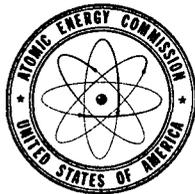


*Submittal*  
*Central Files*

July 29, 1968

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SECRETARIAT

AEC-R 73/13

ACCIDENTAL RELEASE OF ENRICHED URANIUM HEXAFLUORIDE  
AT KFRR - MCGEE, OKLAHOMA CITY

Note by the Secretary

The Director of Regulation has requested that the attached memorandum of July 26, 1968 from the Director of Nuclear Materials Safeguards be circulated for the information of the Commission.

W. B. McCool

Secretary

DISTRIBUTION

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ATOMIC ENERGY COMMISSION

ACCIDENTAL RELEASE OF ENRICHED URANIUM HEXAFLUORIDE  
KERR-McGEE CORPORATION  
NUCLEAR DIVISION  
OKLAHOMA CITY, OKLAHOMA

Report to the Director of Regulation  
by the Director of Nuclear Materials Safeguards

Region III (Chicago), Division of Compliance, was notified by telephone on the evening of July 19, 1968, by the subject licensee that there had been an accidental release of 100.5 pounds of enriched (1.65% U-235) uranium hexafluoride containing 504 grams of U-235. The following information was transmitted in a teletype from Kerr-McGee at approximately 5:08 p.m. on July 22, 1968:

"Refer to License SNM-928. This confirms in accord 10 CFR 20.403 our telephonic notification to you on evening of July 19 of an accidental release of about 100 pounds of 1.65% enriched UF<sub>6</sub> at the Nuclear Division Cimarron facility. Incident occurred at about 6:40 p.m. on July 19 and consisted of ground level release through valves inadvertently left open during start up operation of new equipment for vaporization of UF<sub>6</sub> from standard 12" cylinder. Situation was under complete control by 7:00 p.m. by closing valve; however, the cloud of uranyl fluoride formed in the interim rapidly dispersed uncontrolled to the outside atmosphere resulting in airborne release to the unrestricted area. No overexposure of personnel resulted. One supervisory employee was given medical treatment for minor skin burns around exposed neck area received during later reentry to determine source of leak. Self-contained breathing apparatus was worn during reentry. No property damage resulted. Environmental air samples and surface surveys following release were normal and no significant contamination involved. Production operation in remainder of facility essentially uninterrupted. Operation procedure modifications are being incorporated to prevent recurrence. Detailed report will follow per regulations."

Surveys made by the licensee indicate that the main portion of the plant was not significantly contaminated and only slight contamination was found in the area of the 30" steam chest. Bioassay samples were taken from four employees that were in the immediate vicinity of the incident. The employee who received a slight fluorine burn on the neck was treated by his doctor and returned to work the following day.

The receiving area has been decontaminated and work resumed July 24, 1968, on the cylinder in question. Samples of vegetation and smears of the unrestricted areas downwind to the release have been taken, but the results are not yet available.

Based on the preliminary information received, the Director of the Division of Compliance has advised that there does not appear to be any health and safety problem. The incident will be reviewed during the next Compliance inspection scheduled for August 1968.

It is believed that none of the 100.5 pounds of  $UF_6$  released from the 30" steam chest entered the uranium oxide production system; however, at the completion of the present 1.65% U-235 campaign (scheduled to be completed during the week of July 29, 1968) Kerr-McGee will be able to draw a material balance around the production run. No scrubbers are provided in this particular vaporizing hood and consequently the loss is considered to be unrecoverable. Based on the information received from the licensee, the Division of Nuclear Materials Safeguards does not regard this accidental

loss of special nuclear material to warrant a special safeguards investigation.

Kerr-McGee does not plan to issue a public release. The staff of the Joint Committee on Atomic Energy has been informed by telephone.