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**SPECIAL POINTS OF INTEREST:**

- Heating oil tank leaks
- Remediation equipment should be insured
- Plants cleanup contaminated water

**RESIDENTIAL TANK ISSUES**

In many neighborhoods, residential underground storage tanks (USTs) are about as common as air conditioners. While most residential tanks are used for heating oil, some formerly contained gasoline and were installed during the oil scare in the 1970s.

Issues with residential tanks typically arise when there is a property transaction or the home owner notices an oil smell in their residence. Many buyers and lending agencies are afraid to proceed with the purchase of a property until they know the tank has been removed and any contamination eliminated.

Fortunately for North Carolina, there is a non-commercial trust fund for cleaning up leaks from these tanks. Once a leak has been identified, the responsible party must file an application with the fund for reimbursement of the cleanup costs. Approval of applications may take 4–6 months. The fund does not cover the cost of removing the leaking tank and may not fully pay for the remediation. Reimbursement from

the fund can only occur after the application has been approved. Leaks from above-ground storage tanks are not covered by the trust fund.

Because of funding shortfalls over the years, it may take several months for responsible parties to be reimbursed. But North Carolina has an advantage over some states that do not have a reimbursement program available at all. In those states, responsible parties must rely on their homeowner's insurance. Once the insurance company has satisfied its policy limits, the homeowner is left with the remaining cleanup costs and is open to third-party claims if the contamination migrates offsite and impacts another property.

In order for the trust fund to remain viable, recent law requires the Department of Environment and Natural Resources (DENR) to clean up sites based upon their risk. Sites that are ranked a higher risk will get priority status. If your site is ranked a low or intermediate risk, you may not be directed to clean up the release for some

time, possibly years. You are still obligated to clean up the release and may proceed with the cleanup, but reimbursement will be delayed since DENR did not request the work to be performed at this time. Since some property transactions cannot occur until the property is remediated, responsible parties will not have any choice but to continue the work and wait for reimbursement from the fund.

If you have any questions about residential tank removals, cleanups, or the trust fund process, please contact us.



## REMEDATION EQUIPMENT SHOULD BE INSURED

Soil and groundwater remediation systems are a complex integration of equipment, pipes, and hoses. The size and cost of remediation systems varies greatly. A relatively simple soil vapor extraction system can cost \$5,000–\$10,000. A moderate sized soil and groundwater remediation system may cost more than \$100,000.

In light of the recent severe weather, TerraQuest asked Mr. Scott Ryals of the North Carolina Division of Waste Management—Trust Fund Section, what would happen if a remediation system were

destroyed. Mr. Ryals indicated that the trust fund does not pay for replacement of a remediation system. The replacement cost, including associated labor, would be at the expense of the responsible party.

While TerraQuest makes every effort to ensure that the remediation systems it operates are designed in accordance with applicable ordinances and include such safety features as hurricane tie-downs, remote telemetry, and safety shutoffs, there is no guarantee that mother nature won't damage a sys-

tem. Responsible parties with systems should contact their insurance provider to discuss coverage for their systems.



## MTBE FACTS

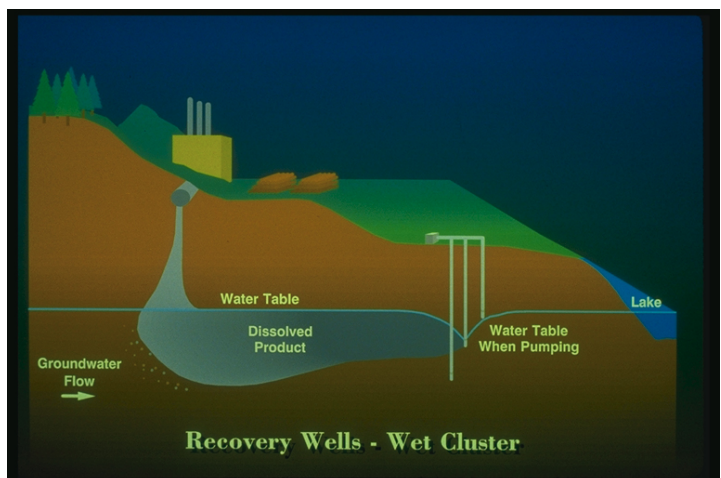
Methyl tertiary-butyl ether (MTBE) is a volatile organic chemical. MTBE has been used as an octane enhancer in gasoline since the late 1970s. MTBE promotes more complete burning of gasoline and reduces carbon monoxide and ozone levels.

Releases of MTBE primarily occur from point sources such as gas stations and pipe lines. In the last few years, the EPA has found more non-point sources of MTBE showing up in the environment. Recreational watercraft, personal gasoline powered equipment, and automobiles can also contribute to non-point sources of MTBE in the

environment. There is evidence that air deposition through precipitation caused by industrial or vehicular emissions may contaminate surface water.

MTBE has certain physical and chemical properties that make it an undesirable chemical in soil and groundwater. Since it has a low affinity to bind to organic carbon in soil, it tends to pass through soil until it encounters the water table. MTBE has a high solubility in groundwater and tends to spread rapidly. MTBE is generally considered a recalcitrant compound meaning that it is difficult to remedi-

ate. North Carolina has not set an *official* maximum safe drinking water level for MTBE. An *interim* level of 11.6 parts per billion has been set by the State Epidemiologist.



## ENVIRONMENTAL RESPONSIBILITY

Everyone has some degree of environmental responsibility because we all use natural resources and have either a direct or indirect impact upon the environment. Some businesses have a high level of responsibility because of the nature of their business. While being a good steward of the environment may seem negative to the accountant's bottom line, in the long run, it is much cheaper

to prevent and minimize a release of contaminants. For example, a gallon of gasoline costs approximately \$2. The cost to recover a gallon of gasoline from water is more than \$100.

If you have not established an environmental policy that includes a risk minimization strategy, we suggest that you contact us to implement a plan for minimizing or preventing leaks.

TerraQuest can work with you and regulators to establish procedures that will minimize your future environmental liability. Establishing procedures now and implementing good "housekeeping" practices will save you money in the long run.

If you have questions about site remediation or assistance with a risk minimization plan, please contact us at (888) 932-1590.

## UNDERGROUND STORAGE TANK FUNDING UPDATE

Session Laws 2003-352 and 2004-124 have been implemented to maintain the solvency of the Leaking Underground Storage Tank Trust Fund. With the implementation of the laws, assessment and remediation primarily focus on high risk sites.

On October 11, 2004, the North Carolina Division of Waste Management set a ranking level for high risk

sites of 800 or higher in order for work to continue whereby responsible parties would be reimbursed within 90 days. It is currently estimated that less than 50 sites in North Carolina will fall into this category. Once the financial situation improves, the ranking will be lowered to allow more site work to proceed. Until such time, responsible parties that proceed with work on sites

ranked less than 800 must obtain non-directed pre-approval. This means that they will be reimbursed for the costs at a later date.

Within the last two weeks, the trust fund has reimbursed approximately 15 million dollars in claims. Hopefully, additional sources of revenue will be found to continue to fund the program.

## TEAM TERRAQUEST IS ON THE MOVE

TerraQuest has relocated our office to 209 E. Main Street in Carrboro. All other contact information remains the same. The move has allowed us to increase our office space and better organize equipment and laboratory supplies. Directions will be posted soon to our updated website.

In addition to our core services of assessing and remediating petroleum and chemical releases, TerraQuest has begun to add additional services and expand others.

Expanded services include contract drilling, site development / re-development, sampling, and Phase I audits.

Additional services added include mold testing. Other services are on the way.

If you have any questions regarding our services or would like more information, please feel free to contact us at (888) 932-1590.



[www.terraquestpc.com](http://www.terraquestpc.com)

**TERRAQUEST ENVIRONMENTAL  
CONSULTANTS, P.C.**

209 E. Main Street  
Carrboro, NC 27510

Phone: 919-932-1590

Fax: 919-932-1594

Email: [mjbrown@terraquestpc.com](mailto:mjbrown@terraquestpc.com)



**YOUR SOURCE FOR ENVIRONMENTAL  
SOLUTIONS.**

## **USING PLANTS TO CLEANUP POLLUTION**

A growing method of site remediation uses plants to remove contaminants from groundwater. This innovative technology is called phytoremediation. Phytoremediation works best at sites with low to medium levels of contaminants. Roots take up the contaminated water and breaks it down into harmless components. Some are stored within the plant, and others are released into the atmosphere.

There are specific species of plants which have been determined to be suitable for

phytoremediation. In determining which plants are best suited, the type of contaminants and site hydrogeology must be considered. Sites with shallow water tables are ideal because the roots have a limited depth of penetration. Some plants are better at remediating metals while others are better at removing organic compounds.

The cost of using plants to remediate a site can save significant amounts of money. In some applications like natural attenuation, the plants are used to minimize

the movement of the contaminants. Plants can also be used in conjunction with active remediation systems that recover groundwater to reduce remediation system costs. Plants can reduce these costs by drawing in some of the contaminated water, thereby reducing the amount of water to be treated by the system. This means that the remediation system can be downsized. Additional information on phytoremediation is available from TerraQuest or the EPA website.

TerraQuest Environmental Consultants, P.C. is a full service environmental consulting firm located in Carrboro, NC. We specialize in the assessment and remediation of various types of facilities.

If you have questions regarding our services, please feel free to contact us at (919) 932-1590 or visit our website at [www.terraquestpc.com](http://www.terraquestpc.com)