LANDFILL LEACHATE

Various Treatment Requirements
The leachate is generally characterized by high TDS (dissolved solids), heavy metals, high BOD and COD, high ammonia, and color. Discharge is to ground surface water. The treatment requirements are extremely stringent. In general, the treatment requirements include removal of metals, BOD, COD, color, TDS and total nitrogen.

This type of system was chosen for various reasons:

- The system reduces high levels of background COD and TDS better than other systems
- The MBR system allows for operation at higher levels of mixed liquor solids, which allows for lower levels of sludge production and a smaller treatment tank
- The system operates at longer sludge ages, which allows for a better acclimated sludge, reducing COD levels in the discharge and thereby improving RO performance
- The system operates with less fouling than competitive systems when used in highly fouling (high TDS) streams, such as landfill leachate
- Double pass RO to achieve the demanding discharge requirements
- Long sludge age and high MLSS reduces color significantly

Advantages:

- Performance adjustable RO
- Smaller footprint
- Lowest levels of effluent contaminants
- Automated system
- Out-of-basin membrane system is easy to maintain and clean
- Operators not exposed to mixed liquor when maintaining system
- UF tubular membranes are rugged and long lasting
- Technology has been used in leachate applications since 2000