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The Rising Risks Of Chlorinated Solvent Contamination

Law360, New York (July 03, 2012, 12:16 PM ET) -- For properties where chlorinated solvents have been released, new regulatory challenges and related liability concerns are increasing as a result of controversial human health studies recently published by the U.S. Environmental Protection Agency. The following summarizes the new challenges and presents recommendations for addressing them.

Issues Presented by Chlorinated Solvents

Properties with chlorinated solvent contamination are already particularly difficult to clean up to meet regulatory standards. The two chlorinated solvents most typically of concern are tetrachloroethylene (PCE), a chemical long used in dry cleaning, and trichloroethylene (TCE), used in part for washing and degreasing activities.

Both of these chemicals can migrate in groundwater, sink through water into bedrock where they are difficult to reach, contribute in certain conditions to indoor air contamination (known as "vapor intrusion") and already are subject to very stringent cleanup standards.

New EPA Risk Assessments and the Regulators' Responses

Now, the rules for remediating these two solvents will be changing as a result of human health risk assessments conducted by the EPA. Human health assessments look at both the potential "excess" cancer and noncancer — such as neurotoxic — risk related to a contaminant.

The EPA determined that the cancer and noncancer risks related to TCE exposure were greater than previously believed. As a result, it is anticipated that the EPA will lower the cleanup standard for drinking water to a more stringent level, and vapor intrusion screening standards for TCE are also expected to go down.

When the EPA sets a drinking water standard — known as the maximum contaminant level, or MCL — of a particular contaminant, that requirement applies to public drinking water supplies in every state, although any state can be more — but not less — stringent. Where groundwater is a potential drinking water source, states typically adopt the MCL as the groundwater cleanup standard.

There is speculation that the results of the health assessment will produce a new standard that could be five times lower than the current MCL for TCE. As a "sinker," TCE is already difficult to remediate in groundwater to the current drinking water standard of 5 parts per billion. High levels of TCE in groundwater will generally decrease quickly with appropriate treatment, but once TCE levels are reduced, the final increment of the cleanup is the most

difficult. If the cleanup standard is lowered, experts question whether remediation to a standard of as low as a single part per billion is even feasible.

Because TCE is highly volatile, in certain conditions it can migrate from soil and groundwater in gaseous form that moves upward into buildings, similar to radon gas. Based on the new human health assessment, the EPA has already lowered its regional screening level for TCE in indoor air, which level is used by the EPA to determine whether to require a vapor intrusion investigation.

As a result, more sites where the EPA is overseeing cleanup will be "screened in" to require the assessment of indoor air risks. How states will react to the EPA's new screening level in administering state-level cleanups is not yet known, but it is likely that a number of states will use the EPA's screening level and will also factor in the EPA risk assessment when establishing or updating indoor air cleanup standards.

The vapor intrusion investigation required at sites where a screening level is exceeded can not only be costly and potentially disruptive to an occupied building, but in states that have not yet established vapor intrusion assessment methodologies and other regulatory requirements, the data produced may set a remediating party onto an uncertain regulatory path.

The EPA's PCE human health assessment identified less cancer risk, but more noncancer risk than previous assessments. The combined information has prompted the EPA to relax requirements for PCE sites by raising the regional screening level for PCE. It will be up to individual states whether or not to adopt the EPA's new screening level; already, the regulated community is lobbying state agencies to take the new PCE risk profile into account in evaluating screening and cleanup standards.

It is not yet known whether the EPA plans to change the drinking water standard for PCE.

Recommendations

At this point, the EPA and state regulatory requirements are in flux. The EPA expects to issue a Vapor Intrusion Guidance in November 2012. Changing an MCL must be done pursuant to the provisions of the Safe Drinking Water Act and will likely take a couple of years. State environmental agencies are still absorbing the implications of the new health assessments.

Given that solvent sites typically take many years to achieve regulatory closure and regulatory requirements and cleanup standards may be changing, it is critical to involve the right environmental consultant to develop a site-specific strategy for investigating and remediating PCE and TCE.

Particularly in the area of vapor intrusion, the methodology and science is complex, and states vary in how they currently approach the issue and what is required. The chosen approach to both the investigation and the remediation at a particular site must be defensible and take into account the new risk information and anticipated regulatory changes.

Second, published information suggests that more than 70 percent of historic dry cleaners have had releases of chlorinated solvents, and risks are presented not only from on-site use, but also from migration of solvent from neighboring properties where dry cleaning, auto repair and other uses of PCE and TCE occurred.

To address a current or potential future indoor air risk, an effective solution is to install a protective vapor barrier under a building. Vapor barriers are particularly cost-effective

when incorporated into new construction. Again, involving the right consultant is critical, since states vary in their requirements for such vapor barriers, which involve more than the typical moisture barrier used in building construction.

For example, materials must be used that will not degrade in the presence of solvent. Depending on the circumstances, it may be prudent, or even a legal requirement, to install a passive vapor barrier in a way that allows it to be easily converted into an "active" system in the event a higher level of protection is required in the future. Note that using a vapor barrier to cut off migration of contamination into a building may result in a requirement to impose a legal restriction on the property to ensure that the vapor barrier remains protective.

Finally, property owners and anyone else responsible for solvent contamination will want to explore liability considerations and take advantage of any liability protection afforded under state or federal law.

In conducting due diligence, prospective purchasers will want to pay particular attention to whether solvent found on a property has migrated into buildings with tenants, or onto abutting properties, creating a third-party liability risk, particularly where tenants or abutting properties are residential.

Due diligence efforts should also identify abutting properties with releases that can migrate to and impact buildings on the property to be purchased. Your legal adviser can also help you determine whether environmental insurance products are available to mitigate liability risks.

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