

PLAINTIFF'S  
EXHIBIT  
USX-121



*United  
States  
Steel  
Corporation*

Interorganization Correspondence

Date: July 23, 1984

From: William C. Marshall, M.D.  
Assistant Medical Director

To: All Holders of  
USS PHYSICIAN'S GUIDE

Subject: Guidelines for Medical Surveillance  
Asbestos Exposure

The attached revised "Guidelines for Medical Surveillance -  
Asbestos Exposure" should be filed in Volume I of the Physi-  
cian's Guide under "Asbestos".

The previously issued guidelines should be destroyed.

*W.C. Marshall, M.D.*

WCM:noc

Enclosure

USX0000935

**GUIDELINES FOR MEDICAL SURVEILLANCE  
ASBESTOS EXPOSURE**

The following guidelines for medical surveillance shall be followed in all United States Steel Corporation operations whenever exposure to asbestos occurs.

1. A comprehensive medical examination shall be provided (or made available) to all employees prior to initial employment in an occupation with exposure to airborne concentrations of asbestos fibers. These medical examinations will be required for any 7 to 8 hour time weighted average concentration of 0.1 fibers/cc, or for a greater concentration. (The OSHA Asbestos Standard permits this examination to occur within 30 calendar days of the first exposure.)

Annually thereafter, and within 30 calendar days before or after termination of employment involving exposure to airborne concentration of asbestos fibers, a physical examination, as designated above, shall be provided (or made available) to these employees.

Whenever pleural thickening is found on any routine chest x-ray of an individual who has had any airborne asbestos exposure, this individual shall be kept under yearly medical surveillance.

The minimum components of the examination shall be:

- (a) A medical history, including a respiratory questionnaire to elicit symptomatology of respiratory disease.
  - (b) A 14" x 17" chest x-ray, posterior-anterior view. Whenever there is evidence of pleural response, right and left oblique views and an expiratory posterior-anterior view should be taken to confirm or rule out pleural findings.
  - (c) Pulmonary function testing to include forced vital capacity (FVC) and forced expiratory volume at one second (FEV<sub>1</sub>).
2. Upon initial assignment to an occupation where exposure to airborne concentrations of asbestos fibers may exist, a complete work history shall be taken. This is particularly important if changes in the chest x-ray begin to appear. The work history shall include all work experiences in United States Steel, as well as non-United States Steel work experiences, to determine the effect of exposure to asbestos. This history should include military exposures, ship and shipyard duties, hobbies, exposures from family members (father, brothers, grand-

fathers, mother, sisters, etc.) who may have worked and brought asbestos fibers home on their clothing, residential locations for proximity to asbestos mining or manufacturing plants, and even recreational areas in relation to discarded wastes from asbestos factories.

3. All chest x-rays should be read by a certified radiologist who is also a "B" reader. It is permitted to contract with such a radiologist to read all x-rays taken at the work location. Where the x-rays are not taken in-plant, arrangements should be made to have the films read by a certified radiologist who is a "B" reader. (A "B" reader is certified following successful completion of qualifying examination of 125 chest x-rays by NIOSH and the American College of Radiology.)
4. A clinical evaluation leading to a diagnosis and recommendations will be made.
  - (a) Correlate all medical findings (history, physical findings, chest x-ray interpretation, pulmonary function results, and any other medical information) with the environmental exposure data.
  - (b) Referral to a pulmonary specialist to assist in this evaluation may be done at the option of the plant medical director or other examining physician.
  - (c) Referral of the chest x-ray to another "B" reader may occasionally be necessary for the proper interpretation of the x-ray.
5. The clinical evaluation will usually result in a diagnosis of one of the following in decreasing order of importance:
  - (a) Asbestosis - typically pulmonary infiltrate of s, t, u type, with or without pulmonary function decrements, and with or without pleural thickening or plaques (with or without calcification) - record on OSHA-200 Log as "Asbestosis".
  - (b) Pleural thickening with history of asbestos exposure - bilateral pleural thickening or plaques (with or without calcification) and with or without pulmonary function decrements. Without pulmonary function decrements, there is no need to refer unless requested by the employee. Record on OSHA-200 Log as "Pleural thickening with history of asbestos exposure".

USX0000937

- (c) Unilateral pleural thickening or plaques with or without adequate history of asbestos exposure (with or without calcification) and with or without pulmonary decrements - the most likely explanation for the pleural thickening in this group is one of the following: infection (pleural effusion) or hemorrhage, callous from rib fracture, radiation fibrosis, scleroderma, chronic mineral oil aspiration, metastatic disease, lymphoma, myeloma, or a combination of these. DO NOT RECORD ON OSHA-200 LOG. Normal anatomical shadows (pectoral shadow area, extra pleural fat deposits, serratus and external oblique muscle shadows) can usually be ruled out by the above mentioned (1.(b)) techniques.
- (d) Normal chest - further follow-up testing fails to substantiate suspicions in original chest x-ray or pulmonary function tests. The role of smoking in any pulmonary function decrement must be carefully evaluated. Diffusing capacity determinations may be helpful in ruling out pulmonary fibrosis and probably should be done. In coke plants, the possibility of coal workers' pneumoconiosis (with or without focal emphysema) must always be ruled out.
6. Recommendations to the physician in discussing findings with the affected employees:
- (a) Each employee must be informed of any positive findings discovered as a result of his/her examination by the United States Steel physician and/or consultant, and an evaluation of these findings will be discussed with the employee. Recorded exposure levels should also be given to the employee. Because of proper handling of asbestos today, these environmental levels will likely be low enough to allay any fears of continued exposure to hazardous levels.
- (b) If the employee has a pulmonary infiltrate due to asbestos exposure, with or without pleural reaction, he/she shall be advised that this response is due probably to exposures of passed years. Depending upon the pulmonary function finding, the risk of continued decrement is probably directly correlated to continued smoking. This is especially true if any continued exposure is properly handled by respiratory protection and is of minimal monitored value. The corporate headquarters' Environmental Health unit shall prescribe the approved manner of handling any continuing exposure. Medical surveillance should be continued every year and, if pulmonary function levels decrease, then at shorter

intervals if clinically indicated. Every effort should be made to get the individual to STOP SMOKING if he/she is a smoker. By some estimates, the risk of lung cancer in those with parenchymal infiltrate is up to sixteen (16) times the risk of a non-smoker with the same exposure and ninety (90) times that of a worker who is a non-smoker and not exposed to asbestos.

- (c) An employee with bilateral pleural thickening or plaques due to asbestos exposure (with or without calcification) - should be advised that this response is the result of many years of low level exposure. These changes should not progress if the exposure has been eliminated or properly controlled by proper handling of asbestos or by respiratory protection if exposure continues. Depending upon the pulmonary function findings, the risk of continued decrement is directly correlated with continued smoking. This is especially true if continued exposure is properly handled by respiratory protection and is of minimal monitored value. The corporate headquarters' Environmental Health unit shall prescribe the approved manner of handling any continuing exposure. Medical surveillance should be continued yearly unless there is a decrement in pulmonary function, then at shorter intervals if clinically indicated. If this occurs, more frequent surveys may be clinically indicated. Every effort should be made to get the individual to STOP SMOKING if he/she is a smoker.
  - (d) Unilateral pleural thickening or plaques (with or without calcification) - continue to follow on a yearly basis.
  - (e) Normal - yearly follow-up.
7. Environmental monitoring - will be carried out by the Environmental Health unit (corporate headquarters or plants) according to requirements of the OSHA Asbestos Standard.

USX0000939

6/26/84



CopiesUSS PHYSICIAN'S GUIDE

|   |                         |                              |                                                                      |
|---|-------------------------|------------------------------|----------------------------------------------------------------------|
| 1 | Armen, R. N., M.D.      | (PA)                         | - Research Center, Monroeville                                       |
| 1 |                         | (PA)                         | - Pittsburgh General Office                                          |
| 2 | Black, M. H., M.D.      | (PA)                         | - Duquesne                                                           |
| 1 | Caruso, John, Jr., M.D. | (PA)                         | - Fairless Works                                                     |
| 1 | Preston, W. D., M.D.    |                              | - Geneva Works                                                       |
| 1 | Davis, D. J.            |                              | - USS Chemicals - Neal Plant                                         |
| 1 | Deloglos, Gust, M.D.    | (PA)                         | - USS Chemicals - Neville Island                                     |
| 2 | Edmunds, R. T., M.D.    |                              | - Gary Works - West                                                  |
| 1 | Fisher, T. F., M.D.     | (PA)                         | - 600 Grant Street                                                   |
| 1 | Fox, C. J., M.D.        | (PA)                         | - Vandergrift Plant                                                  |
| 1 | Block, J. B., M.D.      |                              | - Fairfield Works                                                    |
| 1 | Irion, J. K., M.D.      |                              | - Pittsburg Works (Calif)                                            |
| 1 | Jensen, Warren          |                              | - RMI - Niles, Ohio                                                  |
| 1 | Kuhns, K. F., M.D.      | (PA)                         | - Homestead                                                          |
| 1 |                         | (PA)                         | - Christy Park Works                                                 |
| 1 | MacKay, J. A., M.D.     |                              | - Lorain                                                             |
| 1 | Marshall, W. C., M.D.   | (PA)                         | - 600 Grant Street                                                   |
| 1 | Mathew, A., M.D.        | (PA)                         | - Irvin Works                                                        |
| 1 | Miller, W. D.           | (PA)                         | - 600 Grant Street                                                   |
| 1 | Mosley, M. R., M.D.     | (PA)                         | - National Works                                                     |
| 1 | Novack, T. D., M.D.     |                              | - Gary Works - East                                                  |
| 1 | Pretter, P. D., M.D.    | (PA)                         | - Union Railroad Company                                             |
| 1 | Brace, K. H., M.D.      |                              | - RMI, Ashtabula, Ohio                                               |
| 2 | Schwerha, J. J., M.D.   | (PA)                         | - 600 Grant Street                                                   |
| 1 | Singletary, R. W.       | (PA)                         | - Clairton                                                           |
| 1 | Tornello, R. L., M.D.   |                              | - RMI - Niles, Ohio                                                  |
| 1 | Wier, K. R., M.D.       |                              | - Lynch Medical Services                                             |
| 1 | Woodward, W. M., M.D.   |                              | - South Works                                                        |
| 1 | Lelande, Robert, M.D.   |                              | - Quebec Cartier Mining Co.                                          |
| 1 | Steinmetz, C. H., M.D.  |                              | - Marathon Oil Company                                               |
| 1 | Bundy, Merle, M.D.      |                              |                                                                      |
| 1 | Koch, J. C., M.D.       |                              |                                                                      |
| 1 | Weir, T. F., M.D.       | (PA)                         | - 600 Grant Street                                                   |
| * | Novak, J. F., M.D.      | <u>*Vision Standard Only</u> | 520 Medical Arts Bldg.<br>3700 Fifth Avenue<br>Pittsburgh, Pa. 15213 |
| 1 | Office Copy (Book Case) |                              |                                                                      |

37

Total Copies  
+ 6 copies to update extras in file room

Total 43 copies

7/23/84

USX0000940

