



# Tank Talk



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## EPA publishes new UST rules



For the first time since 1988, the Environmental Protection Agency (EPA) has reviewed and revised the regulations regarding the maintenance, operation and testing of regulated underground storage tanks.

Three years in the making, the rewrite made significant changes in several areas. The State of Rhode Island has been proactive in the management of its UST program, with many of the EPA's new requirements already included in the Rhode Island UST regulations. The UST Section of Waste Management will review the current state UST regulations to ensure compliance with all EPA updates, most of which have a three-year period for state implementation.

The most critical of the EPA's changes are as follows:

### Periodic walk-through inspections:

Facility owners/operators must conduct 30-day frequency inspections of their UST systems. This includes review of fill pipes, spill

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*Many of the EPA's new requirements are already included in Rhode Island's UST regulations.*

buckets, line leak detectors, continuous monitor systems and interstitial monitoring probes. Tank sumps are now required to be opened and inspected annually by the owner/operator to check for leaks, damage and debris.

**Overfill protection equipment:** Owners/operators must have overfill prevention devices.

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### Countdown

**844 days**

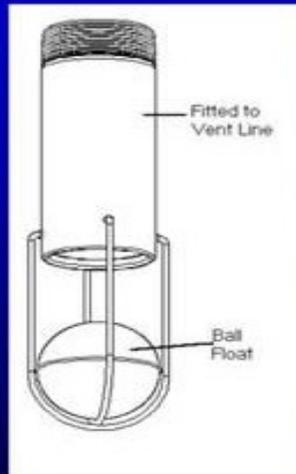
remain between September 1, 2015 and Dec. 22, 2017. Dec. 22, 2017 is the deadline for the permanent closure of most single-walled federally regulated UST systems.

### Fast Fact

The national Underground Storage Tank program started when the United States Congress passed Subtitle I to the Solid Waste Disposal Act in 1985. To implement the act, the EPA created the Office of Underground Storage Tanks. Its two primary areas of responsibility are compliance/inspection and leaking underground tanks.

### Publication Info

*Tank Talk* is a periodic newsletter produced by the Office of Waste Management. If you have comments about the content or suggestions for stories, please send them to us at [dem.tanktalk@dem.ri.gov](mailto:dem.tanktalk@dem.ri.gov).



**Ball float overfill protection devices will no longer be permitted in new USTs under the new EPA regulations published in June 2015.**



Bradford Kendall Illustrations, Inc.

## Ask Tank Dawg!

**Q:** A house we recently purchased has a buried heating oil tank. We don't want to use the tank. What should we do?

**A:** USTs that are no longer in use generally require permanent closure. A single-family residence with a heating oil UST that has a capacity of less than or equal to 1,100 gallons should contact a tank removal contractor to start the process. Unless a spill is suspected, RIDEM will not be involved. All other tanks require RIDEM involvement. Thus, owners of all other tanks should make sure that their contractors obtain approval in writing from RIDEM's UST Program before removing the tank.

*Do you have a question for Tank Dawg? Send it to [dem.tanktalk@dem.ri.gov](mailto:dem.tanktalk@dem.ri.gov).*

# Meet Bradford Kendall

Local artist creates mascot for UST Program

*Tank Talk* had the pleasure of interviewing Bradford Kendall, the creator of Tank Dawg. Here's what he had to say.

**Q: Where were you born?**

**A:** Norwalk, Conn.

**Q: How long have you lived in Rhode Island?**

**A:** I moved here in 1973, so 42 years.

**Q: Where did you go to college and what is your degree?**

**A:** Rhode Island School of Design, BFA Illustration, 1978

**Q: Have you always wanted to be an artist?**

**A:** Yes

**Q: What types of projects have you done?**

**A:** I work in advertising, supplying agencies with pre-production art. That includes television storyboards and layouts for their ad campaign presentations. I also illustrate for children's books, CD covers, magazines, etc. I also produce my own personal artwork.

**Q: What has been your favorite project?**

**A:** Anytime I have the time to do my own personal artwork.

**Q: Who is your favorite artist and why?**

**A:** For my personal work, it's the surrealists, Max Ernst and Salvador Dali, for their mind-expanding imagery. For my advertising work, it's the commercial artists of the 1940s and 1950s. Before photography took over, everything was drawn and painted. Those guys were masters of their craft. The original artist



Bradford Kendall

for Prince Valiant, Hal Foster, for his pen and ink work.

**Q: Where have you worked?**

**A:** I was an art director from 1978-1983 at an agency in Providence called "Creamer Inc." In those days, Providence had a very vital ad scene. Those were my "Mad Men" days. In 1983, I formed my own company, Bradford Kendall Illustrations, Inc. and have been working ever since.

**Q: What is most challenging about your career?**

**A:** To be able to produce my best work within a given deadline.

**Q: Where do you see yourself in 20 years?**

**A:** Still at my drawing board, doing what I love.

Visit [www.bradfordkendall.com](http://www.bradfordkendall.com) for more on Bradford Kendall.

## New UST rules .....Continued from Page 1

es inspected at least once every three years. Nationally recognized test methods must be used.

**Spill containment:** Owners/operators must test spill prevention equipment at least once every three years. The regulation includes vacuum, pressure and liquid testing as methods for testing spill prevention equipment.

**Emergency power generators:** EPA eliminated the deferral for release detection for USTs serving emergency power generators. These systems now must meet the same release detection criteria required for other regulated USTs.

**Ball float valves eliminated:** EPA now prohibits the use of ball float valves in all new and modified UST systems. These

flow restriction devices have a history of field problems and can cause pressurization of tanks when in use.

**Fuel compatibility requirements:** EPA has always required that UST systems be made of or lined with materials compatible with the substance stored. Now, when a facility switches to a regulated substance containing greater than 10 percent ethanol or 20 percent biodiesel, UST owners and operators must notify the implementing agency of the impending switch 30 days prior.

For further details on the EPA's revisions, visit the EPA website at [www.epa.gov/oust](http://www.epa.gov/oust).

# DIGGING UP THE PAST

by Angela Harvey  
UST Management Program



The Ocean House in Westerly

It's not often that a couple of underground storage tanks spark archeological interest. But that's exactly what happened when contractors in 2007 unearthed two unusual tanks during the redevelopment of the Ocean House resort, located in the Village of Watch Hill in Westerly.

Engineers for GZA GeoEnvironmental, Inc. oversaw the closure of the tanks. The tanks, which were buried about 5 feet below grade, were constructed of metal with riveted and welded seams, suggesting an older vintage. The tank interiors contained what GZA described as a wood and burlap lattice. Laboratory analyses of the tanks' contents suggested that the tanks last contained gasoline. GZA estimated the capacity of the large tank at 1,200 gallons and the small tank at 720 gallons.

On one tank, a GZA engineer observed a small metal plate identifying the tank's manufacturer as the "Springfield Gas Company." The manufacturer's name, along with four patent dates stamped into the metal plate, eventually led to the identification of the USTs as compo-

nents of two "Springfield gas machines" -- gas generation systems that powered the Ocean House's lighting fixtures from the late 1800s until electrical service became available in the early 20<sup>th</sup> century.

Archaeologist and author Donald Linebaugh, Ph.D., is an associate professor in the School of Architecture, Planning, and Preservation at the University of Maryland, and director of the historic preservation program. An expert on the history and operation of the Springfield gas machine, Dr. Linebaugh identified the unearthed tanks as Springfield gas machine generators.

"The generator (found at the Ocean House) is typical of the buried generator system," explains Dr. Linebaugh. "Air was pumped from the basement of the house to the buried generator, which was filled with gasoline. It was a stacked generator with pans that held gas and had the burlap for wicking up the gasoline. The air from the air pump moved across the pans and wicks and picked up gas vapor, and then was pumped into the house and burned in gas fixtures attached to the walls."

"A 750-gallon generator was rated at 500 burners," he continues. "This was a fairly typical size for a modest hotel complex. The famous resort hotel in Florida, The Royal Poinciana, had a system that ran 3,000 burners. Mt. Holyoke College in Massachusetts had a system that lit 2,000 burners and held 8,000 gallons of gas. It was removed for remediation a few years ago, when we discovered it still intact under their outdoor amphitheater."

According to Dr. Linebaugh, four Watch Hill hotels boasted Springfield gas machines. Of these, only the Ocean House still stands. As to the fates of the other gas machines? That's a mystery that likely will remain buried in the past.



(Above) — One of two Springfield gas machine generators unearthed during the redevelopment of the Ocean House.

(To the right) — Both tanks contained what appeared to be a "wood and burlap lattice" and residual gasoline.

Tank photos courtesy of GZA GeoEnvironmental



For more information on Dr. Linebaugh and Springfield gas machines, check out Dr. Linebaugh's bio at <http://www.arch.umd.edu/hisp/faculty/donald-linebaugh> and his book, "The Springfield Gas Machine: Illuminating Industry and Leisure, 1860s-1920s."

# The Waste Pile

More  
News from the  
Office of Waste Management

## OWM introduces Historical Ag Use Policy

RIDEM's Office of Waste Management has introduced a new policy that provides streamlined, practical, and economically feasible options for managing historically agricultural properties while maintaining RIDEM's overall mission of protecting human health and the environment.

Known as the "Historical Agricultural Use Policy" for short, the "Guidelines for the Management of Historically Agricultural Properties for Future Use as Open Space and/or Recreational Land" were developed in collaboration with the Rhode Island Society of Environmental Professionals



photo by Steve Scandariato

and finalized in September 2014.

The policy's key points are as follows:

- it applies only to former agricultural

lands that have never been developed or used for any other purposes;

- it addresses four contaminants of concern – arsenic, lead, dieldrin and chlordane – attributable to proper pesticide application;
- it allows for three land reuse options -- open space not intended for recreational use, passive recreational use, and active recreational use – with specific conditions and pre-approved remedial options for each;
- it contains prescriptive guidelines for the required *Site Investigation Report* and *Remedial Action Work Plan*.

Site areas with other contaminants at concentrations above regulatory limitations must be managed through the traditional site remediation process as directed in the Remediation Regulations.

The Historical Agricultural Use Policy can be found on the RIDEM website (link shown below). Questions regarding the use of this policy can be directed to Ashley Blauvelt or Matt DeStefano at the following email addresses:

[ashley.blauvelt@dem.ri.gov](mailto:ashley.blauvelt@dem.ri.gov)

[matthew.destefano@dem.ri.gov](mailto:matthew.destefano@dem.ri.gov)

### Commonalities drive policy creation

Recognizing that lands formerly used for farming often ran into similar issues when trying to comply with the Remediation Regulations, the Rhode Island Society of Environmental Professionals and the Office of Waste Management teamed up to take a closer look at former agricultural lands that had gone through the site remediation program.

The study consisted of an evaluation of soil sampling data collected from 15 historically agricultural sites. The data revealed that these sites most commonly were impacted by elevated concentrations of arsenic, lead, dieldrin, and/or chlordane attributable to the historic, proper application of pesticides. The data further indicated that exceedances of the regulatory criteria for these contaminants typically were not significant.

Based on these findings, the team concluded that these four contami-

nants, when present on historically agricultural lands, could be managed similarly to the rules for arsenic in Section 12.0 of the Remediation Regulations. That is, if RIDEM allowed for the averaging of soil sample data in conjunction with "hot-spot" removal and the recording of an Environmental Land Usage Restriction, most historically agricultural sites could be managed easily and reused safely as open or recreational spaces while remaining in compliance with the Remediation Regulations, without the cost of capping an entire multi-acre site.

Given that a major hurdle to bringing these sites into compliance has been the cost associated with remediating sites that are typically very large, the OWM and RISEP believe that the Historical Agricultural Use Policy now provides responsible parties and municipalities with practical and financially feasible reuse options for historically agricultural lands.

<http://www.dem.ri.gov/programs/benviron/waste/pdf/aghisgui.pdf>