

note compiled by [unclear]
know [unclear] information from [unclear]

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1344 TAD-21
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Disposal of radioactive contaminated waste was recognized as a problem early in the history of the Laboratory. In the early 1940's, the only areas generating such wastes were DP East, DP West, and D Building. The health program for these areas was the responsibility of the Division Leader of CMR, Eric Jette. Dr. Jette was very much aware of the Laboratory's responsibility in this field. The liquid wastes from D Building were being run out on the open ground into Acid Canyon and into rock-filled pits at DP East and DP West. Some time early in 1945, waste burial under the direction of the CMR health group, CMB-12, was started using a pit designated as "Area A" on the map. By 1946, burial was transferred to "Area B". In 1957, a new burial "Area C" was developed. At that time, "Area C" was out in the boon-docks and was a security area. In March, 1960, "Area C" was closed out and burial started in Area G - Mesita del Buey - which is still in use.

While burial of contaminated waste was the method of disposal, it was recognized that other ideas should be investigated. Dr. Jette decided that sea burial should be considered. A number of large steel containers was fabricated with gasketed lids and sea cocks. These were used for a period of time; however, when they were filled, the cost of transportation and fabrication of more boxes was so high that the idea was dropped and the full boxes were placed in pits in Area ~~A~~. B

The volume of waste was increasing as DP West began to attain full operation, so compaction was tried. The methods were crude -



a small wood building was moved into Area B and a hand-operated baler was used. No ventilation was provided and the health protection problems were severe; respirators had to be worn and spread of surface contamination was high. The advantage of baling was weighed against the reduction in volume and the cost of an adequate facility, including the additional labor required, and the operation was stopped.

At the same time, incineration was being considered and a contract was let by the AEC for a pilot incinerator which was built at TA-42. For some reason which I have never understood, the health people were not allowed to interface with the engineering firm. When completed, the incinerator was turned over to the Health Division for operation. After many modifications, it became operational but because of the lack of radiation protection input, it was not a safe operation. Further modifications to correct the safety aspects were considered and again, because of costs, the operation was stopped.

In the meantime, burial was continued and the US Geological Survey was called in to advise on the location of additional burial sites. The USGS made a study of the area and recommended TA-54, Area G, as being the best site available.

While the disposal of solid waste was being studied, a similar study was started on liquid wastes. At the suggestion of the Laboratory, the AEC entered into a contract with the Public Health Service to look into liquid waste disposal. A group of PHS personnel were assigned to LASL and they started work on the problem of building pilot plants for Acid Canyon and DP West. The liquid

waste disposal finally was assigned to LASL and is currently being done by Group H-7.

In 1953, the AEC became concerned with solid waste disposal and contracted with Johns Hopkins University to survey the problem. They visited LASL and we were not prepared to answer the questions regarding costs. After their visit, Group H-6, now H-1 which had become a part of H-Division with the dissolution of CMB-12, began to keep records of costs of burial.

In 1960, the AEC Production Group requested semi-annual reports on waste disposal. In 1969, the first (?) directive appeared as Manual Chapter 0511 which was followed by IAD-0511-21 in March, 1970. The Laboratory has been responsive to 0511 and 0511-21 and has been trying to meet the requirements. In 1972, we received our first funding from WMT and established the waste disposal operation as a section of Group H-1.

Disclaimer: Above cited dates are not firm.

Addendum - -

In case the question is asked, the other areas on the map are:

- D. Underground chamber which contained a polonium source. It has been filled with dirt. Decay has reduced the polonium to a low level - - 138 da half life. Source put in chamber in 1947.
- E. Burial pits which contain ^{238}U and ^{235}U alloys.
- F. A very small burial of equipment containing ^{90}Sr and ^{137}Cs .
Made 1946.
- T. The rock-filled pit into which DP West liquid wastes were discharged.

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