

UTAH TANK NEWS

Winter
2021

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Potential for Regulatory Oversight of Aboveground Storage Tanks

by Mark Crim and Morgan Atkinson

In August 2020, the State Auditor General completed its In-Depth Budget Review of the Department of Environmental Quality. In one of three key findings, the audit declared that aboveground storage tanks (ASTs) are not regulated and may pose environmental risks.

Moreover, the audit recommended that the Division of Environmental Response and Remediation (DERR) should work with the Legislature as they review and consider some degree of regulation for ASTs.

The non-regulated status of ASTs has been a topic of discussion since the release of 40 CFR Parts 280 and 281, in 1988. Those rules were designed for underground storage tanks (USTs) only, leaving other petroleum containment systems, such as ASTs, unregulated. For many stakeholders in the petroleum industry it has often seemed odd that the very petrochemicals we are all concerned about, are managed differently depending on how they are stored, even though the risks are similar.

The finding of the audit recognized the risk to human health and the environment posed by petroleum ASTs. Within the State of Utah we have experienced multiple releases of petroleum from ASTs, and in many cases the entity responsible did not have insurance or the finances to be able to clean up the resultant contamination. This history was in part the basis for auditors suggesting that some level of AST oversight is needed to bring about a reduction in environmental risks. As the members of the Utah legislature consider the appropriate response to the recommendations of the audit, the DERR will work to provide accurate and relevant information to assist them in crafting policy through legislation. If a bill is passed to regulate ASTs, the DERR will continue to work with stakeholders to develop a program that meet the requirements of the legislation while balancing the needs of industry and the citizens of the state.

In comparing the regulated requirements for USTs to that of ASTs, the following chart shows the current status of regulations for each petroleum containment system.

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UST Requirements Compared to AST Requirements in Utah

Underground Storage Tanks	Aboveground Storage Tanks
\$1 million of financial assurance required for release cleanup	No financial assurance required, but AST owners may voluntarily participate in the DERR's Petroleum Storage Tank Fund
Specific requirements for release reporting, investigation, and cleanup	Reporting and cleanup required if the groundwater has been impacted or threatened
Release prevention and release detection requirements consisting of: <ul style="list-style-type: none">• Operation and maintenance standards• Routine system testing and monitoring• Regular Compliance Inspections	Spill control dikes are required, but other release prevention or release detection methods are not; and there are no compliance inspections

ASTs have been able to voluntarily participate in the Utah Environmental Assurance Program (also known as the PST Fund) for many years, though participation has been low. Some of the requirements for participation are:

- site assessment, including collection and analysis of environmental samples
- pass line tightness test and leak detector tests (annually)
- pass tank tightness test (every five years)
- pay applicable fees
- meet the requirements of the Utah Fire Code, which requires additional construction and operating standards.

We will likely know more about what AST regulation may look like in the State by March 5th, when this year's legislative session ends. It seems likely that some form of State AST oversight is on the horizon. To read the whole audit that initiated this recommendation, *An In-Depth Review of the Department of Environmental Quality*, go to: https://olag.utah.gov/olag-doc/2020-04_RPT.pdf



Loa, Utah: AST Damaged by Logging Truck-January 2020 (3,000 gallons)

Case Study of a LUST Site The Triple Stop Gentile Chevron, Layton, Utah

by Kevin Berry and Mark Crim

On February 14, 2019, the Department of Environmental Quality (DEQ), Division of Environmental Response and Remediation (DERR) and Davis County Health Department (DCHD), received reports of gasoline odors in several homes west of Gentile Street in Layton, Utah. Work to investigate and solve the petroleum vapor event took place immediately. The DERR partnered with other state agencies, the DCHD and Layton City to investigate potential sources, pathways of migration, and the extent of the petroleum vapor problem.

Early in the reporting, it was suggested that eight-inch, high-pressure gasoline lines were possibly the cause, due to their presence under two residential properties in the affected area. A short list of other possible causes for the gasoline odors, included a convenience store with underground storage tanks (USTs) upgradient to the affected neighborhood, or an unknown petroleum contributor.

Initial investigative work to determine the source and extent of the vapors, included the DERR contacting the owner of the nearby gas station, the Triple Stop Gentile Chevron, to request automatic tank gauging (ATG) records, and the DCHD with the Layton City Fire Department visiting an impacted home and testing the air for volatile organic compounds (VOCs).

By February 16, the DERR received reports of stronger vapors from the impacted homes, and that two more households noticed gasoline odors. Several residents left their homes due to the petroleum vapors.

Also, the owner of the USTs submitted three months of ATG records to the DERR for its review. The review indicated no release of fuel from the USTs. The same week, a report from the National Report Center indicated that a pipeline company, Andeavor, was investigating a possible hydrocarbon release from its eight-inch petroleum pipelines. Both pipelines were shut down pending further tests.

On February 17, a DERR contractor took nine soil vapor readings and collected four soil samples for analysis. No VOCs or gasoline range organics were detected. Regarding the Andeavor gas lines, stand-up pressure tests were conducted, and both lines passed their tests. The pipelines were restarted, and taken off the DERR's list of concern. Next, the DERR and the Division of Water (DWQ) worked to identify the source of the gasoline vapors and the extent of the impact on the community. The DERR initiated a subsurface investigation using special funds for investigating unknown sources of petroleum, titled '417' funding. Also, the DERR and DCHD met with the residents of three homes and monitored for vapors using a photoionization detector. VOCs were detected in the basements of the three homes.

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On February 21, the Executive Director of DEQ, Alan Matheson, authorized the use of Hazardous Substance Mitigation Act (HSMA) funds to take emergency actions to abate the vapor threat to three affected homes.

Another report of gasoline odor came on February 22, from a residence a quarter-mile away from three affected homes. At that locality, gasoline vapors were noted coming from a storm drain in front of the caller's home. The DERR, its contractor, and Layton City officials conducted a survey of the storm drain and sanitary sewer layouts to check for petroleum vapors. Gasoline vapors were noted several blocks west of the impacted neighborhood at the Kay's Creek storm sewer discharge point, but upgradient from the gas station and impacted homes, no vapors were detected, and no petroleum vapors were noted in the sanitary sewer system.

Throughout the remainder of February 2019, other multi-agency actions included sampling and analyzing drinking water from eight homes; with results showing no impacts from VOCs, DERR contractors installing groundwater monitoring wells at two of the impacted residences, and DWQ collecting water samples from six storm drain locations for analyses; with the highest petroleum impact found at the intersections of Gentile and Angel Street, and at 75 South and Angel Street, both areas upgradient to the impacted neighborhood.

On February 26, DEQ, DCHD and Layton City distributed an informational flyer to residents in the affected area. The flyer included a synopsis of the vapor issue, a map of the area, and contact numbers for health and safety information. Following the distribution of the flyer, two additional households reported gasoline odors. And on February 27, the Triple Stop Gentile Chevron had tank and line tightness tests performed. Testing showed that the diesel and premium tanks both passed, as did all of the piping, but the unleaded tank failed its high-level tightness test. More work was needed to evaluate the unleaded UST.

ATTENTION

Petroleum Vapors at Intersection of Gentile and Angel

February 26, 2019

Residents in a small area near the intersection of Gentile and Angel streets in Layton City, reported petroleum odors on Feb. 14, 2019. This initiated an investigation to determine the source and extent. These reports were made to the Davis County Health Department (DCHD) and the Utah Department of Environmental Quality (DEQ). Since then, authorities have received additional reports of gasoline odors from storm drains in the area, prompting this notice.

The Layton City Fire Department has investigated and determined the vapors do not pose a fire hazard at this time. If you smell petroleum odors in your homes or emanating from a storm drain, please call 9-1-1 so that the Fire Department can respond to ensure the odors do not represent a serious concern and add the location to the data set generated by reports to date.

Since the initial reports, state, county and local officials have actively investigated potential sources, pathways and extent of the vapors.

Layton City responded to calls reporting strong petroleum odors detected intermittently along a storm drain that runs along Angel Street. Layton City, DEQ, and the DCHD have investigated these reports and confirmed vapors and petroleum in the storm drain as far away as Kays Creek. Water sampling and vapor monitoring is ongoing.

Based on results to date, we do not believe there is an imminent public health concern. However, if you smell petroleum odors in your home, please report it to the fire department through 9-1-1.

For more information contact the following:

Safety concerns:
Layton City Public Works (801) 336-3720
Layton City Fire Department (801) 336-3940

Health concerns:
Davis County Environmental Health Department (801) 525-5128

Investigation information:
Utah Department of Environmental Quality (801) 536-4123

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY | Davis COUNTY Health Department | Layton City

On March 1, using HSMA funding, DERR contractors installed and began operating a temporary soil vapor extraction (SVE) system at three of the impacted residences. The system was deemed a success in reducing the in-home vapors. Concerning the Triple Stop Gentile Chevron, and the evaluation of the unleaded UST, it was determined that the spill bucket on the UST was torn, causing the tank to fail the high-level tightness test.

Same day replacement of the spill bucket, and a follow up tank tightness test, proved the UST system to now be sound. An inspection of the torn spill bucket and surrounding soils, showed there was minor soil staining in the surrounding backfill, but nothing to suggest a large-scale release. However, further review of UST inventory records suggested product loss from the unleaded tank occurred, and that the release was intermittent and ongoing.



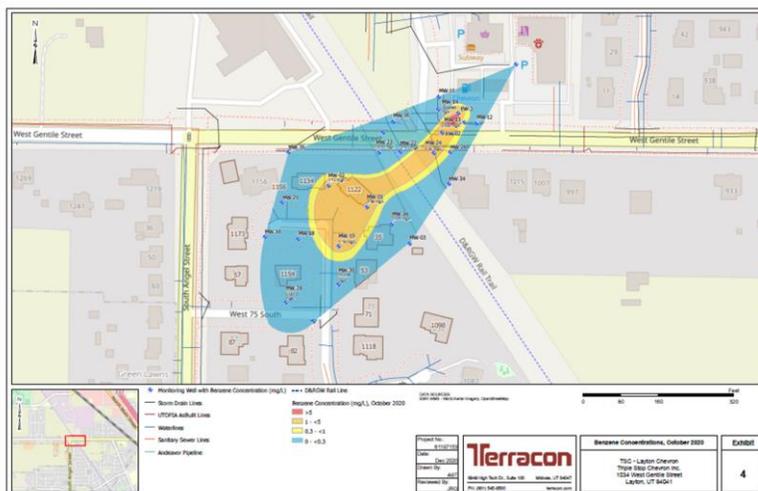
Unleaded Tank's Torn Spill Bucket

Thus, it was determined that the Gentile Street Chevron was the source of the gasoline release that infiltrated into soils, groundwater, storm drains and into numerous homes in the form of gasoline vapors. The DERR notified the gas station owner of its investigative findings and the responsibilities for cleanup.

By April 2019, the DERR had installed up to 37 monitoring wells to identify the source of the petroleum plume in the Layton neighborhood, and provided evidence that the gasoline plume originated from the Chevron gas station. At this juncture, the gas station owner proceeded with cleanup of the plume on their own. They hired an environmental consultant, and applied for coverage under the Petroleum Storage Tank (PST) Fund. The DERR has regular contact with the owner and consultant. Arrangements were made to have a remediation company, CalClean, come to the site to use its dual-phase extraction truck to begin abatement activities at the UST facility.

One-year later, in March 2020, the installation of a permanent SVE system began. The system consists of a blower connected to a number of wells within the plume. As the blower exerts a vacuum on the wells, petroleum contamination is extracted from the liquid phase and turned into vapors by volatilization and is then burned off by using a high heat source. The SVE system began operation on July 8, 2020. Initial estimates of contamination removal rates, by vapor, is approximately 120 gallons per month. The DERR continues to work on this release by ensuring cleanup efforts continue at the Chevron station and that the SVE system continues to mitigate the petroleum vapor migration into the affected homes.

Dissolved-Phase Benzene Map
Triple Stop Gentile Chevron
October 2020



For more information on the 'Triple Stop Gentile Chevron', please visit <https://deq.utah.gov/general/layton-city-pvi>

UST Inspector Story

by Zach Moore

As a kid, I had an odd fascination with the smell of gasoline. The sweet aroma was often associated with road trips or getting a piece of candy from the C-store. Ignorance truly was bliss. But now, as an adult, and more importantly, an UST Environmental Scientist, the smell of gasoline puts me on alert and sometimes raises the hair on the back of my neck. I'm now aware of the dangers of being in an area with strong combustible fumes.

While out on a routine UST inspection in 2020, I caught a strong whiff of gasoline as I rounded the corner of the building that almost felt like a punch to the face. Shortly after, I saw the culprit. Due to not having a long enough product hose, a petroleum deliverer had chosen not to use the vapor recovery port while filling the UST. Instead, he had disengaged the poppet and allowed the volatile fumes to be released into the air. After promptly stopping the fuel delivery, I discussed with the deliverer the violations that he was committing and the danger he was putting everybody at the gas station in. The owner was extremely cooperative and just as concerned as myself. One call later, adequate hoses were ordered so that this issue could be resolved before the next scheduled delivery.

Although this may seem like a fairly innocuous event, the fumes being released into the atmosphere not only affect the already precarious air quality levels in our valley, but also pose a direct threat to anyone in the vicinity of the combustible petroleum fumes. One flicked cigarette or unfortunate spark could ignite those fumes and the tanks themselves to create an explosion that would most certainly cause significant damage to both property and human lives. So whether you are a fuel deliverer, owner, operator, or just pumping gas into your own vehicle, keep an eye and nose out for improper fuel delivery practices.

What's Wrong in this Picture? by Deann Rasmussen



This picture is taken from underneath a dispenser. Loose nuts on the U-bolts, pictured, will not properly secure the breakaway valve. Ensure that nuts and bolts are secure for breakaway valves. This is a safety issue.

Important Dates to Remember

1. Throughput forms are mailed out around March 15th.
2. Throughput forms are due by April 30th.
3. Annual tank registration and PST Fund fee invoices are mailed around May 15th and the payment deadline for these fees is July 1st.
4. Any facility that has not paid the annual fees by September 1st will lose PST Fund coverage and the Certificate of Compliance will lapse.
5. Certificates of Compliance are mailed around the 15th of December.
6. The Secondary Containment Tests to qualify for the rebate must be received by December 15th.

DERR Updates

Position Changes

Claire Odonnel, CERCLA, Left the DERR for Other Employment, February 2020

Maddison Mc Mullen, CERCLA, Left the DERR for Other Employment, May 2020

Kinsey Blatter, CERCLA, Left DERR for Other Employment, August 2020

Scott Lippitt, CERCLA, Left the DERR, September 2020

Patrick Frier, CERCLA, Left DERR for Other Employment, November 2020

Scott Baird, Executive Director DEQ, Left DEQ with the new gubernatorial appointments, December 2020

Kim Shelley Appointed by Governor-elect Cox, as the Executive Director DEQ, December 2020

Maureen Petit, CERCLA, New Hire as an Environmental Scientist, December 2020

Michael Swistak, CERCLA, New Hire as an Environmental Scientist, December 2020

Wesley Sandlin, CERCLA, New Hire as an Environmental Scientist, January 2021

Certification Corner

EXAMS for A/B Operators, Groundwater and Soil Samplers, UST Removers, UST Installers, UST Technicians, UST Testers and UST Consultants

Testing Location: Utah DEQ/DERR office at 195 North 1950 West, Salt Lake City, Utah.

Testing Times: DERR is testing on Tuesday and Thursday, by appointment only, and offered by Chelsea Qualls, as availability occurs.

Applications, supporting documents and fees must be submitted 5 business days prior to taking the exam. You can pay fees and register online: <https://deq.utah.gov/certification/derr-payment-portal-shopping-cart>

If you would like to be added to a 'Testing List' or if you are unsure if you are on it, contact Chelsea, she would be happy to check for you. Please contact Chelsea Qualls at cqualls@utah.gov or 801-536-4100.

Certified UST Consultant Recertification Changes

Regarding the Certified UST Consultant course: the DERR is working on creating a virtual course during the pandemic. You can expect the regular course, you know and love, to return once we get back to normal.

Regarding Certified UST Consultant certification: if your certification expired after March 1, 2020, the DERR is granting monthly extensions on that certification, as long as testing is not available, however, your renewal certification will still be calculated at 2 years from the original expiration date. Essentially borrowing time against your certification clock. Please contact Chelsea Qualls at cqualls@utah.gov or 801-536-4100 for any questions you may have.