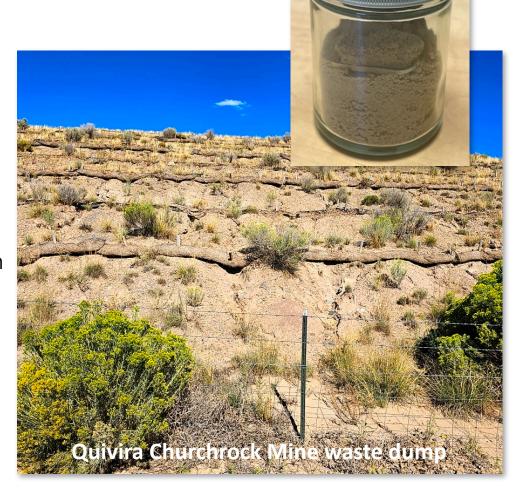
**Community Concern: What is mine waste?** 

- The waste IS:
  - Mine Waste Rock Very Low Level Waste
  - Broken rocks and sand that contain natural radioactive and non-radioactive metals at levels higher than background in surface soils
  - Waste left by the miners that had too little uranium to be transported to mills.
- The waste <u>IS NOT</u>:
  - Uranium Mill Tailings, which are processed ore that has been altered from its natural state by crushing and acidifying
  - Reactive or explosive or acutely toxic
  - Hazardous waste
- Mine waste from Quivira and Section 32/33 mines is not regulated by the NRC because of the low radiation levels, unlike uranium mill tailings (see graphic, next slide)



## Radiation Intensities of Various Nuclear Wastes Compared with Background

Increasing doses\* of gamma radiation

(A) Normal soils: naturally occurring radiation

(B) Mine wastes: elevated radiation, heavy metals; dry dirt, rocks

(C) <u>Uranium ore</u>: elevated radiation, heavy metals

(D) <u>Uranium mill tailings</u>: high chemical toxcity, high radiation

(E) <u>Transuranic wastes</u>: high radiation, remote-hand

(F) Spent fuel: deadly, remote handled



"Background," or natural conditions



Mine waste (Quivira CR1 Mine)



Uranium ore hauling on AZ Strip



Uranium mill tailings (UNC, Churchrock)



Transuranic wastes (WIPP)



Spent nuclear fuel (Palo Verde NGS)