

OFFICE MEMORANDUM

TO : C. R. Wherritt, ENG-1

DATE: April 16, 1964

FROM : L. F. Burdge, ENG-1

SUBJECT: CONTAMINATED WASTE DISPOSAL - DP-SITE

SYMBOL : ENG-1-918

Three methods for providing for the increase of contaminated waste effluent at DP-Site (TA-21), as outlined in a letter from H-Division, were:

- 0694
TA-21
1. Expand existing plant
 2. Pump the waste from DP-Site to TA-50
 3. Construct a new waste treatment plant at DP-Site.

These three proposals were investigated in some detail and cost comparisons were made for (2) and (3).

Expand Existing Plant

This facility, as pointed out in the H-Division letter, is a hodgepodge of previous additions, and it would be extremely awkward to add to this facility in any rational manner. This proposal was determined not to be feasible.

Pipe Line from DP-Site to TA-50 - Preliminary Estimate Cost - \$616,600

A pipeline from DP-Site (TA-21) to the TA-50 disposal plant involves several considerations besides the pipeline.

1. The americium waste cannot be pumped with the regular waste and therefore would require a separate line. H-1 is very much opposed to hauling the americium by tank truck.
2. Neutralization tanks and equipment are required at DP-Site as the waste pH varies widely. These tanks will require stirrers and will have to be buried.
3. There are three sources of highly radioactive waste at DP-Site that require three buried stainless steel holding tanks; two 500-gallon tanks and one 1000-gallon tank. The pH of these effluents can vary widely and separate tanks are required to prevent sludge forming. This waste will be metered into the normal waste to provide dilution.
4. A pump station at DP-Site of approximately 500 square feet will be required for the pumps, chemical storage tanks, chemical feeders, etc.



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5. An americium disposal facility of approximately 2,800 square feet will have to be built at TA-50.
6. The raw effluent holding tank capacity at TA-50 will have to be increased by approximately 50,000 gallons.
7. One additional person will be required at TA-50, an operator helper, to keep up with the increased load on the plant.

New Facility at DP-Site (TA-21) - Preliminary Estimate Cost - \$552,850

A new treatment plant at DP-Site to provide treatment for all DP-Site waste will require a facility of approximately 7500 square feet gross. This would include:

1. Americium treatment facilities
2. Raw effluent and treated effluent holding tanks
3. Three extra-hot waste holding tanks
4. Chemical treatment facilities
5. Flocculator and settling tank.
6. Miscellaneous equipment required for operation of the plant.

Recommendations

For cost reasons as well as for efficient operation of the waste disposal facilities, it is recommended that a complete treatment facility be built at DP-Site.



L. F. Burdige

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cc : File
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