

What forms of LLRW waste are disposed of at WCS?

WCS is a one-stop location for treatment, storage and disposal of low-level radioactive waste (LLRW) and mixed low-level radioactive waste. LLRW includes items that have become contaminated with radioactive material or have become radioactive through exposure to radiation. LLRW is generated at facilities such as power plants, oil and gas operations, hospitals and research institutions.

What other types of waste are disposed at WCS?

In addition to LLRW waste, WCS is permitted/licensed to take RCRA hazardous waste, TSCA waste (PCBs) and naturally occurring radioactive materials (NORM).

Why was Andrews County selected as the location for a radioactive waste site?

The WCS site in Andrews County, Texas was selected due to its unique geological features and ideal climate. The site is located atop a ridge of 600-foot thick red-bed claystone in a relatively remote, semi-arid, sparsely inhabited area of far west Texas, with the nearest residence approximately 3.5 miles to the west in New Mexico and an average annual rainfall of less than 16 inches. No significant erosion has taken place at the site for the past 60,000 years and there is no reason to expect significant erosion at the site during the next 60,000 years.

Why is the WCS site a better choice for disposal than other locations?

Some facilities must dispose of waste above ground due to the location of the water table. Above ground construction makes erosion more likely to occur. At many sites there is no natural barrier protecting the groundwater. At the WCS site, the geology allows for below-ground disposal. The natural claystone barrier is 600 feet thick and is less porous than concrete. WCS also has low seismic risk compared to other parts of the country, and no surface water in the vicinity.

What kind of environmental monitoring is performed at WCS?

WCS has an extensive program with more than 400 monitoring wells to ensure the safety of the community and environment at all times. WCS conducts the environmental and effluent monitoring programs to detect any possibility of potential impact to human health and the environment and to demonstrate compliance with applicable regulatory limits. These programs are designed to monitor potential pathways of exposure related to the site's activities. Under these programs, WCS monitors the primary pathways of potential exposure: air, soil and ambient radiation. Additional pathways monitored are groundwater, surface water, wastewater, sediment, vegetation and fauna. WCS also operates a meteorological monitoring program that supports several of the environmental monitoring requirements. Environmental media and effluent samples are routinely collected.

Who regulates the WCS facility?

The State of Texas maintains active oversight of the WCS site and operations through the Texas Commission on Environmental Quality (TCEQ). State regulators are on site each day observing processes and ensuring protocols comply with state regulations. The Nuclear Regulatory Commission (NRC) ensures that TCEQ oversight is in compliance with Federal standards. The Department of Energy also provides oversight of certain operations related to DOE waste.

What kind of safety precautions are in place?

WCS is committed to providing the safest and most secure waste treatment, storage and disposal services. Aside from the legal and regulatory protections in place, WCS pre-approves each individual shipment and container prior to the waste arriving onsite. Radiological surveys accompany the shipment and once the shipment arrives, WCS performs additional radiological surveys of the shipment and/or containers to ensure they are compliant with the license(s) and permit(s) and no external contaminants are present. WCS continues to support efforts to ensure that employees and the public are safe from even a small chance of exposure to radioactive materials. We provide our low-level waste customers with a much-needed service in the most robust facility in the country, and with an exemplary safety record.

How is the waste transported to WCS?

The entire disposal process is tightly regulated, beginning with the transportation of the waste which is overseen by the U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Transportation. Waste is transported on specified routes via road or rail and, where appropriate, in casks designed to withstand impact, exposure to heat and puncture. Strict controls, rigorous oversight and extensive training have made the shipment of low-level radioactive waste a safe, routine part of U.S. commerce for more than 50 years. Radioactive waste has been arriving at the WCS site for over a decade without a single safety or environmental issue.

Are people in the area at risk of radiation exposure from WCS?

No. The average exposure for WCS radiological employees is 8% of the NRC regulatory limit of 5 rem/year for radiological workers. For WCS non-radiological employees, exposure while working on the WCS site is less than 10 mrem/year (equal to one chest X-ray) or one tenth of the NRC regulatory limit of 100 mrem/year. WCS is continually monitoring and maintaining all exposures less than regulatory limits. Radiation exposure at the WCS site boundaries is well within regulations and indistinguishable from the region's natural background radiation level.

What is background radiation?

Radiation is a natural part of our environment and daily lives, and our bodies automatically manage our normal exposure. The normal exposure we all receive every day from "background sources" includes naturally occurring radon in our air, cosmic rays, radioactive rocks (granite) and soil, and even plants and food that are naturally high in potassium or other radioactive elements (bananas, carrots, avocados, Brazil nuts). The other normal background sources of radiation exposure are man-made, such as basic medical procedures and consumer products.

What is the economic benefit for Andrews and surrounding communities?

Both Andrews County and the State of Texas receive a significant percentage of the gross revenue from waste disposal activities. WCS makes quarterly payments to the state and county. Since operations began, Andrews County has received approximately \$12.6 million in fee revenues and the State of Texas has received approximately \$55.6 million of disposal fees. In addition, WCS has made over \$300 million in fixed-asset investments in Andrews County and the annual payroll at the site is over \$15 million (approximately \$280 million to date). As a good corporate citizen, WCS understands the importance of supporting local charitable organizations, sports teams, chambers of commerce and various other entities around the area.

Could the WCS site contaminate groundwater in the area?

WCS' site analyses unequivocally demonstrate that the limits of the Ogallala Aquifer lie northeast of the WCS licensed site and that there is no drinking water beneath the site. The Texas Water Development Board has confirmed through their own studies that the sites are not above or adjacent to a drinking water source. In addition, WCS has an extensive monitoring program with more than 400 monitoring wells to ensure the safety of the community and environment at all times, and files both monthly and quarterly reports to the TCEQ. The site was intentionally located atop a 600-foot thick bed of red claystone that is 10x less permeable than concrete and limits any horizontal groundwater travel to about 1 foot per 1,000 years.

With the increase in small induced earthquakes in the Permian Basin, how can you be sure the waste will remain secure?

WCS has conducted updated Probabilistic Seismic Hazard Analyses for the facilities and has taken into consideration background seismic activity (induced earthquakes) and the risk to the facility is still extremely low for the region. Configurations of disposed waste are extremely stable.