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Date request received 4/8/96

Date submitted to ADC 4/15/96

Date submitted to HSA Coordinator 4/8/96

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Date submitted to CICO CO 4/15/96

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Date submitted to ChemRisk/Shonka and DOE 4/23/96

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REPORT NO.
KZ 3609

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Date November 26, 1946 UNCLASSIFIED Series A

Secret
Classification

Code System for Classification of "T" Compounds
Short Title of Document

F. H. Anderson
Author

CIRCULATION

TO BE RETURNED TO PLANT RECORDS K-1034

All persons reading this document are requested to sign in the space below.

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M-294

Special Correspondence - Coded Chemicals

CARBIDE AND CARBON CHEMICALS CORPORATION

Post Office Box P

OAK RIDGE, TENNESSEE

TO: E.D. Flickinger

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CARBIDE AND CARBON CHEMICALS CORPORATION

REPORT NO.
KZ 3609

CODE SYSTEM FOR CLASSIFICATION OF "T" COMPOUNDS

Distribution

F. H. Anderson

A. de la Garza

E. D. Flickinger

F. C. Hutton

G. T. E. Sheldon

A. M. Tuholsky

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Carbide and Carbon Chemicals Corporation, Operating Contractor for the U.S. Atomic Energy Commission.

This document has been approved for release to the public by: T W Selby for A B Quist 4/19/96
Technical Information Officer Date
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INTER-COMPANY CORRESPONDENCE

(Insert Name) COMPANY Carbide and Carbon Chemicals Corp. LOCATION Post Office Box P Oak Ridge, Tenn.

To Mr. G.T.E. Sheldon
Location K-303-7

Date November 26, 1946

Copies to Attached Distribution

Subject Code System for Classification of "T" Compounds

Dear Sir:

At present our records show that many apparently unrelated numbers have been used as codes for various K-25 process "T" materials. The result has been confusing in two particulars. First, about [illegible] codes are used to classify about 20 materials. This means that different codings are assigned to material of the same "X" concentration. Second, differentiations of "T" process chemicals other than TF_6 is not feasible because of the lack of system of initial classification. On occasions where identification has not been made, incorrect conversion factors have been applied and the resulting errors have invalidated the monthly accountability report.

A "T" material identification system is presented herewith for plant-wide adoption on December 1, 1946. This system has been used by Coded Chemicals since early October, 1946, for classification of special samples withdrawn from the cascade and has advantages over the present method because it answers objections mentioned above.

A tabulation of conversion factors which apply to the most frequently used "T" material is attached.

Yours very truly

R.W. Levin

R.W. Levin - Chairman
Process Materials Department Council

FHA:ber

Enclosures (2)

F. H. Anderson
A. de la Garza
E. D. Flickinger
F. C. Hutton
A. M. Tuholsky

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SYSTEM FOR CLASSIFICATION OF "T" MATERIAL

PREFIX Number	"T" CONC. Range Wt. %	SUFFIX Number	COMPOUND Name	COMPOUND Symbol
2	< 0.40	20	"T" Metal	T
3	0.40 - 0.459	21	Black Oxide	TO_2
4	0.460 - 0.529	23	Orange Oxide	TO_3
5	0.530 - 0.599	24	Dark Green Oxide	T_3O_8
6	0.600 - < Normal Feed	35	Hexafluoride	TF_6
7	Normal Feed - 0.799	43	Nitrate	$TO_2(NO_3)_2$
9	0.80 - 2.999	65	Tetrafluoride	TF_4
10	3.0 - 5.999	66	Sulphate	TO_2SO_4
11	6.0 - 9.999	67	Acetate	$TO_2(C_2H_3O_2)_2$
12	10.0 - 18.999			
13	19.0 - 28.999			
14	29.0 - 38.999			
15	39.0 - 48.999			
16	49.0 - 58.999			
17	59.0 - 68.999			
18	69.0 - 78.999			
19	79.0 - 88.999			
20	89.0 - 98.999			
21	99.0 - 100.0			

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FACTORS FOR CONVERSION OF VARIOUS COMPOUNDS TO "T"

CODE SUFFIX	21	23	24	35	43	65	66	
"X" Concentration Range Wt. %	TO_2	TO_3	T_3O_8	TF_6	$TO_2(NO_3)_2 \cdot 6H_2O$	TF_4	TO_2SO_4	Prefix
< 0.40	.8815	.8322	.8480	.6761	.4741	.7580	.6503	2
0.40 - 0.459	.8815	.8322	.8480	.6761	.4741	.7580	.6503	3
0.46 - 0.529	.8815	.8322	.8480	.6761	.4741	.7580	.6503	4
0.53 - 0.599	.8815	.8322	.8480	.6761	.4741	.7580	.6503	5
0.60 - <Normal Feed	.8815	.8322	.8480	.6761	.4741	.7580	.6503	6
Normal Feed - 0.799	.8815	.8322	.8480	.6761	.4741	.7580	.6503	7
0.80 - 2.999	.8814	.8321	.8480	.6761	.4741	.7580	.6502	9
3.0 - 5.999	.8814	.8321	.8479	.6761	.4740	.7580	.6501	10
6.0 - 9.999	.8814	.8320	.8479	.6759	.4739	.7578	.6500	11
10.0 - 18.999	.8813	.8319	.8477	.6757	.4736	.7576	.6499	12
19.0 - 28.999	.8812	.8317	.8476	.6755	.4733	.7574	.6496	13
29.0 - 38.999	.8810	.8316	.8474	.6752	.4730	.7572	.6493	14
39.0 - 48.999	.8809	.8314	.8473	.6749	.4727	.7569	.6490	15
49.0 - 58.999	.8808	.8312	.8471	.6746	.4724	.7567	.6487	16
59.0 - 68.999	.8806	.8310	.8469	.6744	.4721	.7565	.6484	17
69.0 - 78.999	.8805	.8309	.8468	.6741	.4718	.7562	.6481	18
79.0 - 88.999	.8804	.8307	.8466	.6738	.4714	.7560	.6478	19
89.0 - 98.999	.8802	.8305	.8464	.6735	.4711	.7558	.6476	20
99.0 - 100.0	.8802	.8304	.8463	.6734	.4710	.7556	.6474	21

Note values for midpoint of ranges.

Calculated by J. Cokin

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