

~~Confidential~~
kg x \$ = price

1098

3336

EXPLANATORY REMARKS - TAILS UF₆ RELEASE JULY 21, 1969

Time: July 21, 1969, 0841 to 0926 a.m.

5176

Location: X-330 Tails Withdrawal Area

Amount: Approximately 1500 pounds (460 kg U) of UF₆ tails material was released in the area with an estimated 60 kilograms of uranium recovered from decontamination operations. The net amount lost to the surroundings was 400 kilograms of uranium, valued at \$3260.

Weather: Light Rain
Temperature ~75° F
Wind Direction SSW to SSE
Wind Velocity 5 to 10 mph
Relative Humidity ~100%

Discussion: The tails operator attempted to valve off cylinder 1207 (full 10-ton) at 0730 a.m.; however, the cylinder valve could not be closed and the cylinder was left for the day shift. Additional attempts to close the valve were unsuccessful and the operator froze UF₆ as a plug in the valve using two 50-pound CO₂ extinguishers. The pigtail was then disconnected without releasing material but the valve port cap could not be screwed on valve due to bad threads. The release occurred when the UF₆ plug in the valve was partially vaporized and blown out due to the heat of and pressure in the cylinder (160°F and 30 psia). The release was stopped by driving a wooden plug into cylinder valve.

Personnel: There were 21 employees within the general area of the release who were monitored and urine samples obtained. Of these, the tails operator received acid burns on the hand, face and neck and required hospitalization. In addition, a second cascade

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
1st Review - Date: 4-18-97	Determination [Circle Number(s)]
Authority: <input type="checkbox"/> ADC <input checked="" type="checkbox"/> ADD	1. Classification Retained
Name: m. thier	2. Classification Changed To: ex
2nd Review - Date: 4/22/97	3. Contains No DOE Classified Information
Authority: [Signature]	4. Coordinate With:
Name: [Signature]	5. Classification Cancelled
	6. Classified Information Bracketted
	7. Other (Specify):

~~Confidential~~

M-8-3

~~Confidential~~

EXPLANATORY REMARKS - TAILS
UF₆ RELEASE JULY 21, 1969 - cont.

by the release of material were below plant allowable limits, based on urine sample results, and returned to their normal work assignments.

Area Contaminated:

All of the released material was believed confined within the perimeter fence area of the plant due to weather conditions during the release. This assumption is substantiated by data from air monitors located downwind of the release which showed no airborne activity and the water sample analyses of the plant streams were within previous recorded values.

Corrective Action:

Pigtail modifications will provide a safety valve as back-up for the cylinder valve. In the event of future valve trouble, the pigtail valve will be closed and the pigtail disconnected at the withdrawal manifold. In addition, the recommendations made by the special investigation committee and adopted as standard procedure are considered a part of this corrective action.

Loss Calculations:

The amount released was determined by weight difference of the cylinder before and after the release. However, the cylinder weight before the release was made with the pigtail connected and was assumed to be within ± 20 pounds. The material recovered from the heavily contaminated tails withdrawal area was determined by compositing representative samples of five 55-gallon drums of solution. The samples were analyzed by the Works Laboratory and the assay was determined from daily cylinder assay data.

A. H. Wernecke

A. H. Wernecke, Superintendent
Uranium Control & Data Processing

RECEIVED

~~Confidential~~