



Long Term Protection for PFAS Contaminated Wastes

Federal and State agencies including DOD and USEPA have been working diligently to evaluate viable management alternatives for disposition of waste materials containing PFAS. Mobility of PFAS molecules in various wastes requires that technologies selected for disposal ensure liquids (including landfill leachates) remain secure without the potential to impact ground water or the local environment. Agencies are also seeking waste management solutions that have sufficient national capacity to handle the long-term needs of government and industry.

A proven alternative which meets these criteria is secure disposal at remote desert RCRA permitted Subtitle C sites with "Zero Discharge" offsite. RCRA disposal facilities located in desert environments offer long term protections due to the following characteristics:

- Superior Geological Conditions, Deep Groundwater, Massive Clay Deposits
- Remote Settings with Low Population Density
- No Encroachment, Limited Projected Population Growth and Development
- Specifically Designed for Secure Long-Term Disposal
- No Discharges Offsite of Leachate, Storm Waters or Other Liquids
- Stringent Subtitle C Facility Designs Complementing Existing Natural Protections
- Arid Desert Environment Resulting in High Net Pan Evaporation Rates
- Zero Discharge Ending the Cycle of PFAS Impacts in the Environment

US Ecology operates two (2) RCRA Subtitle C facilities in Idaho and Nevada that meet the above criteria and have substantial disposal capacity. Both sites are regulated by federal and state laws and regulations. Superior landfill designs currently in place include double synthetic and clay liners, trench cap barriers, and leak detection systems.

US Ecology offers an unequaled combination of high-level design and natural protections for the secure disposal of PFAS wastes including AFFF concentrates, rinsates, groundwater, solid or liquid remediation wastes, contaminated soils, debris, bio solids, plating bath solutions and other materials.

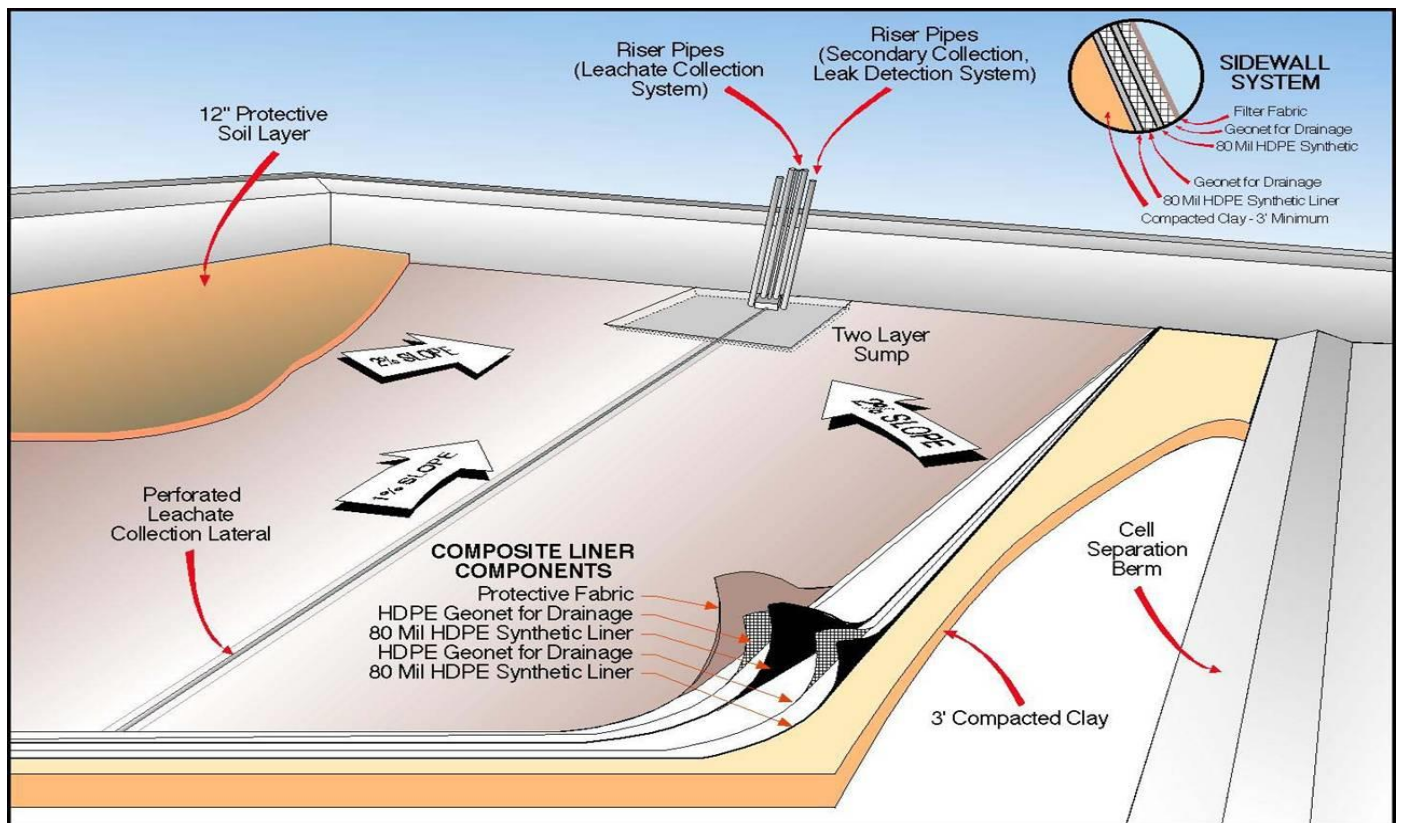
Natural Protections of Desert Locations Enhance Subtitle C Landfill Design

US Ecology's disposal sites in Grand View, Idaho and Beatty, Nevada offer the securities of RCRA Subtitle C design and construction with the added natural protections of being in remote desert locations. Both facilities are in states that highly support the operations as necessary assets to address environmental cleanup throughout the country.

Subtitle C disposal cells must meet specific design criteria:

- Double or triple synthetic liners
- Multiple leachate collection and removal systems
- Leak detection systems
- Run on, runoff, and wind dispersal controls
- Construction quality assurance program

The design, construction and quality assurance requirements of Subtitle C Landfills establish the most stringent performance to prevent waste placed in the landfill from impacting the environment. Subtitle C landfill cell requirements are shown below.



US Ecology Desert Facilities in Idaho and Nevada

Arid climates, low annual rainfall totals and high net evaporation rates limit leachate generated in desert disposal facilities. US Ecology sites are located in the driest parts of the country.



Site Evaluation Criteria for Desert Sites

US ECOLOGY SITE INFORMATION		
Site Evaluation Criteria	Idaho Desert Site	Nevada Desert Site
Zero discharge of leachate offsite	yes	yes
Depth to local groundwater aquifer	3081 ft	300 ft
Located in a remote, sparsely populated area?	yes	yes
Nearest town	10.5 miles	10 miles
Annual rainfall / net pan evaporation rate	7" / -53"	4" / -78"
Geology	thick clay	caliche
Current Permitted Capacity	10.1 mil yards	7.9 mil yards
Estimated life of Permitted Capacity	212 years	32 years
Rail served	yes	no
Distance to major metropolitan area (> 1M population)	321 miles	118 miles

US Ecology Idaho



US Ecology Nevada

