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From: Commanding Officer, Naval Air Engineering Center, Phila., Pa. 19112
To: Commander, Naval Air Systems Command (AIR 520331)

Subj: Assignment 2-21(13H) Cresol, Substitution for in Cleaning Compound Formulations in Specifications; Report No. NAEC AML 2504, Detoxication and Disposal of Cresol-Containing Waste from Cleaning Operations

Ref: (a) NAVAIRSYSCOMHQ AIRTASK AIR320 013 200/1 F020 03 01 of 15 Oct 1963
(b) Military Specification MIL C-19853A(WEP) Carbon Removing Compounds; Agitated Tank
(c) Military Specification MIL-R-18553A(WEP) Remover, Paint, Non-flammable, Water Rinsable, Usable in Contact with Synthetic Rubber

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1. The subject assignment was established under reference (a) to provide efficient cleaning compounds which are cresol-free. Several of the cleaning compounds used by the field activities engaged in maintenance and overhaul work contained cresol, or other phenolic compounds as ingredients in their formulations. Elimination of ingredients of this type was considered necessary since their biocidal properties made their ultimate discharge into sewage systems objectionable.
2. The elimination of cresol from various specification items has been covered by partial reports previously issued under this assignment. However, its elimination from all cleaning compound formulations has not been accomplished as, for example, the widely used carbon remover procured under the reference (b) specification. Although neither industry nor the Aeronautical Materials Laboratory has been able to develop a cresol-free material equal to the reference (b) material in performance, it is felt that effective substitute materials may be discovered in the investigation of new chemical materials authorized by assignment 2-04(13H).
3. Until such a time as cresol and other phenolic compounds have been totally eliminated, it is felt that the minimal amounts of these materials remaining in use can be rendered safe for disposal by suitable pretreatment. Although the development of the equipment involved is outside the scope of this assignment, investigations have revealed that adequate pretreatment could be economically

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accomplished by either of the two processes currently used by industry. These consist of removing the cresols by steam stripping and recovery for future use, or by acidification and disposal of the cresol-bearing layer by burning. Much of the necessary equipment such as reservoirs, tanks, filters, valves, pumps, may be found idle in the storage areas of any large installation.

4. Authorized work on the subject problem assignment has been completed. This report is final and the assignment is considered closed.



R. L. ABBOTT
By direction

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Security Classification

DOCUMENT CONTROL DATA - R&D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

ORIGINATING ACTIVITY (Corporate author) Naval Air Engineering Center Aeronautical Materials Laboratory Philadelphia, Pa. 19112	2a. REPORT SECURITY CLASSIFICATION Unclassified
	2b. GROUP

REPORT TITLE

Toxication and Disposal of Cresol-Containing Waste from Clearing Operations

DESCRIPTIVE NOTES (Type of report and inclusive dates)

AUTHOR(S) (Last name, first name, initial)

Atuska, S. A.

REPORT DATE	7a. TOTAL NO. OF PAGES 2	7b. NO. OF REFS 3
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CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S) REPORT NO. NAEC AML 2504
PROJECT NO.	

Assignment 2-21(13H) under NAVAIRSYSCOM A320 013 200/1 F020 03 01	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)
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AVAILABILITY/LIMITATION NOTICES

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SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY Naval Air Systems Command Department of the Navy Washington, D. C. 20360
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ABSTRACT

Assignment 2-21 was established to provide efficient cleaning compounds which are cresol-free. Elimination of ingredients of this type was considered necessary since their biocidal properties made their ultimate discharge into sewage systems objectionable. Although neither industry nor the Aeronautical Materials Laboratory has been able to develop a cresol-free material equal to the specification MIL-C-19853A(WP) material in performance, it is felt that effective substitute materials may be discovered in the investigation of new chemical materials authorized by assignment 2-04(13H).

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Cleaning compounds						

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