December 1998 saw the federally mandated deadline for upgrading older steel underground storage tanks (USTs) with spill prevention, overfill prevention, and corrosion protection. To meet the corrosion protection requirement, owners could line their tanks, add cathodic protection, or do both. Before being upgraded, most tanks were required to have an internal inspection done to assess the tank’s integrity. As the deadline approached, approval was given for several alternative integrity assessment methods that did not require cutting a hole in the tank.

The alternative methods that were allowed to be used in Utah were carefully reviewed to ensure that they complied with U.S. Environmental Protection Agency (EPA) and industry standards, including ASTM ES 40-94 and ASTM G 158-98, the standards that were created to allow alternative assessment methods.

Some of these alternative upgrade methods utilized statistical analysis of soil characteristics and corrosion analysis to determine whether an UST system was suitable for upgrade. They presumed that the backfill material around the UST was consistent and uniform.

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In recent years we have seen several significant releases from tanks that had used these alternative assessment methods for the upgrade. It appears that some of the assumptions designed into the alternative methods may not have been correctly applied. For example, many tanks were found not to be in uniform backfill, but were in native soil with rocks, clods, etc., that could have caused points of corrosion, or, at a minimum, would have invalidated the alternative assessment method that had been performed.

One of the most significant UST releases in the state came from a tank that had an alternative assessment done before upgrading with impressed current cathodic protection. The cleanup has cost over $2 million to date, and is likely to go much higher. In the last 18 months we have seen five other significant releases from older steel tanks and piping upgraded with cathodic protection or internally lined, three of which had been upgraded using an alternate assessment method. This represents something we have not seen before: a quick succession of releases from upgraded older steel tanks, including some that had been upgraded with an alternate assessment method.

In the state of Utah, we currently have almost 700 older steel USTs that are still in service. Almost 500 of these were upgraded only with Impressed Current cathodic protection. Over 150 were lined and had Impressed Current installed, and over 30 had only an internal lining installed. Approximately 125 currently active USTs used one of the alternative assessment methods before upgrading with cathodic protection. As these tanks get older they pose an increasingly significant risk of leaking product, with corresponding threats to human health and the environment. Financial risks include reduced solvency of the state Petroleum Storage Tank Trust Fund, increased third-party insurance rates, and increased cleanup costs to facility owners. We have already seen major releases with detrimental impacts to the public in the form of vapors in homes and businesses, residents displaced from their homes for significant periods of time, and cleanup costs in the millions of dollars, with potential for additional costs from third-party claims against the tank owners.

The Division of Environmental Response and Remediation (DERR) encourages you to monitor your tanks very closely, including performing monthly leak detection, performing a daily inventory reconciliation, and ensuring that cathodic protection systems are adequately protecting your tanks and piping. If problems do occur, it is critical to respond to them as quickly as possible to minimize the effects of a release. In one of the cases previously mentioned, the tank owner suspected a release based on automatic tank gauging test results and had a precision tightness test performed on one tank. It was found to be leaking and was immediately emptied. While it is too early to say how bad the leak is, this example shows how diligence in monitoring the tank system can catch a release in its early stages.

It is becoming more and more apparent that the combination of the age of these tanks and the possible incorrect application of alternative integrity assessment methods has created the potential for significant releases from older UST systems. If you have older steel tanks in service, especially if they were upgraded with one of the alternative integrity assessment methods, the DERR recommends that you consider replacing these USTs with new systems, to help prevent releases and protect human health and the environment. We expect that more releases from these tanks will occur the longer they stay in the ground. Low-interest loans are available from the Petroleum Storage Tank Loan Fund for upgrading, replacing, or permanently closing USTs. More information on the loan fund can be found at http://www.undergroundtanks.utah.gov/pst_loan.htm, or by calling Gary Astin at (801) 536-4103.
The Utah Petroleum Storage Tank Trust Fund (PST Fund) received the annual actuarial analysis for Fiscal Year (FY) 2009 (July 1, 2008 – June 30, 2009). The report, prepared by Deloitte Consulting and dated October 5, 2009, estimated that the PST Fund would have a positive cash balance through 2019. The report indicated that PST Fund revenues were lower in FY09 for two primary reasons: 1) several tank owners who do not participate in the Fund received large refunds of surcharges paid and 2) lower gasoline consumption due to the weak economy resulted in lower surcharge collections. However, the cost containment measures implemented by the PST Fund over the past 4 years have helped keep the PST Fund in a positive cash balance condition. During FY09, the Tank Branch closed 104 LUST cases and opened 95 new release cases.

MODIFICATIONS IN MANAGEMENT
by DeAnn Rasmussen

It took just one person to retire and the result was two new managers! There have been some significant changes in management during the past year. In July of 2009 Dale Marx, UST Branch Manager retired after 24 years with the State of Utah. Dale cared about the people and businesses that are affected by the rules and regulations administered by the UST Branch and he cared about his co-workers. As Branch Manager, Dale guided the UST program through many revisions over the last 10 years. Utah’s tank program has been recognized nationally for the level of collaboration between government and the regulated community, and the success that resulted while Dale was Branch Manger. Although his absence is felt, we wish him a happy retirement with many hours spent doing exactly what he wants to do!

The vacancy left by Dale Marx’s retirement was filled by Therron Blatter who had been Manager over the UST Section for the past 10 years. Prior to being the UST Section Manager, Therron was a Project Manager for UST Compliance Section and has worked for the state for a total of 18 years. Therron is a graduate of BYU with a Masters in geology and is a professional geologist. He is on the EPA Federal Rules Revision Workgroup and is also actively involved with the Association for State and Federal and Territorial Solid Waste Management Officials (ASTSWMO). Anyone that has had the pleasure of working with him can tell you that he is an intelligent, considerate, and hard working individual.

After interviewing many qualified candidates Doug Hansen was selected to fill Therron’s position as UST Section Manager. Doug is a graduate of the University of Utah with a degree in chemical engineering and is a professional engineer. Doug has been with the State of Utah for 14 years. For the past year his abilities have been directed toward special projects that benefit the entire department. He was a Project Manager in the PST Trust Fund for 13 years and managed numerous sites through the remediation process. We look forward to working with him as our program continues to evolve.
Certification Corner

**UST Consultant Certification Program**

In order to remain current you must take and pass the UST Consultant Certification Examination before the expiration date. Certified individuals may apply for renewal not more than six months prior to the expiration date of the certificate. Beginning in 2010 the DERR will administer the examinations (initial and renewal) and the renewal course three times a year. The renewal courses begin at 9:00 a.m. and finish at 1:00 p.m. Exams and courses take place at the DERR office at 168 North 1950 West in Salt Lake City. For more information contact Michelle Horning at (801) 536-4128 or at mhorning@utah.gov.

**Initial Exam and Renewal Course Schedule**

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Please refer to the DERR web page for certification program requirements, fees, applications and the examination schedule. The web page address is: [http://www.undergroundtanks.utah.gov/cc_exams.htm](http://www.undergroundtanks.utah.gov/cc_exams.htm).

**Groundwater and Soil Sampler Certification Courses**

Environmental Contractors, Inc. (ECI) 801-491-3455 by appointment only
Utah Environmental Training (UET) 801-687-2286  [http://www.undergroundtanks.utah.gov/docs/FIRST%20SEMESTER%202009.pdf](http://www.undergroundtanks.utah.gov/docs/FIRST%20SEMESTER%202009.pdf)