specialists." That hasn't been done as far as I know.

On the Board of Water of Supply website there's a six-page letter wherein they detail many of their objections having to do with the process of the study itself. They're questioning AECOM. I come guess AECOM is the main engineering facility that is in charge of this. It appears that the Department of Health is questioning their reliability, their substantiability about doing the study itself.

Response: This comment does not directly address or suggest changes to the proposed rules, so the department is not providing a response.

Commenter: Alison Bhattacharyya, Sierra Club

Comment #50: I'm here as a cancer survivor and a mother of three kids, very concerned about the water quality. I look at the timeline, 2014 was the original leak. 2015 I got a letter from Earnest Lau saying, "did you guys know this is happening?" Which I didn't. And immediately got sort of involved and agitated about the Red Hill fuel tanks. Now we are at 2018, we're still deciding on which is the correct, most optimal solution and it's, according to the Board of Water Supply, they must be double-lined which is, I think, option six. So it's taken us four years to get to where we already know what's the best and safest optimal solution is. Presumably we can't shut them down. I think that's taken a really long time. I think there is not this sense urgency and I guess we're relying on the Department of Health to hold their toes to the fire and put some urgency into solving this problem.

Response: See response to comments #7 and #23.

Comment #51: [The commenter addressed some questions to the Navy about whether it is possible to reduce the amount of fuel stored at Red Hill.]

Response: This comment does not directly address or suggest changes to the proposed rules, so the department is not providing a response.

Commenter: Melodie Aduja, Democratic Party

Comment #52: The Democratic Party, Oahu County, has passed a resolution requesting and urging that the United States Navy retrofit the 20 tanks at Red Hill with double-walls or relocate the jet fuel within five years.

Response: This comment does not directly address or suggest changes to the proposed rules, so the department is not providing a response.

Commenter: Kimiko Lattaela Walter, Sierra Club

Comment #53: I'm a water drinker like all of you. I have a four-year old daughter, I live on the south shore of Oahu, like many of you. The concern for me is that these tanks have been violating state law for a couple of decades now, I think that was established. So the fact that we have to wait another 20 years feels to me like kicking the can down the road, waiting until the very last minute. So I just want to go on the record as saying I appreciate all work the Department of Health has done and the other agencies that are involved, but I do think that 20 years is too long for us to wait where every day there could be another, man-made or not, mistake where we have thousands, tens of thousands of gallons leaking into our environment. For me this is unacceptable. So please shorten the timeline.

Response: See responses to comments #7 and #41.

Commenter: Robinah Gibola, Sierra Club

Comment #54: When it comes to water what I've been questioning is why are we not finding a solution faster? Looking back from where I come from, in northern Uganda, we have a water crisis and the leaders are not doing anything because we don't have the money, we don't have the technical support. But the fact that being here in Hawaii, the resources are there, we have the technological people to do something and 20 years is actually too much.

Response: See response to comment #7.

Commenter: Liz Bogdanski

Comment #55: [Commenter summarized written comments submitted. See comment #18.]

Response: See response to comment #18.

Commenter: Jodie Malinoski, Sierra Club

Comment #56: I had the opportunity to do a round of outreach on Red Hill at some of the neighborhood boards that would be directly affected if the water were to become contaminated and I just wanted to report back that nine neighborhood boards did pass a resolution to urge the Navy to upgrade their tanks in a way that is more protective of our water.

Response: This comment does not directly address or suggest changes to the proposed rules, so the department is not providing a response.