

FROM H. DEAN BELK, M.D.
PITTSBURGH OFFICE - 6

TO *R.M.J.* R. M. JAMES
PITTSBURGH OFFICE 6

June 23, 1987

*File asbestos -
DH*

**RE: RECOMMENDED PROCEDURES FOR MEDICAL SURVEILLANCE OF
EMPLOYEES EXPOSED AT OR ABOVE THE ACTION LEVEL FOR ASBESTOS**

In mid-1986 the Occupational Safety and Health Administration issued a revised standard for asbestos. The effective date for the Revised Standard at Alcoa's domestic locations was January 16, 1987.

Attached for your review and implementation are actions recommended to assure Alcoa's compliance with medical requirements of the Revised Standard. The first attachment is a revised medical protocol for employees exposed to asbestos at or above the action level (0.1 fiber/cc for 30 or more days a year).

The second attachment contains recommended medical administrative procedures. Implementation of these procedures will assure good medical management of employees under medical surveillance as well as compliance with the Standard.

The Revised Standard requires that employees be given a written statement after the medical examination. Attachment 3 contains examples of letters which contain information required by OSHA.

H. Dean

H. DEAN BELK, M.D.

HDB:bal

PLAINTIFF'S
EXHIBIT
AL-1651



SF-4563 (REV 85-7)

ALCOA0000010430

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PROTOCOL DESCRIPTION: OCCUPATIONAL MEDICAL EVALUATION: ASBESTOS

CONTENTS:

PROCEDURES:

RECOMMENDED:

- o Cardiovascular History
- o Respiratory History
- o Physical Examination

OPTIONAL:

- o Medical History (Short Form)

TESTS:

RECOMMENDED:

- o Blood Analyses (Series 24)
- o Blood Count
- o Chest X-Ray
- o ECG
- o Spirometry

OPTIONAL:

- o Blood Gases with pH
- o Urinalysis

SCHEDULE:

No tissue reaction - annual medical evaluation for employees exposed at or above the action level.

Evidence of pulmonary/pleural tissue reactions - annual medical evaluation offered as long as individual employed at Alcoa.

Frequency for chest x-rays --

X-ray chest (exposure <10 years): every 5 years

X-ray chest (exposure >10 years):

- a. <35 years: every 5 years
- b. Age 35 <45 years: every 2 years
- c. Age >45 years: annually

FROM H. DEAN BELK, M.D.
PITTSBURGH OFFICE - 6

TO MEMORANDUM

June 23, 1987

**RE: STANDARD PROCEDURES FOR MEDICAL SURVEILLANCE OF
EMPLOYEES HAVING POTENTIAL ASBESTOS EXPOSURE AT WORK**

Since OSHA revised its asbestos standard in 1986, Alcoa physicians discussed the Revised Standard at our April, 1987 Meeting and agreed upon some general procedures for medical follow-up in Alcoa's Asbestos Medical Surveillance Program. The following procedures encompass the collective judgment of the physicians and should be followed to assure compliance with OSHA's requirements and Alcoa's medical standards.

For the purpose of defining standard procedures, employees have been grouped below into categories determined by whether medical findings are positive or not and by whether the findings could be related to asbestos exposure or not.

A. Employees without significant medical findings

- a. A written statement should be provided to the employee indicating no significant medical findings related to asbestos exposure. From findings at this medical examination the employee is not at increased risk of developing asbestosis.
- b. No special medical follow-up is necessary at this time; however, medical monitoring for asbestos will continue as long as the employee is exposed at or above the action level for asbestos.
- c. No work restrictions are indicated.

B. Employees with significant medical findings but unrelated to asbestos exposure (assumes abnormality for organ other than the lung)

- a. Positive findings should be discussed with the employee by medical personnel, and a recommendation for medical follow-up should be made. The employee is not at increased risk for developing asbestosis.
- b. Periodic medical monitoring for asbestos exposed employees will continue as long as the employee is exposed at or above the action level; medical surveillance for other medical problems are at the discretion of the plant physician.
- c. No work restriction is indicated for potential asbestos exposure. Work restrictions for other conditions are at the discretion of the physician.



- C. Employee with significant medical findings related to the lung but not caused by asbestos
 - a. After medical findings have been discussed with the employee by medical personnel, a recommendation for medical follow-up should be made. If positive finding(s) are localized on chest x-ray and pulmonary function test results demonstrate little or no impairment, the employee is not at increased risk of developing asbestosis. Should asbestosis develop, this employee may suffer additional lung impairment. If the employee smokes, he should be urged to stop.
 - b. Periodic medical monitoring for asbestos must continue for employees as long as he/she is exposed at or above the action level for asbestos. The physician must apply good medical judgment in making a decision regarding the need for medical monitoring for the non-asbestos lung problem.
 - c. If the pulmonary lesion is localized on the chest x-ray and pulmonary function tests are normal, no work restriction is indicated for asbestos exposure. If the chest x-ray lesion is generalized and/or pulmonary function tests are abnormal, the employee should be restricted from asbestos exposure. Although the risk of developing asbestosis is very small today when exposures are minimal, asbestosis, if it should develop, could severely aggravate already impaired pulmonary function.
- D. Employees with significant medical findings consistent with tissue reactions to asbestos
 - 1. Pleural plaques or calcifications on chest x-ray (without evidence of parenchymal disease of the lungs)
 - a. A written statement to the employee must indicate presence of pleural plaques and/or other evidence consistent with tissue reactions to asbestos. The employee should be informed that he does not have asbestosis, which is a disease of the lung tissue, and we cannot with certainty predict whether such a reaction will or will not occur in the future. The employee is at greater risk for developing asbestosis and should carefully follow industrial hygiene guidelines for safe tear-out of asbestos, and the plant industrial hygienist should be notified about this risk. If the employee smokes, he should be urged to stop.
 - b. Periodic medical monitoring for asbestos exposure will continue as long as the person is employed at Alcoa, and medical personnel will keep him informed if further changes occur.

- c. Unless asbestos work is undertaken with conscientious application of work practices prescribed by industrial hygiene guidelines for personal protection of workers, the employee should be restricted from work involving potential exposure to asbestos.
2. X-ray evidence of parenchymal disease of the lung consistent with a lung tissue reaction to asbestos
- a. Upon the initial discovery of x-ray evidence of lung changes consistent with a reaction to asbestos the employee should be referred to a local specialist in lung disease for a thorough medical evaluation. In advance the physician should be given all relevant information and should be informed that the purpose of the evaluation is to establish a diagnosis for the x-ray changes. After positive findings have been discussed with the employee by medical personnel, the employee should be given a copy of the report unless information contained in it could cause emotional stress. If the specialist diagnoses asbestosis, the plant Workers' Compensation Administrator should receive a copy of the report to initiate an investigation of the employee's asbestos exposure at Alcoa.

Once asbestos exposure at Alcoa and/or elsewhere has been determined, the plant physician, Workers' Compensation Administrator and hygiene/safety professional should arrange for a telephone conference call with their respective functional staff members in Pittsburgh to discuss all findings in the case and attempt to establish whether or not (1) the findings are likely caused by asbestos exposure, (2) exposure likely did occur during work at Alcoa, (3) the case should be filed with OSHA as a case of occupational disease (asbestosis).

Because of the risk for progression of asbestosis, the employee should be informed that he must avoid all future exposure to asbestos. In addition, if he smokes, he should stop immediately.

- b. Periodic medical monitoring will continue as long as the individual is employed by Alcoa.
- c. The employee should be restricted from work which may result in further asbestos exposure.


H. DEAN BELK, M.D.

HDB:bal (ASP:HDB)

ATTACHMENT 3

Proposed Letters Containing Medical Findings and Recommendations
for Employees in the Asbestos Medical Surveillance Program

A. For employees without significant medical findings

To: _____
(employee's name) (date)

Re: Results of Examination Provided Under
Alcoa's Asbestos Medical Surveillance Program

OSHA and Alcoa health standards require that regular medical examinations be offered to employees while they are potentially exposed to asbestos at work. You completed your medical examination on _____. As far as we can determine medically at this time, you demonstrated no medical evidence of reaction to asbestos and you are not at increased risk of developing asbestosis.

(physician's signature)

- B. Employees with significant medical findings but unrelated to asbestos exposure (assumes abnormality for organ other than the lung)

TO: _____
(employee's name) (date)

Re: Results of Examination Provided Under
Alcoa's Asbestos Medical Surveillance Program

OSHA and Alcoa health standards require that regular medical examinations be offered to employees while they are potentially exposed to asbestos at work. You completed your medical examination on _____. As far as we can determine medically at this time, you demonstrated no medical evidence of reaction to asbestos, and you are not at increased risk of developing asbestosis.

In accordance with OSHA's requirements this letter will not address medical findings, if any, which are unrelated to asbestos exposure. Such significant medical findings with recommendations for follow-up have been discussed with you by medical personnel.

(physician's signature)

- C. Employees with significant medical findings related to the lung but not caused by asbestos

TO: _____
(employee's name) (date)

Re: Results of Examination Provided Under
Alcoa's Asbestos Medical Surveillance Program

OSHA and Alcoa health standards require that regular medical examinations be offered to employees while they are potentially exposed to asbestos at work. You completed your medical examination on _____. As far as we can determine medically at this time, you demonstrated no medical evidence of reaction to asbestosis, and you are not at increased risk of developing asbestosis.

In accordance with OSHA's requirements this letter will not address medical findings, if any which are unrelated to asbestosis exposure. Such significant medical findings with recommendations for follow-up have been discussed with you by medical personnel.

(physician's signature)

D-1. For employees with significant medical findings consistent with tissue reactions to asbestos (pleural plaques)

TO: _____
(employee's name)

(date)

OSHA and Alcoa health standards require that regular medical examinations be offered to employees while they are potentially exposed to asbestos at work. You completed your medical examination on _____. As a result of this examination, medical personnel discovered the presence of (pleural plaques) (pleural calcifications) which may be evidence that your body is reacting to previous asbestos exposures. You do not have asbestosis, which is a disease of the lungs. On the basis of present medical findings we cannot predict whether you will develop asbestosis in the future, but you are at increased risk of doing so. (We urge you to stop smoking now because smoking will increase your risk of further, more serious lung problems in the future.) [where applicable]

(If your job requires you to work with asbestos and you faithfully follow industrial hygiene recommendations for your protection, you will not further increase your risk for developing asbestosis in the future.)
or as a plant medical option for consistent application --
(Because your risk for developing asbestosis is greater, you are restricted from jobs which require occasional work with asbestos.)

(physician's signature)

D-2. For employees with medical findings in the lung consistent with asbestosis

TO: _____
(employee's name) (date)

OSHA and Alcoa health standards require that regular medical examinations be offered to employees while they are potentially exposed to asbestos at work. You completed your medical examination on _____. As a result of your examination in the Medical Department and your evaluation by a specialist in lung diseases, doctors discovered the presence of _____ in your lungs. These findings are consistent with changes which occur in cases of asbestosis. To reduce further damage to your lungs in the future, we urge you to avoid exposure to substances potentially harmful to your lungs. (If you smoke, we urge you to stop.) [if appropriate] You should not hold a job which requires you to work with asbestos, and a medical restriction has been issued in this regard.

(physician's signature)