



C-746-U Landfill Groundwater Assessment



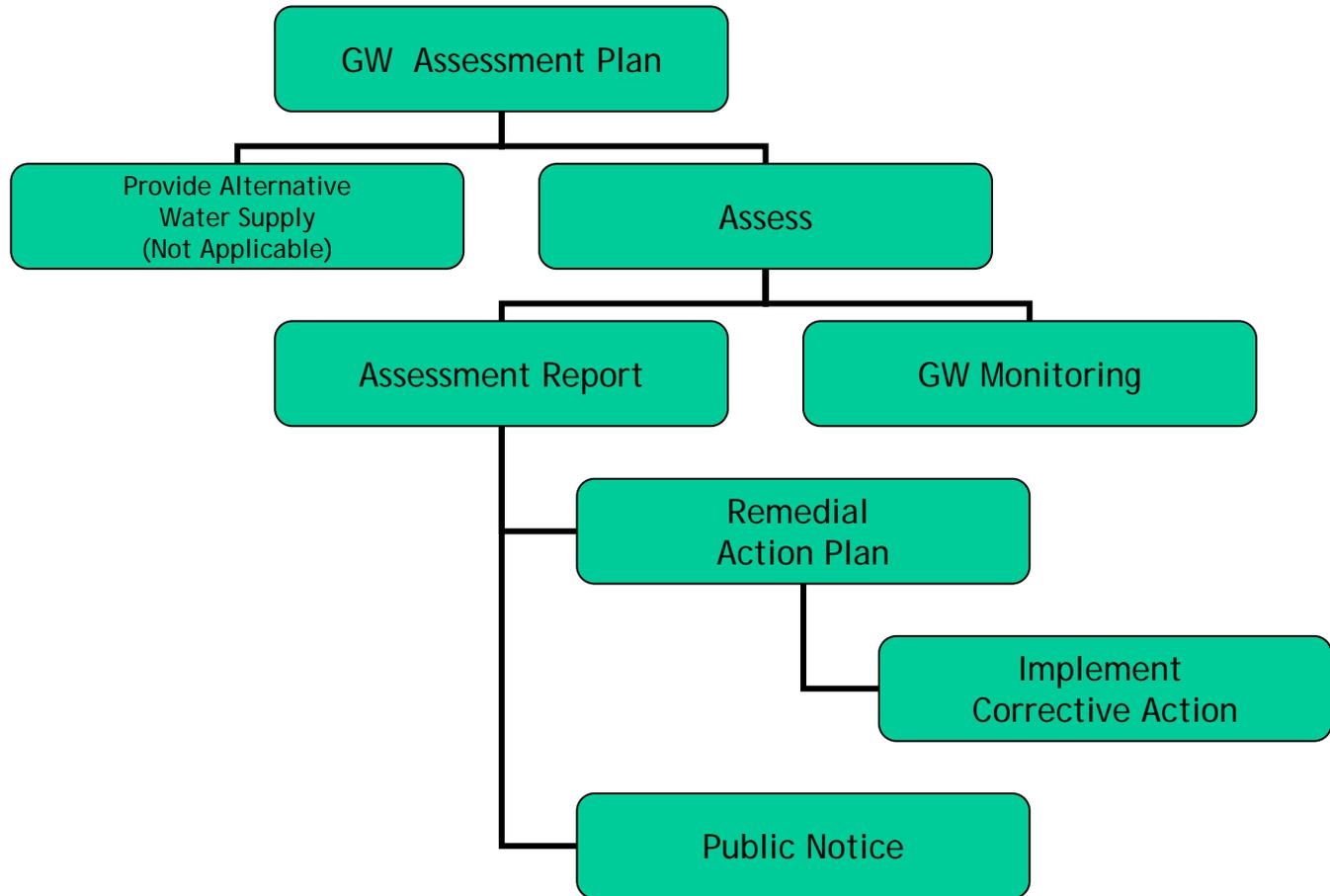
C-746-U Landfill Groundwater Monitoring

- On August 30, 2006, DOE received a letter from KDWM in response to statistical exceedence reports submitted to KDWM
- The letter required DOE to submit a revised Groundwater Assessment Plan addressing previous exceedences for the C-746-U Landfill wells
- The letter required the assessment plan to be submitted within 30 days



C-746-U Assessment & Corrective Action Flow Chart

401 KAR 48:300 Section 8





C-746-U Permit Conditions

Groundwater Monitoring Exceedence Evaluation Requirements

T-12 page 125 of the C-746-U Solids Waste Permit

- **Monitoring:** The operator of a solid waste site or facility shall be required to prepare and submit a groundwater assessment plan if laboratory analyses of one (1) or more monitoring wells at the site or facility shows the presence of one (1) or more parameters listed in 40 CFR 302.4, Appendix A as of October 1988, above the maximum containment level (MCL) in 401 KAR 31:031 or significant increase over naturally occurring background levels for parameters that have no MCL. For parameters that have no maximum contaminant levels a significant increase over background shall be determined using a statistical test as specified in Section 9 of 401 KAR 48:300. [401 KAR 48:300 Section 8(1)]



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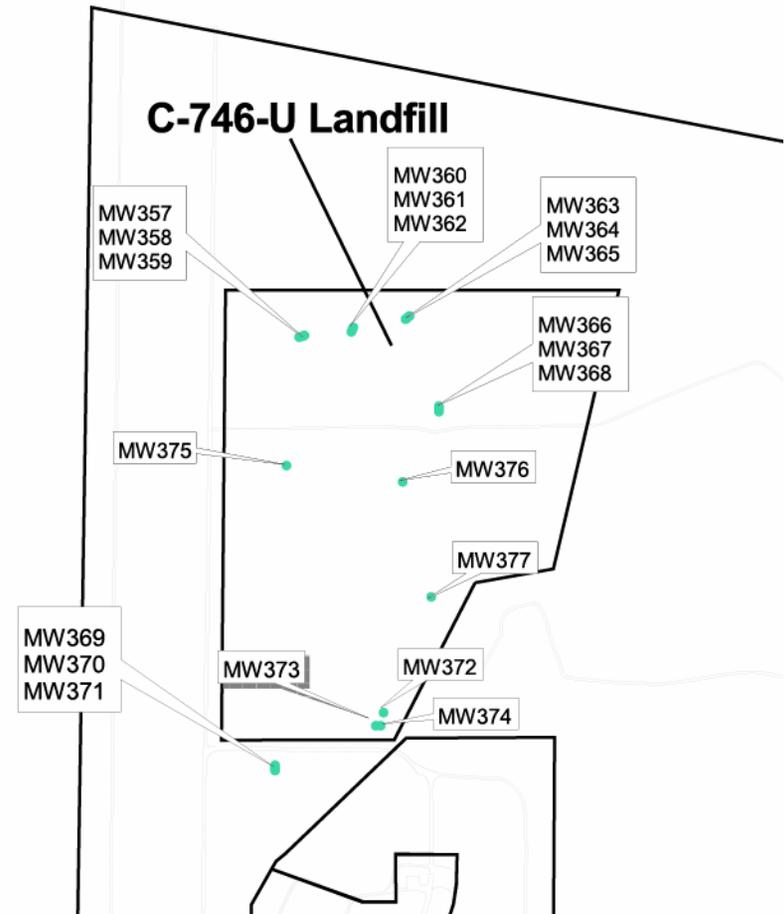
- Groundwater is monitored for compliance in the upper Regional Gravel Aquifer and the lower Regional Gravel Aquifer
- Monitoring wells are sampled quarterly
- Results are compared to Maximum Contaminant Levels (MCLs) and statistically analyzed for increases
- Exceedences are reported to the state within 48 hours of completion of verification and technical review



C-746-U MCL and Statistical Exceedences

Monitoring Wells (12) with Exceedences

- Gross Beta (MCL): MW372 (URGA), MW373 (LRGA)
- Carbon Disulfide (Statistical): MW362 (UCRS)
- Chemical Oxygen Demand (Statistical): MW358 (LRGA)
- Manganese (Statistical): MW366 (URGA)
- Sulfate (Statistical): MW359 (UCRS), MW362 (UCRS), MW365 (UCRS)
- Tc-99 (Statistical): MW361 (LRGA), MW372 (URGA), MW373 (LRGA)
- PCBs (Statistical): MW361 (LRGA), MW363 (URGA), MW365 (UCRS)
- Radium-228 (MCL): MW362 (UCRS), MW363 (URGA), MW364 (LRGA), MW369 (URGA)
- Total Organic Carbon (Statistical): MW358 (LRGA)
- TCE (MCL): MW370 (LRGA), MW372 (URGA), MW373 (LRGA)





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- DOE requested an extension of the Groundwater Assessment Plan development in order to
 - Resample the twelve wells for the extension list of parameters during the October 2006 routine sampling event (to avoid costs of duplicating some parameters that are required quarterly)
 - Obtain results from this sampling, validate the results, and incorporate them into the development of the Groundwater Assessment Plan
 - Coincide with the submittal of the routine groundwater data from the October 2006 sampling event (February 2007)