

Why Can't the Landfill be Left the Way It Is?

The Department determined that closure of the landfill is needed because the following threats to human health and/or the environment were found:

- *Trash and refuse is present near the surface with minimal or no cover; also the current topography does not adequately manage runoff.*
- *Existing soils exceed the RIDEM Residential and Industrial/Commercial Direct Exposure Criteria for the following hazardous substances: arsenic, lead, benzo (a) pyrene, benzo (b) fluoranthene, and chrysene.*
- *Soil sampling showed existing soil exceeds the RIDEM leachability criteria for trichloroethene, tetrachloroethene and cis-1,2-dichloroethene.*
- *Groundwater sampling of on-site wells shows it exceeds the RIDEM GA standard for barium, benzene, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride.*
- *Soil gas results indicate elevated levels of trichloroethene, 1,1,1-trichloroethane, toluene, 1,1-dichloroethene and 1,1,2-trichlorotrifluoroethane on the central portion of the landfill.*

What is being done at the site?

The approved remedy for the Site consisted of the following elements:

- *Trucking onto the site shaping and grading soils that meet RIDEM Industrial/Commercial Standards to create adequate slopes under the final cap. They have also used uncontaminated soil from the Newport Navy base with naturally occurring arsenic above 7 mg/kg but below 40 mg/kg (parts per million).*
- *A final cap consisting of two feet of clean soils meeting the RIDEM Residential Direct Exposure Criteria.*
- *Placement of a Deed restriction (an Environmental Land Usage Restriction or ELUR) on the property preventing disturbance of the cap or residential development without written approval of the Department.*
- *Quarterly monitoring of groundwater and soil gas.*

Are the Arsenic Levels at the Landfill Safe?

The Department has carefully examined the proposed levels of soils with naturally occurring arsenic and believes them to be consistent with Department standards for similar materials as explained below (quoted from our decision of March 2011):

The proposal is to accept, among other soils already approved, soils containing naturally occurring arsenic. Levels proposed are similar to naturally occurring levels in Aquidneck Island. Aquidneck Island is characterized by high arsenic levels relative to most of the state due to the fact that it is underlain by metasedimentary rocks of the Rhode Island Formation as opposed to the felsic igneous rocks that underlie most of the rest of the state. Therefore the characterization of the soils as "contaminated" is not accurate as the arsenic was the result of natural deposition processes several hundred million years ago.

The Rhode Island House of Representatives "Special Legislative Commission to Study Naturally Occurring Arsenic in Soil", as reported in May 2008 dealt with the issue of naturally occurring arsenic, particularly on Aquidneck Island. A number of the members and those who gave testimony, including the Town of Middletown, took issue with the Department's Remediation standard of 7 mg/kg (parts per million). They felt in addition to being inconsistent with other standards (as discussed below) they were unrealistic and unreasonable. The commission found that the cleanup standard of 7 mg/kg had a negative economic, environmental and quality of life impact that disproportionately affected the

residents of Aquidneck Island. The report is contained in [Attachment F](#). As a result of the Commission's findings, the Department proposed revised standards in its Remediation Regulations that were released for public comment in December of 2010. These allow for the presence of arsenic in residential soils (either naturally occurring or from man-made sources) at a level of 43 mg/kg with very minimal standards as explained in Rule 12.04 of the draft regulations (6" of clean soil and some notification-though not necessarily an Environmental Land Use Restriction or soil blending). Levels above 43 mg/kg are considered acceptable with 2 feet of cover and an Environmental Land Use Restriction.

Given the proposed regulations above, the Department spoke in the workshop for this site of its concern of being consistent. It is very hard for the Department to argue that 43 mg/kg is safe in a residential setting with 6" of cover but that a landfill next to that resident with an average of 20 mg/kg, mixed with other soils and covered with 2 feet of fill and an Environmental Land Use Restriction (ELUR), represents a danger to the health of residents nearby. The Department went so far as to read the upcoming public hearing on the Draft Remediation Regulations into the administrative record of the hearing. This was so commenters could either object to the new standards or explain why that regulatory standard, and the findings of the Commission it was based on, should not apply to this site. The only comment received on this issue was from Representative O'Neil (District 59), Co-Chair of the Special Legislative Commission to Study Naturally Occurring Arsenic in Soil. Representative O'Neil made it very clear that the Department's consideration of the BUD did not deviate from the recommendations of the Commission except to the degree that it is more stringent than what the Commission recommended. This was because the Department required type 3 standards (2 feet of soil with and ELUR) while only allowing the applicant to bring in soils that meet the type 2 contaminant levels (15-43 mg/kg).

Other important regulatory standards are the Compost regulations (Solid Waste Regulation #8). These set a limit of 41 mg/kg in Class A compost which its uses are unrestricted. Class A compost is considered safe enough that it can be (and is) sold or given to homeowners for gardening, lawn application and landscaping, as well as, applied to public parks. Class B compost, with levels of arsenic up to 75 mg/kg can be used in more limited applications such as agricultural uses or public lands, provided certain time limits are met between application and public access

In summary, many commenters have concluded, that soils with arsenic levels of 20 mg/kg, underneath a 2 foot cap are a threat to human health and the environmental. The Department has already promulgated standards to allow unrestricted residential use of compost with 41 mg/kg and has proposed standards to allow levels up to 43 mg/kg in residential soils with only 6 inches of cover