



# WHITE MESA URANIUM MILL

## Frequently Asked Questions

### ***CAN YOU TELL ME MORE ABOUT THE WHITE MESA MILL AND HOW IT OPERATES?***

The mill, originally licensed by the Nuclear Regulatory Commission (NRC) in August 1979, is authorized to receive, process, and possess uranium ore and **11e.(2) byproduct material** (11e.(2) refers to the paragraph in the Atomic Energy Act that defines a particular type of byproduct and waste material from the processing of uranium). White Mesa processes uranium ore and uranium-bearing alternate feed material to recover uranium oxide, also known as “yellowcake.” The composition, radioactivity, and disposal of 11e.(2) materials are strictly regulated by federal and state law. The NRC transferred its regulatory authority for mill licensing and permitting to the State of Utah in August 2004.

### ***WHICH LICENSES OR PERMITS GOVERN MILL OPERATIONS?***

The mill operates under a **ground water discharge permit** and **radioactive materials license** issued by the Utah Division of Waste Management and Radiation Control (DWMRC) and an **air-quality approval order** issued by the Utah Division of Air Quality (DAQ).

### ***IS IT TRUE THAT THE MILL IS OPERATING WITHOUT A LICENSE?***

No. The White Mesa Mill is operating under and complying with all current license and permit conditions. The mill submitted radioactive materials license and ground water permit **renewal applications** as required before the existing license/permit expired, meeting the regulatory requirements for a **timely renewal**. “Timely renewal” is the period beyond the original license expiration date during which a licensee can continue to operate without a renewed license until a final determination is made on the license renewal application.

### ***IF THE APPLICATIONS WERE SUBMITTED ON TIME, WHY HAS IT TAKEN SO LONG FOR DWMRC TO RENEW THEM?***

Review of the renewal applications involves multiple disciplines, including radiation safety, engineering, and hydrogeology. DWMRC scientists and engineers conducted an **exhaustive review of the license/permit renewal**, and after several years of thorough questioning of the mill operator and modifications to the original license renewal application, the division asked for **public comment** in 2011 on the proposed renewal. Members of the public raised a large number of concerns in their comments. DWMRC decided to address these concerns before issuing a final license renewal, so it gathered/evaluated new data and performed **an independent dose model** on the radiological impacts from airborne emissions from mill operations. The dose model showed the public would not be harmed from White Mesa’s operations. This modeling is part of the packet out for public comment.

### ***HAVE REGULATORY REQUIREMENTS AT THE MILL BEEN ON HOLD SINCE 2007?***

No. DWMRC has continued to address issues at the mill during the license review, including a large Corrective Action for ground water contamination. Over the past ten years, the agency completed three license amendments, implemented modifications and improvements to the mill’s **reclamation plan**, completed review and approval of corrective action plans for **nitrate** and **chloroform** plumes, and worked with Energy Fuels on the mill’s environmental monitoring program...all to ensure the mill is operating in a manner that protects the health and safety of the public and environment.

### ***WHAT ELSE IS DWMRC DOING TO ENSURE THE MILL IS MEETING REGULATORY REQUIREMENTS?***

DWMRC scientists and engineers perform approximately 20 onsite inspections each year to ensure compliance with license and permit requirements and the ground water corrective action plans. In fact, staff are onsite an average of 40 days per year. Energy Fuels is required to conduct and report on a wide range of environmental monitoring at the mill, including **ground water monitoring, effluent monitoring**, soil and vegetative sampling, **tailings wastewater sampling, spring and seeps sampling, chloroform monitoring**, and **nitrate monitoring**. DWMRC posts these reports, as well as the mill's reclamation plan, tailing cell construction and relining, background ground water quality reports, and alternate feed proposals, on its website at [deq.utah.gov](http://deq.utah.gov).

There is an extensive ground water monitoring network at the mill. Seventy-four monitoring wells are located on site and sampled for compliance purposes. Tailings wells are analyzed for 38 possible contaminants. The approved corrective action nitrate and chloroform remediation plans require Energy Fuels to pump the ground water and treat it by evaporation and/or use it as process water. Concentrations of both nitrates and chloroform have decreased since remediation began.

Monitoring wells show that the ground water contamination is contained within the mill site boundary. Particulate and air sampling, including radon monitoring, show results below regulatory limits. Based on meteorological data at the site, the prevailing winds in the area flow to the northwest and away from those living in White Mesa, reducing the possibility of even the most minimal public exposure to particulates and radon from mill operations.

### ***WHAT ABOUT THE ALTERNATE FEED MATERIAL FROM SEQUOYAH FUELS? IS THE MILL EQUIPPED TO PROCESS, STORE, AND DISPOSE OF THIS MATERIAL SAFELY?***

Yes, because the mill is licensed to take 11e.(2) material, and in 2002, NRC determined the material from Sequoyah Fuels was 11e.(2) material. In its amendment requests, the mill asked to process this material as an alternate feed for its uranium content. The White Mesa Mill is licensed to receive certain approved alternate feed material, but acceptance is dependent upon NRC guidance and criteria. When Energy Fuels proposed to receive and process alternate feed material from the Oklahoma facility, DWMRC contracted with URS Professional Solutions to prepare a **safety evaluation report (SER)** on the request. URS evaluated the environmental impacts of the alternative feed, including the ability of the mill to monitor and mitigate possible releases, the adequacy of the tailings cells for disposal of the processed feed, and the safety of temporary storage of the feed material on the ore storage pad. The report concluded that the proposed feed material could be handled safely by the mill's current monitoring/safety programs with the addition of specific operating procedures.

### ***WHAT IS THE MILL REQUIRED TO DO IF AN ENVIRONMENTAL RELEASE OCCURS?***

White Mesa Mill has an approved emergency response plan in place and has provided the appropriate notifications for incidents in the past. DWMRC also provides required notifications to the appropriate parties and encourages suggestions from the public on ways to improve the current notification process.

### ***DO THE RULES THAT GOVERN OPERATIONS AT THE WHITE MESA MILL ADEQUATELY PROTECT THE PUBLIC?***

NRC rules and regulations are subject to extensive research, review, and public input to ensure they protect public health and safety and the environment. Utah is an **Agreement State** with the NRC, and as such is **required** to implement and enforce these rules. When NRC granted Utah the authority to oversee the radioactive materials licensing at the White Mesa Mill in 2004, DWMRC had the staff and resources — more so than NRC — to ensure the mill complied with licensing requirements and implemented corrective actions for ground water contamination. While DWMRC cannot, by state statute, adopt more stringent environmental standards than federal law requires, it can and has committed significant time and attention to the White Mesa license/license renewal, upholding its promise to the people of Utah to use sound science and the rule of law to make decisions that safeguard the state's air, land, and water.