

1/15/71 Memo

MOUND

Burial started - April 1954

Burial completed - September 1958

Contents

903	30-gallon drums - solid waste - D-38
21	30-gallon drums - oil waste - D-38
12	30-gallon drums - oil waste - plutonium (1)
102	55-gallon drums - solid waste - D-38
282	55-gallon drums - oil waste - D-38
85	55-gallon drums - oil waste - enriched uranium
<u>1405</u>	Total

Retrieval started - April 14 1970

Retrieval completed - May 28 1970

Comments

- (1) Material came from plutonium processing building Plutonium content was so low that it was measurable only by the most sensitive laboratory techniques
- (2) All liquids have been processed to solid waste All of the contents from the 1405 barrels have been shipped from the plant site to an AEC authorized burial site
- (3) High-volume air sampling was maintained at the mound site by both The Dow Chemical Company and the Colorado State Department of Health throughout the retrieval operations and no airborne contamination was detected

ADMIN RECORD

REVIEWED FOR CLASSIFICATION

BY S L CUNNINGHAM

Date 12/14/89 (C)

REVIEWED FOR CLASSIFICATION/UCM

By George H. Seabrook

Date 7/3/90

A-DUO2-000005

OIL DRUM STORAGE FIELD

First drums stored October 1958
Last drums stored - January 1967
First drums removed - January 1967
Last drums removed June 1968

Contents

3572 drums of oil contaminated with plutonium
1254 drums of oil contaminated with uranium

Comments

- (1) A total number of 5 237 drums were stored in the oil drum storage field 4 826 drums were transferred to the plutonium waste processing plant The difference of 411 drums is attributed to leakage of the oil into the soil and some of the drums were not full when first transferred to the field for temporary storage
- (2) 1964 was the first indication that drums were leaking in the field As a result the storage area was fenced and contents of the leaking drums were transferred to new drums Approximately 420 drums leaked to some degree and of these about 50 leaked totally empty Approximately 86 grams of plutonium leaked into the soil
- (3) In 1967 a heavy rain storm spread contamination to a ditch near the drum storage field
- (4) In November 1968 grading was started for preparation of applying an asphalt cap over the area
- (5) In July 1969 installation of the asphalt pad was started and completed in November of 1969
- (6) In February 1970 six inches of road base course was applied east and south of the asphalt pad. This was completed in March 1970
- (7) Four sample wells were drilled in the corners of the asphalt pad in November 1969 No water has ever been detected in the wells
- (8) The contaminated soil will be removed and shipped to an AEC authorized burial site when an appropriate method for removal is developed

TRENCHES

Trench No 1

Burial started - December 1954
Burial completed - December 1962

Contents

125 drums of depleted uranium machining chips

Comments

Approximately 25 000 kg of D-38 chips are buried in this trench and about two feet of soil cover the drums Present plans are not to remove this depleted uranium as it presents no hazard to the environment

Trenches No 2 through 8

Burial started - July 1954
Burial completed - August 1968

Contents

100,000 kg of sanitary sewage sludge contaminated with uranium and plutonium
About 275 flattened empty drums contaminated with uranium
Asphalt planking (Trench No 4 only) contaminated with uranium and plutonium

Comments

- (1) The concentration of radioactivity in the sanitary sewage sludge ranges between 8.4×10^5 d/m/kg to 7.9×10^6 d/m/kg and contains a total alpha radioactivity on the order of 100 to 150 millicuries
(2.2×10^6 dpm/kg OK for feet 1 2 or 100 (total c. 1000))
- (2) The asphalt planking was removed from an evaporation pond and was contaminated with uranium and trace amounts of plutonium
- (3) The flattened drums had been used when oil contaminated with uranium was burned
- (4) Present plans are not to remove this material from the trenches as it presents no hazard to the environment.

OIL BURNING PITS

Oil Burning Pit #1

10 drums of oil contaminated with D-38 were burned in August 1956

Oil Burning Pit #2

The contents of 169 drums of oil contaminated with uranium were burned in March and April of 1957. From June of 1961 until May of 1965 914 drums containing oil contaminated with uranium were burned.

Comments

The drums used for the oil burning operations were reused and eventually 300 empty drums were discarded by flattening and burying them in the trenches or in the burning pits.

There are no present plans to remove this material as it presents no hazard to the environment.

CONTAMINATED ASPHALT DUMP

Asphalt and soil contaminated with plutonium at the time of the Building 776 fire on May 11, 1969 were dumped on the south side of the plant and covered with soil. It is estimated that about 320 tons of asphalt and soil with an average radioactivity concentration of 7.4 d/m/g were disposed of in this area.

SANITARY LAND FILL

In August 1968 until February 1970 sewage sludge with the same radioactive contamination level as that buried in the trenches was buried in the sanitary land fill. This amounted to approximately 1000 kg.

MISCELLANEOUS

A small quantity of D-38 contaminated incinerator ashes were dumped in an area southwest of the main plant.

No radioactive waste is now being or will be buried on the plant site