

# CENTRAL LANDFILL PEER REVIEW

## OPERABLE UNIT TWO

August 31, 1995

### Introduction

The purpose of this Peer Review is to get some input to the operable unit 2, off-site ground water investigations and risk assessment currently planned for the Central Landfill Site. I've summarized the issues we wish to discuss in the handout. Some of these issues might not be clear at this point but hopefully they'll be a lot clearer after the very short Site briefing I've prepared for you.

### Brief Site and Area Description:

1.) The Central Landfill Site is an active municipal landfill site owned and operated by the RISWMC. Close to 90% of the state's non-hazardous solid waste is disposed of at the Site. Currently 154 acres have been licensed for landfilling. A license is pending for landfilling an additional 56 acres.

2.) The area surrounding the site is composed of undeveloped property, residential property and commercial/industrial property (see Figure 2). The state legislature required the RISWMC to purchase all residentially zoned property within 2000 feet of the landfill and operations area. The total acreage within this buffer zone is 1,310 acres. The RISWMC owns 870 acres (159 residential lots and 5 industrial lots) or 66 percent.

3.) The groundwater in the area is primarily GA. I'm not sure how the other New England States classify their ground water, but in RI their are basically three classifications.

GA = suitable for drinking water use without treatment;

GB = not suitable for drinking water use;

GC = more suitable for certain waste disposal practices than for development as a drinking water supply.

If there are pollutant concentrations greater than the groundwater quality standards for the applicable classification it is designated a non-attainment area (e.g., GA-NA or GB-NA)

4.) Public water has been made available to all residential and commercial/industrial properties which could have potentially been impacted by the landfill. It has not been demonstrated that all users within the area have been connected and/or abandoned the use of their private wells (see Figure 3).

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## **Current Approach for the OU2 RI/FS**

- 1.) The purpose of the OU2 Remedial Investigation studies are to determine the extent of ground water contamination and to evaluate the impacts the landfill has had to off-site surface waters and sediment.
- 2.) A public health and ecological risk assessment will be performed using the collected surface soil, surface water and sediment data collected.
- 3.) We currently have plans to evaluate the present and future human health risks associated with the use of off-site ground. Present risks will be evaluated using tap water samples. Future risks will be evaluated using ground water data collected from existing residential wells we hope can be developed into monitoring wells or from new monitoring well construction.

## **Issues for Discussion**

1) The ground water risk assessment performed during OU1 used data from monitoring wells which were relatively close to the toe-of-the-slope of the landfill and provided the justification for our source control remedy. OU2 will determine the extent of ground water contamination. Do we need another risk assessment to justify additional remedial actions (e.g., institutional controls) for off-site groundwater, or will the exceedence of an MCL in any down-gradient area be adequate justification for action? Note: since OU1 was a source control remedy, no clean-up levels were established for groundwater, however, a performance standard was developed. Our performance standard is that the source control remedy shall prevent groundwater with contaminant concentrations greater than MCLs from migrating beyond the toe-of-the-slope of the landfill and prevent the degradation of surface water below state criteria.

If we perform another ground water risk assessment, we may not be able to justify any additional action under CERCLA even if MCLs are being exceeded, i.e., we may not have carcinogenic risks  $> 10^{-4}$  or a hazard index  $> 1.0$ .

- 2.) Does it make any sense to consider additional remedial actions (other than institutional controls) for groundwater before the effectiveness of the source control remedy can be evaluated?
- 3) If it doesn't make sense to consider additional remedial actions for groundwater, is it possible to issue a final decision document or will OU2 be an interim ROD or some other form of decision document?
- 4) How may the other sources of contamination in the area complicate the issues?