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(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box P OAK RIDGE, TENN.

This document consists of 2 pages
 No. 3 of 4 copies. Series A.

TO Mr. B. H. Thompson
 LOCATION K-303-7

DATE June 17, 1952

ANSWERING LETTER DATE

ATTENTION
 COPY TO Mr. C. L. Gritzner
Mr. J. A. Marshall ✓
Mr. R. J. Clouse (K25RC)

SUBJECT Inventory of Recoverable Uranium Bearing Materials in Storage

KP-330

972481

Four inventories of contaminated solutions and solids have been conducted to determine the approximate rate of accumulation of contaminated solutions and solids and to see if present recovery facilities are adequate.

The following are inventories made February, 1950, June, 1951 April 1, 1952 and May 1, 1952:

Month	Gallons Solution	Pounds Solids & Oils	Uranium Grams	"X" Grams
February, 1950	3,800	116,496	798,814	10,412
June, 1951	6,900	100,096		
April 1, 1952	16,193.4	227,461	2,268,435.8	30,042.3
May 1, 1952	18,721.8	233,493.6	2,759,417.8	34,421.3

The February, 1950 and June, 1951 inventories are the results of previous inventories made and reported by this department. The April 1, 1952 and May 1, 1952 inventories were made using the data compiled by the IBM section of the Uranium Control Department.

The solutions and solids which are presented on these inventories are considered recoverable. They do not include such materials as K-1131 and K-1405 vacuum cleaner material, K-1131 ash, ferrocyanide solutions, ClF₃ and UF₆, Hartford waste sludge and supernates, solutions containing dichromates, phosphates, molybdates, plutonium, etc., or any other solutions or solids not considered recoverable.

The solutions which are considered recoverable are laboratory waste solutions, carbonate solutions, hydroxide solutions, aspirator solutions, nitric acid solutions, sulphuric acid solutions, hydrochloric acid solutions, evaporator concentrate, nickel solutions, lime floc filtrate and small amounts of hydrocarbon and fluorocarbon oils and solvents that are measured in terms of liters.

The solid material inventories consists of impure ammonium diuranate, impure U₃O₈, impure UO₃, lime cake from hydrocarbon and fluorocarbon oils, miscellaneous lime cake, incinerator ash, iron floc, conversion ash, gunk, contaminated fluorocarbon and hydrocarbon oils and solvents, contaminated sodium fluoride, etc.

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The present recovery system has in the past averaged 2,846 gallons of solution per month. This process rate is inadequate as shown by the increase in stored uranium contaminated materials. The present production is limited by a batch solvent extraction process and an ammonium diuranate precipitation of uranium.

A work order has been issued for the construction of a continuous operating process, which will include two "always-safe" evaporators, a continuous operating solvent extraction system and a spray dryer.

With this additional equipment the recovery of uranium from contaminated recoverable materials should be increased by at least 200% and probably more.

R. J. Clouse

R. J. Clouse

Chemical Operations Department

RJC/hs

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