

STANDARD OPERATING PROCEDURE

for

TRANSFER of WASTE FROM THE

GENERAL'S TANKS, AREA A,

to TA-21-257

(March 1974)

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INTRODUCTION

This SOP is written to cover the transfer of liquid radioactive wastes presently stored in structures DPW-107 and DPW-108 (General's Tanks) in Waste Disposal Area A to the influent holding tanks at DPW Bldg. 257, TA-21. The overall lengths of these cylindrical structures are 19.15 m and each has a diameter of 3.66 m. They lie horizontally and parallel to each other mounted on concrete saddles with a 6.1 m space between them.

Each of the two tanks has a capacity of approximately 193 000 litres (51 000 gallons). One contains about 151 000 litres, the other about 34 000 litres of Pu contaminated waste. The top of the tank surface is located about 2.28 m below the ground surface. A layer of compacted earth fill covers the top surface section of each tank and extends upward 46 cm. Above this fill is a 20 cm thick concrete slab that extends horizontally 1.2 m beyond the longitudinal extremes of the tanks and 1.8 m beyond the lateral extremes of the area enclosed by both tanks. The concrete slab dimensions are 20 m x 21.6 m long and there is an earth fill 1.6 m thick to the ground surface.

The total 185 000 litres will be transferred to the Bldg-257 DPE raw waste storage tanks by means of a submersible pump placed in the General's Tanks. A flexible discharge line will be connected to convey the waste to a nearby existing line (76 mm cast iron) that carries the DPE waste to 56 000 litre storage tanks at Bldg. DP-257. A pumping rate of about 200 litres per minute will be used during the operation.

Operations: After all safety criteria have been satisfied, and all connections have been made, the pump will be started and the valve at the flushing connection will be opened. Approximately 40 000 litres of waste will be transferred to the DPE waste storage tanks at DP-257.

Following the pumping operation, the discharge line will be drained and disconnected from the flushing connection. Its ends will be sealed in polyethylene bags and the hose will be retracted into Area A. The equipment will remain in Area A until all waste has been transferred. At that time, the line and pump will be rinsed with tap water and transferred to DP-257.

Health Physics and Safety:

1. H-1 will be notified before any work is done in Area A and an H-1 representative will be present during all excavation, cutting and pumping operations.
2. H-8 will be notified when excavation down to the concrete slab has been completed to permit them to take soil cores near the tanks.
3. H-5 will be notified before the steel tanks are penetrated.
4. The excavated area will be provided with a temporary barrier along its perimeter to safeguard against falling into the excavation.
5. Samples will be taken of the liquid in each tank after the .4 metre diameter holes are cut. These samples will be analyzed for gross alpha, ^{239}Pu , ^{241}Am , gross beta, and gross gamma by Group H-7.
6. A plastic covering will be used under and around all parts of the discharge line where connection are made and broken in order to prevent soil or concrete contamination and hose ends will be bagged in plastic as necessary. In addition, the tank openings will be sealed with a plastic covering until all operations have ceased in Area A.