

Residential Heating Oil Tanks: Examining Them From All Sides

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In many cases one's primary residence represents a person's largest asset. Therefore, it is vital to protect that asset. I recommend addressing your tank when you are not pressured by an imminent property sale. However, human nature being what it is, most tank issues arise during the sales process. Regardless of how your UST comes to the fore, these ideas will help you immeasurably.

Stories about leaking residential USTs abound, creating fear and anxiety. Because fear and anxiety are paralyzing, it is important to remain clear-headed so you make sound business decisions. Armed with the right information, savvy homeowners can mitigate fear and anxiety and gain control over their heating oil tank situation.

First, let's explore a few facts about USTs. USTs installed from approximately 1940-1995 were thin-walled and prone to perforation via corrosion. Many tanks manufactured in the past 20 years or so are much improved. (And even the highest quality tanks must be installed in accordance with the manufacturer's directions, lest you run the risk of nullifying the inherent protection and safety features inherent to your selected model.¹) Even though older tanks are prone to fail, only one in four USTs actually leak. And most leaks occur at couplings, not because the tank wall has been perforated. Secondly, most people ignore their UST: out of sight, out of mind. This is ill-advised if you own an older UST because of its potential liability. In short, if you own a home with an older UST, you need to decide what, if any, action you wish to take. Ideas are presented below.

What If You Own a Home With a Heating Oil Tank?

Homeowners with USTs fall into one of several categories, each of which presents a different set of circumstances. Thus each category will be examined individually so you understand the situation and what, if anything, needs to be done.

- You currently heat your home with oil from an active UST installed prior to 1995.
- You currently heat your home with oil from an active UST installed after 1995.
- You are selling your home in which an active heating oil tank remains.
- Your UST is no longer in service but still contains oil and remains in the ground.
- Your UST has been emptied of oil and (ostensibly) has been closed in place.
- Your UST was previously removed from the ground and properly disposed.
- A special word about aboveground storage tanks (ASTs)

You currently heat your home with oil from an active UST installed prior to 1995

Most owners of active older USTs know they should do something but they don't know what to do. First, remember that 75% of these tanks do not leak. In spite of the favorable odds, if you don't address the UST now it is probable that another member of your family will have to address it sometime hence. And at the very least it will certainly become an issue at the point of sale.

First, you must decide if you wish to retain heating oil or switch to gas. As mentioned earlier, your heating oil company can become your champion in this process. Or you can simply switch to some form of gas.

If you decide to close your UST, you have two options. You can close your UST in place or remove it. Although closing a tank in place is perfectly legal with the proper documentation, I do not suggest this option because when a tank is gone, it is gone, taking the worry with it. A tank closed in place retains a specter of uncertainty even when the closure is performed perfectly well. But if you wish to close it in place, here is what you need to know. First the tank needs to be opened, pumped out, and the interior squeegeed clean. Then even though they are not required, ESA strongly advises taking samples through the centerline of the bottom of the tank. Doing so can prevent a world of problems later! If the samples are deemed clean, the tank will need to be filled with certified clean soil or sand. And most important, the contractor or consultant needs to assemble a concise letter report containing full documentation (receipts, the construction permit, laboratory results, photographs, etc.) showing that the tank was closed properly and that no soil impacts exist. This letter report should always remain with the house because it proves that the tank was properly closed in place and no longer poses an environmental threat.

Why does ESA recommend taking soil samples when the state does not require them? Because the samples certify that there are no soil impacts. Then the letter report documents that the former tank was closed properly and presents proof showing that your tank did not leak.

And, as stated above, removing the tank is always preferable. First, the cost for removal is almost the same as closure in place. And as stated earlier, a tank removed cannot return to haunt you.

You currently heat your home with oil from an active UST installed after 1995

In a perfect world you have retained the product literature and specifications of the UST. You also have construction drawings or as-builts (that include photographs) taken during the installation. You want to establish that your tank was installed in accordance with current installation standards and that your UST is among those that is safe and secure. Absent this form of confirmation, you may have to follow the procedures described in the previous section.

You are selling your home in which an active heating oil tank remains

I am often asked the following question by homeowners and realtors: "We have a potential buyer; what should we do about the UST?" And this is my response.

I ask if the homeowner has any reason to believe that the UST is leaking. For example, are you getting water in the tank, are there recurrent service problems with the oil burner, or is there any other evidence making you suspect that the UST could be a problem? If their answers are "No," I suggest they share that information with the buyer (and a seller must always be truthful about this subject). I then suggest that if the buyer wishes to leak test the UST, that they be allowed to do so at their expense. And if the UST is sound, there is nothing further to be done. But if the UST fails the leak test, there is an affirmative obligation upon the homeowner to act. This means that ESA (or a company like ESA) should then be called.

Realtors should advise their clients to address USTs before they intend to sell their homes. In my experience the best time to address a UST is when there is no pressure to sell your home. It does not mean that you should remove your UST. But it does mean that you should avail yourself of information from an environmental expert so that you make an informed business decision. I routinely engage homeowners and realtors in exactly these kinds of conversations and would be pleased to have such a conversation with you or someone you know. These discussions are highly informative and are, of course, offered at no cost or obligation. I promise that the information dispensed is of great value.

Your UST is no longer in service but it still contains oil and remains in the ground

This is an accident waiting to happen. At least if your UST is in service you might learn about a problem while your heating system is in use. But when the tank is not in service and oil remains inside, it is unlikely that you would know if a leak occurs. Moreover, because this tank will always be there and because there is an affirmative obligation to disclose such information during a sale, I suggest that the owner address the UST well in advance of a potential deal. Therefore, these USTs really should be removed.

Your UST has been emptied of oil and (ostensibly) has been closed in place

I will share a story about a very recent project. A couple was selling their home. They had abandoned their UST in place 15 years ago. The potential buyer sampled the former tank and found elevated levels of petroleum below actionable levels. Regardless, the buyer demanded action. So ESA was called to remove the tank. During the process it was learned that the tank was twice as large as previously reported by the homeowners. However, the tank was closed correctly all those years ago, and ESA's confirmatory soil samples indicted that this UST never leaked. No remediation was needed.

So what is the moral of this story? Actually there are two. The first is that although the tank was closed in place correctly 15 years ago, they failed to take samples through the center line of the tank. Had they done so and retained the results, the owners may have obviated the need to remove the tank. The second lesson is to address tanks such as this before you consider selling, otherwise you risk having an issue like this derail your deal.

Your UST was previously removed from the ground and properly disposed

On many occasions people have told me that their residential UST was satisfactorily removed many years ago. They tell me the tank did not leak and remediation was not necessary. To which I ask one simple question: "Prove it." And they can't. They did not retain any documentation from the tank removal process that supports their story.

Now take this scenario one step further. Assume that the homeowners are about to sell their home and the buyer's attorney says, "What documentation do you have that demonstrates that the tank was properly removed and did not leak?" Because the homeowner does not have a tank closure letter report, they have no choice but to conduct a soil investigation.

This hassle would have been completely avoided had the vendor who removed the tank performed soil sampling (even though the tank did not leak) and put those results into a simple letter report documenting all of the removal activities. And that is exactly how ESA performs residential tank removals, just so our clients will avoid this niggling problem sometime hence. Using ESA's letter report, the homeowner can provide the buyer's attorney with proof that obviates a potential objection to the sale.

A Special Word about ASTs

Homeowners often feel very secure when their oil is stored in an AST. And because ESA has had experience with problematic ASTs, I want to share some random bits of advice that may prove useful.

- Some people have ASTs outdoors. This is not my preference. But if you have no choice, then be sure that the AST rests upon a poured concrete pad to provide a firm and stable platform.
- Be sure the AST's legs are strong, secure and not corroded. I have seen a leg fail, causing the AST to slump and spill oil.
- There is one particular form of indoor AST installation that can cause a very serious problem. I have seen two instances where the feed line from the AST passed along the ground and, to protect the feed line from accidental impact-damage, it was encased in concrete. No doubt that this was a well-intentioned protective measure by the installation contractor. However, I have seen those feed lines corrode within that concrete cocoon. And because in each instance the basement was on a floating slab, the oil then leaked undetected beneath the house. Consequently, I strongly recommend that this form of AST installation be avoided in all circumstances.

- When removing an AST (or UST), always remove and properly dispose of the fill pipe and vent line. When they remain, it appears that the home is still being serviced by fuel oil. I know of homes where an AST was removed from the basement but the fill pipe remained in the basement wall, still visible outside and (from all appearances) still in use. In three instances oil companies erroneously delivered fuel via these unconnected fill pipes, thereby spilling hundreds of gallons directly into each basement!
- Finally, I want to identify a newer form of AST that is vastly improved: one manufactured by the Roth Company. Again, ESA has no vested interest whatsoever in the sale or use of any AST or UST. And in my opinion, Roth tanks are one of the best options for indoor oil storage because they provide a very high degree of safety and security.

Prices

There is a difference in the way ESA removes a residential UST versus many other environmental companies. What is that difference, why does it exist, and what will it cost?

When it comes to removing residential 550-gallon USTs, there are two kinds of environmental companies. The first kind removes USTs very inexpensively. Some of them advertise that they will remove your tank for \$1,200 - \$1,500. With tongue in cheek, I refer to them as "Tank Yankers." Please believe me when I say they cannot even mobilize to your home for that price! Yet they conduct business this way looking for a leaking tank, and then assess change orders to offset the losses incurred from removing non-leaking USTs.

ESA and companies like us address residential USTs differently. To begin with, ESA charges approximately \$5,000 to remove a 550-gallon residential UST. The drastic price difference reflects the inclusion of all the services you need to document via laboratory analysis in a letter report that the tank did not leak. Furthermore, we include receipts for the clean backfill, disposal documentation for waste oil, and receipts for scrapping the former tank. This level of service negates future problems. And if the tank leaks, ESA (like the Tank Yankers) also provides a change order for the additional work, along with our commitment to do that extra work as quickly and as inexpensively as humanly possible. When a UST leaks, ESA's prices are no more expensive than any other vendor (and to be candid, our prices are often far less expensive).

There are vast philosophical differences between doing things "ESA's way" vs. doing things the "inexpensive way." So, what should you do? That is up to you. This article's intent is to provide suggestions to better address residential heating oil situations. You, of course, don't want to spend more money than is necessary. Ultimately, I hope that you at the very least factor in all the variables necessary to arrive at a business decision that truly reflects your best interest.

Why Use Heating Oil?

Some of you may still need to choose a source of energy. After all that you have read in this article you might ask, "Why would anyone still choose heating oil considering the potential liability?" There is actually a very good reason! Heating oil provides more heat per unit volume than either natural gas or propane. (*Disclaimer: neither my company nor I have any vested interest in what form of energy anyone uses.*) When the prices per unit of these three energy sources are equivalent, heating oil provides the best value.

And regardless of the energy price, other factors influence how many useable BTUs you derive from your energy source. These include what kind of heating system you use, its age and condition, and how well insulated your home is. Failure to change your air filters can also reduce your heater's efficiency. Additionally, a homeowner always has the option to shop the market for the least expensive source of heating oil or propane. This cannot be done as easily for natural gas; a commodity provide by your utility.

Here are the BTU values of the three most common sources of domestic energy. Note that the BTU value per gallon of heating oil is almost 51% greater than propane! And the BTU value of a cubic foot of propane is more than twice that of an equivalent volume of natural gas (Source: <http://www.propane101.com/propanevsnaturalgas.htm>).

Heating Oil	138,700 BTU/gallon
Propane	92,000 BTU/gallon
Natural Gas	100,000 BTU/therm ²

Click the following link to view a real-time calculator that can help you compare relative energy costs. (<http://nepacrossroads.com/fuel-comparison-calculator.php>)

People who remove their UST still have to heat their homes moving forward. Oil dealers lost considerable market share during the past 25 years and therefore want to retain customers! So if you are not averse to using oil in the future, ask your oil company (or a competing oil company) about replacing your tank with a new state-of-the-art UST or AST. There are many durable (and corrosion-proof) high-quality models available for either new USTs or ASTs.

Because everyone's situation can be a little different, I will (as always) speak with you at no charge to answer your questions about this serious and sometimes confusing subject. You may also want to seek the advice of an environmental attorney to determine how these suggestions affect your particular situation. I can be reached at 732-469-8888 x201.

Thanks.
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[1] If the UST is regulated, then state standards must also be followed during installation. However, in New Jersey all residential heating oil tanks are non-regulated, regardless of size. Thus in New Jersey the proper installation of non-regulated tanks is governed by the manufacturer's directions and guidance, and local construction codes.

[2] Natural gas is sold per therm, not per gallon. Determine your price per therm by dividing your total fuel bill by the total therms of natural gas consumed.