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HW-22358

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October 5, 1951

To: File

From: W. N. Koop

REMOVAL OF RUPTURED URANIUM SLUG
FROM TUBE NO. 3964-B

SUMMARY

The 105-B reactor was shut down at 4:33 AM on October 5, 1951 to remove a ruptured uranium slug from tube No. 3964-B. Removal was accomplished with the pneumatic charger, using normal forces. The time required from shutdown to startup was eighteen minutes. The production loss has been estimated to be 7 M&D.

DETECTION

The rupture was initially indicated by the effluent monitoring system. Subsequent reader samples confirmed the rupture and the reactor was shut down. A reading of 20 R/hr. was obtained on the rear pigtail of tube No. 3964-B.

REMOVAL

Within five minutes of the reactor shutdown the water pressure was reduced from 400 psi to 200 psi. The water pressure was then reduced to about 40" of head on cross-header 38½. The charge was displaced with solid aluminum dummies, using the pneumatic charger with only normal pressures experienced. The tube was capped and the water pressure raised to 375 psi as rapidly as possible. Operation of the reactor was resumed at 4:51 AM.

DATA ON THE CHARGE

Tube No. 3964-B contained regular metal charged December 13, 1950. The tube was operating at 288 KW power level and had reached 80% of current goal concentration.

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MASTER

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October 9, 1951

DATA ON THE CHARGE (Cont.)

The ruptured slug was the 39th piece from the front as determined by monitoring the pieces discharged. It was a MR type, canned November 7, 1950, processed on truck 10, line G and had been antoclaved.

EXAMINATION AND DISPOSAL

Examination of the slug revealed that end cap had become separated from the remainder of the piece. The exposed surface appeared to be deeply pitted along two radial cracks which extended down the can wall about 1".

The slug was photographed, canned and is being held in the 105-B storage basin awaiting transfer to 111-B for further examination.

W. T. 3-7
OPERATIONS UNIT
REACTOR SECTION

WNK:smm

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