Managing Leachate Recirculation and Bioreactor Landfills

The design and operation of municipal solid waste (MSW) landfills as bioreactors continues to be a topic of great interest in the solid waste community. This approach has the potential to be a more sustainable, economical, and environmentally sound method of managing MSW relative to traditional sanitary landfilling practices. Despite the potential benefits, leachate recirculation and bioreactor (LR&B) landfills can pose a greater risk to human health and the environment if not designed, constructed, and operated in a safe and controlled manner. Training is essential to ensure regulatory compliance and environmental safety, managers and operators of LR&B landfills. SWANA offers this course as preparation for the Leachate Recirculation and Bioreactor Landfills Certification exam or as a standalone course.

Participants will gain knowledge of:

- How LR&B landfills compare to traditional landfills
- Fundamentals of LR&B landfill operations
- Pros and Cons of LR&B landfills
- Technology options for design, construction, and operations
- Methods for achieving bioreactor and leachate treatment conditions
- Tools and techniques for monitoring and controlling LR and bioreactors landfills
- Overview of regulatory, environmental, and safety issue

Who Should Attend

Owners and operators of MSW landfills practicing or considering leachate recirculation or bioreactor techniques. Landfill design engineers, regulators and other professionals interested in gaining a complete understanding of how to manage and operate leachate recirculation and bioreactor landfills will also benefit from attendance.

Course Content

The comprehensive course manual presents detailed information on these topics, and more along with supplemental images, graphs, and examples. It serves as a reference tool for participants during class and on the job.

- Overview of LR&B Landfills
- Operation and Monitoring of Bioreactor and LR Landfills
- Enhancing Waste Decomposition and Stabilization
- Objectives of Operations and Monitoring
- Landfill Gas Systems Operation and Monitoring
- Aeration Systems Operation and Monitoring
- Monitoring Parameters and Techniques
- Liquids Addition Systems
- Liquids Systems Operation and Monitoring
- Air Addition Systems
- Landfill Gas Extractions Systems
- Recordkeeping, Reporting and Safety
- Other Considerations

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