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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

Using Environmental Covenants to Assist in Closing LUST Sites with Residual Free Product

by John Menatti and Mark Crim

Environmental consultants and regulators have come to realize that the complete cleanup of leaking underground storage tank (LUST) sites contaminated with free product is challenging using existing in-situ remediation technologies. Once free product soaks into subsurface soils, it is difficult to remove, except by soil excavation, even when using highly engineered in-situ remediation techniques, such as high-vacuum multi-phase extraction, in-situ heating, or surfactant flushing. These technologies can remove much of the free product, but there is often residual product left behind that causes the soil or groundwater to remain contaminated at concentrations above the cleanup standard.

However, a LUST site with residual free product in subsurface soils and groundwater can obtain regulatory closure with the aid of an environmental covenant (EC), if there are no adverse risks posed by the remaining contamination and the free product has been removed to the maximum extent practicable. Adverse risks may include exposure to contaminated groundwater or the potential for vapor intrusion into an overlying building. When evaluating exposure pathways, if there is no use of the groundwater then the exposure pathway is not complete. If there are no buildings overlying the free product, or if a building exists with a vapor mitigation system, then the vapor exposure pathway is not complete. Removal of free product is mandated by Federal Regulation. 40CFR-280.64 states that, free product must be removed to the maximum extent practicable as determined by the implementing agency. The implementing agency in Utah is the Division of Environmental Response and Remediation (DERR).

ECs describe and document the type and location of contamination remaining at the site. ECs may limit the use of the property, prohibit groundwater use, and describe actions that must be taken if the remaining contaminated soil or groundwater is disturbed, or if buildings

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are to be constructed over the contamination. ECs are legally binding documents that are recorded on the title of the property by the respective County Recorder, and become a permanent property record. ECs serve to notify prospective purchasers of the property about the presence of subsurface contamination so that the land can be properly evaluated and safely developed. ECs will show up in the title searches performed by prospective purchasers and can be found on the DERR's Interactive Map and UST/LUST Program website.

This article describes two LUST sites in Utah where the DERR has determined that free product has been removed to the maximum extent practicable, and that there are no adverse risks posed by the remaining contamination. In both cases, the EC specified that any new buildings constructed over the residual contamination, would be required to install a vapor barrier to prevent vapor intrusion. One of the sites has obtained regulatory closure and the other site is being evaluated for site closure. ECs assisted in site closure recommendations.

Site 1: Obtained regulatory closure. It is a former Tesoro gas station located in Salt Lake City, Utah. Here, gasoline leaked from the UST system and migrated to the groundwater at about 50 feet below ground surface (bgs). The in-situ remediation technique used was electrical resistance heating, combined with soil vapor extraction. The cleanup system removed about 1,335 gallons of gasoline from the subsurface in about 10 months. Following those efforts, there was still residual free product left in the smear zone and groundwater, but the contamination was confined to the property boundary. An EC was prepared and recorded as part of the site closure recommendation. A 'No Further Action' letter was issued by the DERR in October 2018.

Site 2: Site is in-process of finalizing and recording four ECs, on four separate parcels of land. It is the former Sunrise Market, located in La Verkin, Utah. Here, gasoline leaked from the UST system and migrated to the groundwater at about 20 feet bgs, and a free product plume moved laterally under three off-site properties. Remediation techniques used at this site included total fluids extraction, free product skimming, and surfactant flushing. From 1998 to 2012, about 8,194 gallons of gasoline were removed from the subsurface. Even with these efforts, there was still residual free product left in the smear zone and the groundwater plume continues to exist under three off-site properties. Following site treatment and the recording of four ECs, the DERR may issue a 'No Further Action' letter.

Reminder: All LUST NFA determinations are made in accordance with a thorough evaluation of the site and must meet the criteria outlined in Utah Administrative Code R311-211, Corrective Action Cleanup Standards Policy for UST and CERCLA sites.

Good news! The EPA has recently approved low-level sump testing. For more information, follow this link: https://www.epa.gov/ust/low-liquid-level-ust-containment-sump-testing-procedures

What's Wrong with this Picture?

by Deann Rasmussen

Do you have a properly fitted seal or cap on your vapor recovery port?

We often see poorly fitted or broken caps that can cause a release of fuel.

In this photo, a broken cap has allowed vapor and or fuel to come out of the vapor recovery port.

Please ensure that all caps or seals are properly fitted and that broken caps or seals are replaced with new ones.

Important Dates to Remember

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

DEQ Updates

Retirements

Paul Zahn, LUST RA Section Manager, January-2019

Brad Johnson, DEQ Deputy Director, April-2019

John Menatti, PST Section Manager, May-2019

Position Changes

Morgan Atkinson, LUST RA Section Manager, November-2018

Avery Holyoak, LUST RA Section, New Hire as an Environmental Engineer, May-2019

Rick Saathoff, CERCLA Site Assessment/Emergency Response Section Manager, June-2019

Alan Matheson, DEQ Director, July-2019, future Executive Director, Point of the Mountain State Land Authority

Scott Baird, Interim DEQ Director, appointed by Governor Gary Herbert, July-2019

Chelsea Qualls, Environmental Program Coordinator, July-2019

Certification Corner

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

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

Testing Times: 1st Tuesday of each month at 9:00 a.m., and the 3rd Tuesday of each month at 2:00 p.m.

Please contact Chelsea Qualls at cqualls@utah.gov. to register.

Applications, supporting documents and fees must be submitted 5 business days prior to taking the exam.

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Certified UST Consultant Recertification Course Schedule

October 17, 2019 February 20, 2020 June 19, 2020

The renewal courses begin at 9 a.m. and end at 1:00 p.m.

Please contact Chelsea Qualls at cqualls@utah.gov. to register.