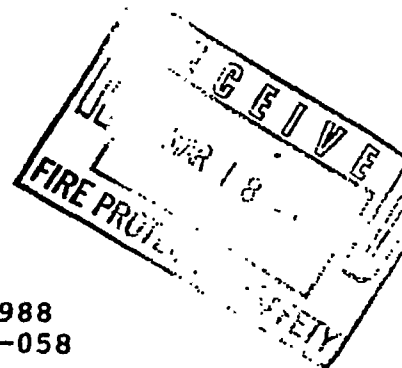


**Bell Helicopter** **TEXTRON**

A Subsidiary of Textron Inc.

**INTER-OFFICE MEMO**15 March 1988  
81:CLC:ley-058

MEMO TO: B. Alapic, R. Battles, R. Conrad, E. Covington,  
M. Ernest, P. Welsh, Engineering Supervision

COPY TO: A. Schijf, D. Sims

SUBJECT: IDENTIFICATION OF ASBESTOS, AUTHORIZED BY BHTI  
ENGINEERING DRAWINGS AND DOCUMENTS

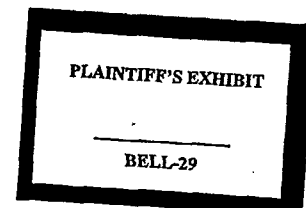
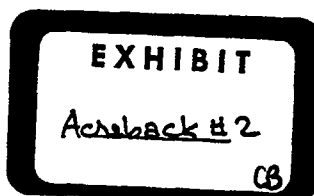
The purpose of this Engineering wide task is to identify and eventually eliminate all possible use of asbestos at BHTI, authorized by Engineering.

The attached data identifies parts and materials known to contain asbestos. Each item should be reviewed by the Design Group responsible for the design, to determine each applications parameters and select a suitable replacement.

The Design groups most affected by this effort are; Airframe, Controls, Fixed Equipment, Hydraulics, Power Plant, Rotors and Transmissions, but all Engineering groups are included in this activity to assure all usage is identified.

The actions to-date have primarily been limited to availability issues. A summary of events and circumstances are presented to help establish a starting point.

BHTI was advised by Manville Industrial Products Division (formerly Johns-Manville) in October of 1985, that they would cease manufacture of materials containing asbestos after December 1985 and discontinue delivery after March 1986. They recommended their non-asbestos products as replacements. We were using Style 76 and 78 gasket sheets, they recommended Style 976 and 978 respectively. Group Engineers were requested to review the using drawings and provide alternates for Style 76 applications where possible. We had previously superseded Style 78 with MIL-G-12803, to assure continued availability. Other Manville materials had second sources already identified.



BHT 00224

R M Industrial Products Company Inc, (formerly Raybestos Manhattan) also stopped manufacture of asbestos products in this same time frame.

The continued availability of asbestos products has been due mainly to distributors having large inventories and some smaller manufactures have continued to produce non QPL controlled materials. The distributors' inventories are now close to depletion.

Many asbestos containing materials are identified under vendor part numbers and Bell Standard numbers. These are seals, gaskets, friction materials, sealants, adhesives, insulation and thermal sheets used during manufacturing and raw material for parts. Usage and identification of these type items will depend heavily on Design group personnel with knowledge outside the BEIMS data base.

| <u>Asbestos Sheet</u> | <u>Current Status/Comment</u>                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------|
| Bell Standard         | 151-008C is single source R M. Action Item                                                                                   |
| Bell Standard         | 151-008A was superseded by 151-008E, April 1986.                                                                             |
| Bell Standard         | 151-011-1 is single source R M.<br>R M is no longer able to produce this material. Supply is now depleted. Action Item       |
| Bell Standard         | 151-012 was inactivated September 1986 without a superseding standard. Existing designs still use this material. Action Item |

Non-Asbestos Sheet

|               |                                                                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bell Standard | 151-021 was created January 1987 for new applications up to 2300°F continious service. It is a candidate to replace other thermal sheets. Action Item |
| Bell Standard | 151-008E, is Manville Style G-89 fiberglass, qualified by FAA and used at BHTI to replace Style 89.                                                   |

Dave Sims Ext. 5602 is the Engineering Department coordinator. Please advise Dave of action taken on each item listed and the identities of other parts and materials you discover.

Other sources of asbestos containing material are being identified throughout BHTI. If you are aware of other sources, please contact Alan J. Schijf, Ext. 5857.



C. L. Cabe  
Group Engineer  
Standards Engineering  
Ext. 5099