

REVISED  
PHASE II WORK PROPOSED FOR GM LINDEN ROAD LANDFILL

1. The groundwater flow direction is still somewhat uncertain since it was mentioned in the report that the wells may not have been at equilibrium when the water levels were measured. The water levels should be measured again and mapped.
2. Some of the sampling results may have been due to groundwater mounding on the site. However, no true upgradient wells away from the influence of the landfill were provided to determine background water quality. There are also no wells downgradient off the site to check for plume migration. A few more wells, both shallow and deep, should be installed upgradient and downgradient off the landfill site.
3. Substantial amounts of fly ash, oil, and black sediment with a chemical odor was mentioned in the upper parts of many of the borings, especially 3S, 2D, and 8D. Wells should be installed in these locations and at these levels, and water and sediment samples should be taken. (The perched water table should make this possible.)
4. Oil wasn't sampled for in the 1982 sampling even though it is an important contaminant on site. No sampling was done for volatile hydrocarbons such as toluene. No sampling was done for dissolved metals and ions to determine what contaminants are actually traveling in solution. All the wells, including newly installed ones, should be sampled for pH, oil, total and dissolved metals and ions, purgeable halocarbons, and purgeable aromatic hydrocarbons.
5. The cadmium, chrome, and selenium laboratory detection limits are higher than the EPA maximum limits for these metals in drinking water. As a result, the 1979 and 1982 sampling results are inadequate in regards to these three metals. The re-sampling for total and dissolved metals proposed in #4 above should include analysis for cadmium, chrome, and selenium with detection limits substantially lower than the EPA maximum limits.
6. The detection limit for cyanide is higher than the EPA recommended limit but less than the EPA mandatory limit. When re-sampling for cyanide, the laboratory detection limit should be below the EPA recommended limit.
7. The re-sampling should also include analysis for polychlorinated biphenyls, organochlorine pesticides, and other specific phenol compounds as included in DNR organic scans #4 and #8. It is necessary to determine the specific phenol compounds present in order to determine how safe the water is to drink and to make any predictions about the environmental fate of the compounds.

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