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July 16, 1951

TO: FILE

REMOVAL OF RUPTURED SLUG
FROM TUBE NO. 1475-D

SUMMARY

The 105-D pile was shut down at 10:39 P.M. on June 28, 1951 to permit removal of a ruptured slug from tube No. 1475-D. Removal was accomplished with the charging machine using normal forces. Total time expended in the actual removal operation was seven hours; however, the outage extended 26.6 hours because of minimum pile downtime requirements.

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July 16, 1951

DETECTION

The rupture was initially indicated by the effluent water monitoring system. Header sample analysis gave additional evidences of a rupture and the pile was shut down. A reading of 3 R/hr was obtained on the rear pigtail of tube No. 1476-D.

REMOVAL

The tube was discharged using normal force with the pneumatic charging machine.

DATA ON THE CHARGE

Tube No. 1476-D contained regular metal, charged September 4, 1950. The ruptured slug was an M. R. type, canned August 1, 1950, processed on truck No. 2, Line "G", and had been autoclaved. The tube was operating at a 311 KW power level and had reached 87% of current goal concentration.

A flux comparison of the pieces from the tube indicated that the ruptured piece was the 35th piece from the front. The rupture was a circumferential failure of the can wall immediately adjacent to the Al - Si bond between the slug and the end cap.

H. I. ASPECTS

Approximately twenty minutes after isolation of the tube, the effluent flow was diverted from the north to the south basin of 107-D. Samples of the effluent water taken at the north basin outlet before diversion and of the south basin inlet and outlet after changing basins, indicated that no detectable amount of product was flowing into the river. Subsequent samples of the storage basin and retention basin permitted both basins to be returned to normal.

Contamination was confined to established danger zones, and there was no overexposure of personnel.

SLUG DISPOSAL

The ruptured slug is currently being held in the 105-D storage basin pending shipment to 111-B.

C. D. Shadinger
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