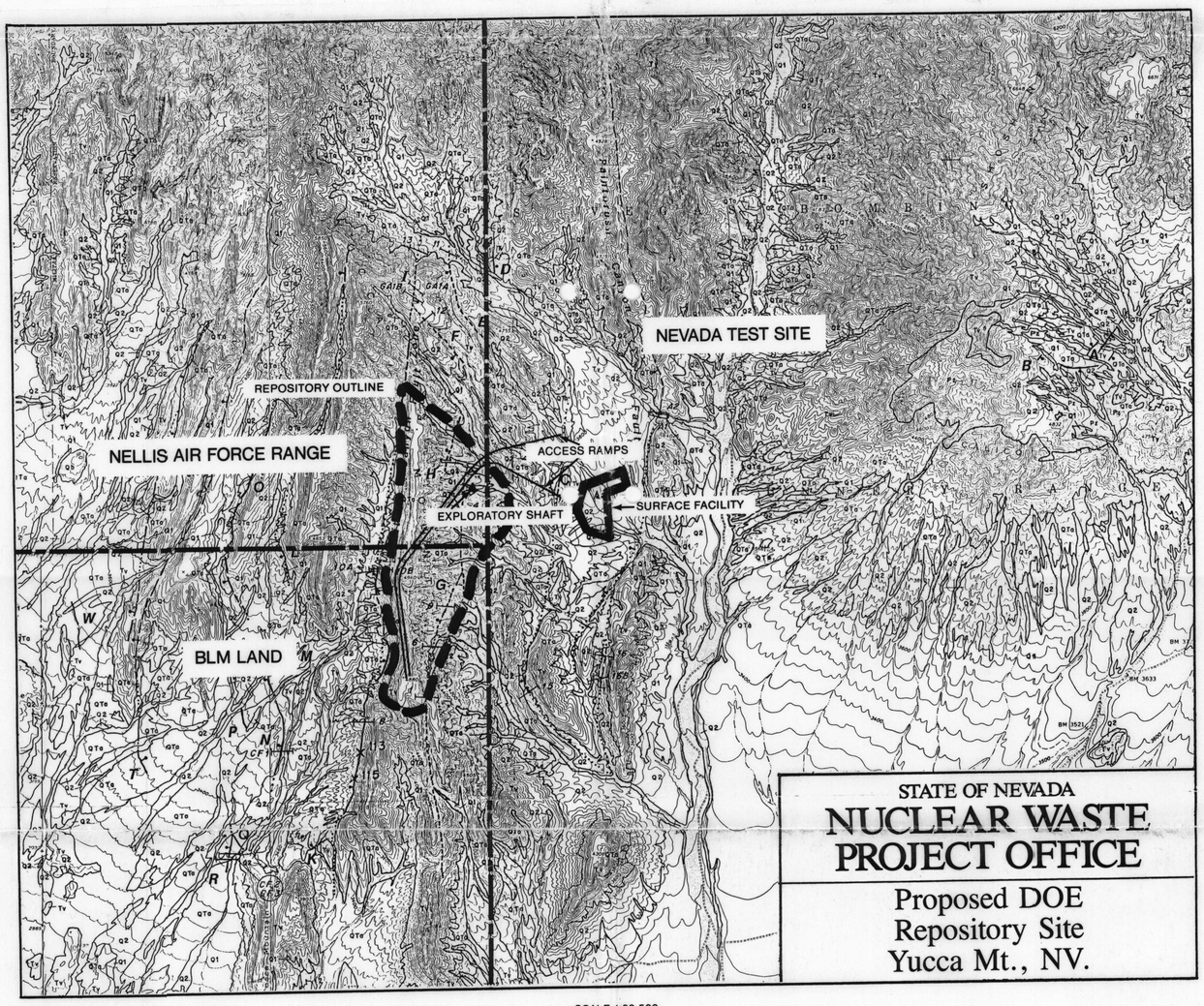


Before Yucca Mountain could be selected as the country's first high-level nuclear waste repository, the Department of Energy must conduct detailed exploratory work to resolve major questions about the site's suitability. The DOE Site Characterization Plan calls for sinking a primary shaft 12 feet in diameter and 1,480 feet deep. From it, crews would dig drifts and drill exploratory holes that would enable them to collect detailed data about the site's ability to isolate radioactive waste from the biosphere. A secondary shaft six feet in diameter would be used for ventilation and another means of egress. It would be connected to the main exploratory shaft by a drift. (See figure one)

If Yucca Mountain were found suitable for development of a repository, construction would begin in 1993. Under the plan, the first waste would be received in 1998. Waste emplacement would continue for 28 years, followed by a 22-year monitoring period. The repository could be open as long as 92 years if there were retrieval of waste to recover uranium and plutonium that could be used anew. If there were no retrieval before 2048, the repository would be sealed. Its capacity would be limited by law to 70,000 metric tons.

Under the plan, the surface facilities complex at Yucca Mountain would cover about 150 acres on the east side of the mountain. They would be used to conduct waste-handling, to support the underground operations and to provide general repository support services. Surface construction also would include roads, railroad connections and utilities. (See figure three)

Access to the underground area would be along gently sloping ramps that would permit vehicles to carry waste packages from the surface buildings to the emplacement area. Underground facilities would cover 1,520 acres. The repository horizon would be more than 750 feet below the surface. The water table would be 650 to 1,300 feet below the repository horizon. (See figure four)

FIGURE ONE

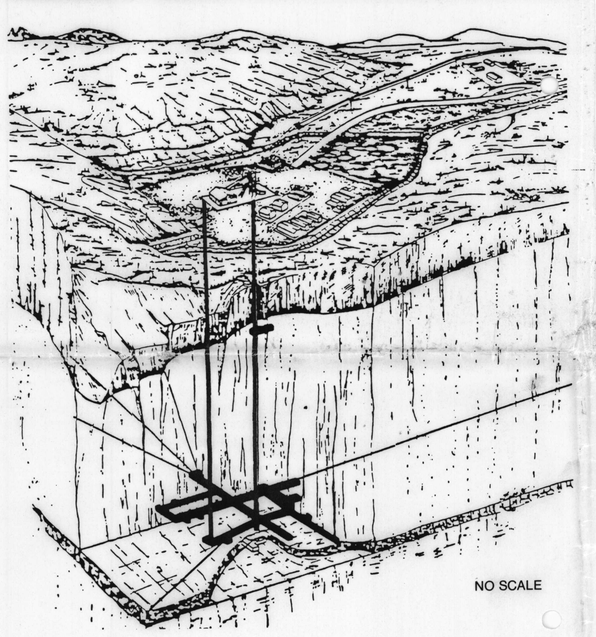


FIGURE TWO

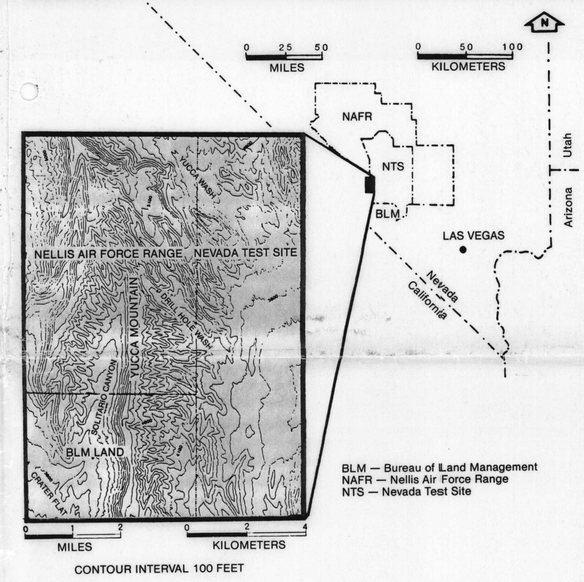


FIGURE THREE

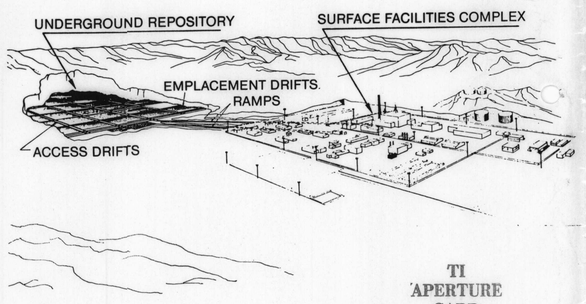
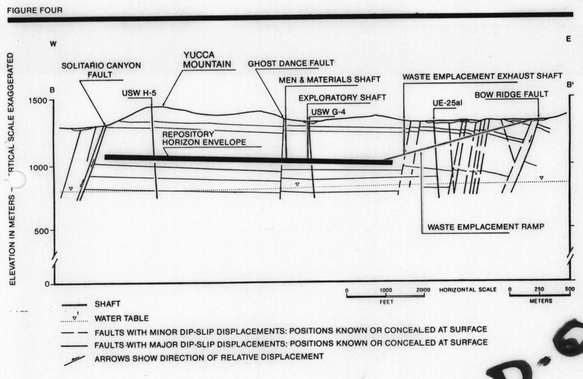


FIGURE FOUR



Data Reference:
USGS Open File Report 84-788
DOE Draft EA and EA

O-4895