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RIDEM's revised hazardous materials rule makes arsenic levels in soil now manageable

dh Hazardous Materials



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When the R.I. Dept. of Environmental Management (RIDEM) promulgated rules governing the assessment and remediation of hazardous materials in 1996, numerical cleanup standards were developed for arsenic and numerous other contaminants. The standards for shallow soil were based on human health risks associated with direct exposure to tainted soil in both residential and commercial or industrial settings.

Site-specific releases of arsenic that impact soil are typically attributable to leaching of arsenic-containing wood preservatives and application of certain herbicides and pesticides. Unfortunately, arsenic and other elements included in this hazardous materials list also occur naturally which made it difficult at times for RIDEM to determine whether low concentrations at a given site were the result of the natural geology, neighborhood-wide urban fill, or a specific contaminant release. This article briefly describes recent changes to RIDEM's arsenic policies that may allow owners of arsenic-impacted properties for-

merly under RIDEM's jurisdiction to achieve full compliance with RIDEM's regulations and release the property from any related land use restrictions.

Problems with Arsenic

The original arsenic standard for residential properties was 1.7 parts per million (ppm) and 3.8 ppm for commercial/industrial properties. Although the arsenic standards were developed based on the average concentration of naturally occurring arsenic as measured at various sites across the State, the standards were slightly greater than the federal risk-based level.

The original arsenic standards became problematic when soil testing, conducted as part of environmental due-diligence site assessments, frequently detected arsenic at levels exceeding RIDEM's standards. Although arsenic levels may have been within the range of naturally occurring arsenic, they immediately became jurisdictional to RIDEM and the burden of proof that they were "background" and not from a contaminant release became the owner's responsibility.

To achieve compliance with RIDEM rules and proceed with the property sale, property owners were required to conduct a study of background arsenic levels by testing dozens of soil samples or mitigate the problem by either: **1)** excavating the arsenic-tainted soil and disposing of it at a licensed facility, or

2) capping the soil with two feet of clean fill or an asphalt surface. Unfortunately, although the soil-capping alternative would eliminate the risk of exposure and reduce off-site disposal costs, this remedy also entailed the recording of an environmental land use restriction (ELUR) in the Land Evidence Records of the town where the parcel was located. ELUR restrictions often precluded excavation or new building construction on the property and even subsurface utility repairs required advanced notice to RIDEM. An additional ELUR-related burden was the requirement to have an environmental professional annually inspect the property for compliance with the ELUR conditions and submit a report to RIDEM.

A New Approach

By the late 1990s RIDEM became aware of the magnitude to which the arsenic policy was impacting R.I.'s commercial and industrial real estate industry and formed a Waste Site Streamlining Task Force in 2001 to review its site remediation programs including its arsenic policy. By utilizing an alternative statistical approach to estimating the range of expected background arsenic concentrations across the State (based on the 95th percentile upper confidence limit), a more representative average background concentration of 7 ppm was calculated for arsenic in soil. Consequently, since RIDEM's objective

is not to regulate naturally occurring materials, the regulations and policies governing arsenic in soil were changed.

The revised rule is detailed in Section 12.0 of RIDEM's Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases. Properties are considered in compliance with the rule if laboratory testing results for the minimum number of soil samples meets the following criteria: **1)** the average soil arsenic concentration is 7 ppm or less, **2)** no greater than 10% of sample results exceed 7 ppm, and **3)** no one sample is greater than 15 ppm. An important caveat to this rule is that arsenic must be the *only* contaminant detected at a property.

An Opportunity

The revised arsenic policy is a great improvement to the Remediation Regulations and removes RIDEM jurisdiction from the vast majority of properties containing naturally occurring arsenic. For properties formerly jurisdictional to RIDEM solely due to the presence of arsenic in soil, a self certification process now exists wherein an ELUR Release Form documenting compliance with the new arsenic standard is recorded in the applicable town's Land Evidence Records.

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