

TENORM WASTE REFERENCE SHEET

(Regulated radioactive material is 5 pCi/g.)

FST/Processing Facilities

Filter cake
Centrifuge sludge
Shaker residuals
Used filter socks/cartridges
Tank bottoms
TENORM contaminated equipment

Saltwater Disposal (SWD) Wells

Produced/production water tank bottoms
Used filter socks/cartridges

TENORM Impacted Equipment

Loaders/skid steers used at FST/Processing Facilities
Loaders/skid steers used for soil remediation
TENORM waste holding bins
Valve assemblies
Used well heads
Filter pods
Heater-treater tubes (fire tubes)

Exempt: NORM (non-regulated materials)

Produced/Production water
Produced/Production water spills and impacted soils
Drill cuttings
Drilling mud
Frac flowback without tracer materials

Decontamination

Pipe scale
Pigging waste
TENORM contaminated soils
TENORM contaminated equipment
Used filter socks/cartridges
Used HEPA filters

Tank Batteries

Crude oil tank bottoms
Produced water tank bottoms
FST/Processing facility tank bottoms

Other

Ceramic proppant as a waste material (i.e., spilled on the ground or a waste product).

Note:

- TENORM impacted waste and materials must be hauled by a licensed and permitted transporter.
- Oil & gas companies, considered general licensees, can haul their own contaminated pipe and equipment from one company-owned site to another company-owned site in ND. Third-party transporters must be licensed.
- All TENORM impacted equipment and materials must be disposed of at a licensed facility. Commonly used facilities include:
 - Secure Energy 13 Mile Landfill (ND): 50 pCi/g and below.
 - KT Enterprises (ND)
 - Oaks Disposal (MT): 50 pCi/g and below.
 - Clean Harbors (Deer Trail, CO):
 - Oil & gas field wastes: 12,200 pCi/g or below of Ra-226 & Ra-228 in pipe scale or 6,000 pCi/g in other waste forms.
 - Other wastes not related to oil & gas: 2,000 pCi/g or below of total radionuclides in other wastes with no greater than 222 pCi/g Ra-226.
 - Republic Services (ID): 1,200 pCi/g or below
 - Federal NORM Services (TX): 2,000 pCi/g Ra-226 & 208,000 pCi/g Ra-228 or below.
- Frac flowback with tracer materials is a regulated waste but **NOT** categorized as TENORM waste.