Plain Language Summary
Radioactive Materials License R05360
Renewal – Amendment Application

enCore Alta Mesa LLC has applied for renewal and major amendment of radioactive material license number R05360. The Alta Mesa Project produces a uranium product (also known as yellowcake) that is used by nuclear power generation stations to produce clean, safe reliable electricity for millions of Texans and Americans.

Applicant and Operator Name

enCore Alta Mesa LLC, a subsidiary of enCore Energy US Corporation

Type of Application

Renewal and major amendment of radioactive material license

Facility Name and Location

The facility name is the Alta Mesa Project and is located at 755 CR 315, Encino, TX 78353.

Type And Function Of The Facility

The Alta Mesa Project is a licensed in-situ recovery uranium mining operation. The overall operation consists of wellfields comprised of PVC cased water wells where oxygen may be added to the naturally-occurring groundwater which is circulated through the orebody and pumped to ion exchange facilities to recover the uranium mineral using the same process as a standard water softener. This recovered uranium will be further processed into the final product commonly known as "yellowcake." This yellowcake is transported to a conversion facility located out of state where it is further concentrated for eventual use as fuel for nuclear power generation stations to produce electricity for millions of Americans. Following completion of mining, the facility conducts groundwater restoration utilizing various restoration techniques including reverse osmosis treatment of groundwater. Wastewater associated with uranium mining and restoration phases are disposed of in waste disposal wells permitted by TCEQ. Following mining and restoration, the facilities are decommissioned and the land surface is reclaimed for eventual return to the landowner.

Type and Amount of Radioactive Material to Be Authorized

The existing form of radioactive material currently authorized for the Alta Mesa Project facilities is any form and the existing, volume and type of radioactive material currently authorized for the Alta Mesa Project facilities is unlimited quantities of natural uranium and byproduct material. This renewal and amendment application does not request any changes to the type, form or volumes of natural uranium and byproduct material.

Control of Radioactive Effluents and Radioactive Contamination

The Alta Mesa Project maintains a robust health physics and environmental monitoring program to ensure that the Project does not have the potential to cause an adverse impact on human health, the public or the environment. The comprehensive radiological protection and environmental monitoring program is described in detail in the application. Engineering controls and a management program based on the principles of As Low As Reasonably Achievable, or ALARA, provide assurance that impacts to employees, the public and environment have been and will continue to be negligible.

What types of radioactive effluents are managed?

The primary effluent is excess groundwater produced during mining. As required by TCEQ regulations, about 1 percent of the groundwater used for mining must be removed to minimize the potential for mine water migrating outside of the mining area. After the uranium mining is completed, water treatment is used to restore the groundwater quality within the formation which generates additional liquid effluent. Other types of liquid and solid effluents include liquid wastes produced by the processing plants and solid waste such as used filters and equipment used for uranium recovery and decommissioning activities.

Airborne effluents primarily consist of radon gas, a naturally occurring gas that is recovered with uranium during mining and restoration. Although most of the radon gas is recirculated and reinjected, a small amount may be released during operations. The monitoring programs discussed above include radon monitoring and this data documents that the facility related radon emissions have negligible impact on employees, the public and the environment.

How are the radioactive effluents managed?

During certain uranium processing steps, small amounts of radon gas may be released to the atmosphere. enCore Alta Mesa LLC monitors radon concentrations during operations within the facility and along license boundaries which document the low levels of radon in air even at short distances from the facilities. Liquid effluents associated with uranium mining, processing and restoration are disposed of in waste disposal wells permitted by TCEQ.

How will the facility prevent spills, leaks, and releases?

Mining solutions are contained within wellfields by withdrawing more water than is injected. This is verified by measuring water quality in monitor wells installed around each wellfield two times per month. Pipeline pressures are monitored, and pumps will automatically shut down if the pressure suddenly increases or decreases. Processing facilities are curbed to contain any potential spills or leaks. Personnel performing uranium recovery activities are rigorously trained in the safe operation of the facility to minimize the potential for upset conditions to occur.

How will the facility clean up spills, leaks, and releases?

Liquids captured within concrete containment curbs are collected and disposed of with other liquid waste in the TCEQ permitted disposal wells. Any soils potentially affected by spills are surveyed for radiological contamination and soils exceeding regulatory standards are removed and disposed of at a licensed disposal facility.