# Safe and Secure Solutions for PFAS-Contaminated Wastes



Sustainability in Action

Federal and state agencies including the U.S. Department of Defense and EPA have been working diligently to evaluate viable management alternatives for disposal of waste materials containing per- and polyfluorinated substances (PFAS). The mobility of PFAS molecules in various wastes requires that disposal technologies ensure liquids (including landfill leachates) remain secure without impacting 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. These types of facilities offer long-term protections due to the following characteristics:

- Superior geological conditions, deep groundwater and massive clay deposits
- Remote settings with low population density
- No encroachment, limited projected population growth and development
- Specifically designed for secure long-term disposal
- Stringent Subtitle C facility designs complement existing natural protections
- Arid desert environment results in high net pan evaporation rates
- Zero discharge ends the mobility cycle of PFAS and its impact on the environment



To learn how we can help you reduce waste, save money and achieve compliance, call **800.592.5489** or visit **RepublicServices.com**.

In 2021 and 2022, Republic Services acquired three legacy Environmental Solutions companies: US Ecology, ACV Enviro and ECOFLO. These companies now operate under the Republic Services name.

Republic Services operates two RCRA Subtitle C facilities in Idaho and Nevada that meet the aforementioned criteria and have substantial disposal capacity. Both sites adhere to 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.

Republic Services 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

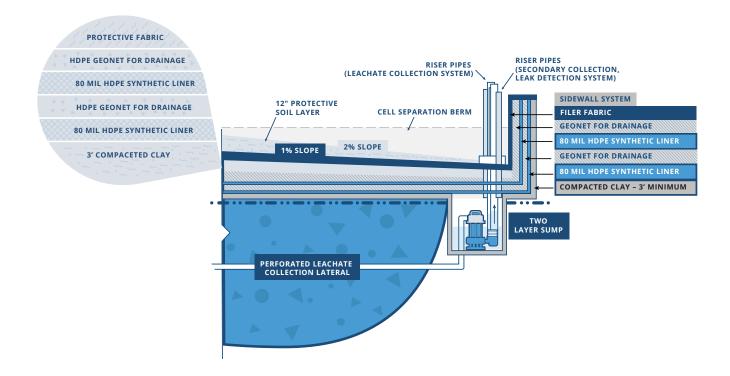
Republic Services' disposal sites in Grand View, Idaho, and Beatty, Nevada, offer the securities of RCRA Subtitle C design and construction with the added natural protections of remote desert locations. Both facilities are in states that highly support the operations as necessary assets to address environmental 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 landfill waste from impacting the environment. Subtitle C landfill cell requirements are shown below.



## **Grand View Facility and Beatty Facility**

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



#### **Site Evaluation Criteria for Desert Sites**

Republic Services Site Information		
Site Evaluation Criteria	<b>Grand View Facility</b>	Beatty Facility
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



## **Grand View Facility**



# **Beatty Facility**

