



From D.L. KIPPEN

To MEMORANDUM

ORC / ASBESTOS
Task Force

PITTSBURGH OFFICE

1988 February 18

RE: ASBESTOS SAMPLING DATA COLLECTION PROJECT - ORC

Alcoa will be participating in an asbestos data collection project in conjunction with several other large industrial concerns under the auspices of Organization Resources Counselors, Inc. (ORC). This will enable us to pool asbestos exposure data with the various industries involved which will benefit Alcoa in two ways.

1. Having access to this sort of data will enable industrial hygienists to anticipate potential exposure levels associated with specific asbestos jobs and environmental controls. This information could then be used to plan specific job procedures and protective measures necessary for jobs.
2. If an asbestos job being conducted in an Alcoa plant is analogous to one in the sampling data pool, expensive and time consuming daily sampling required under the OSHA Asbestos Construction Standard may not be necessary. Reliance upon sampling data from the pooled data after our own initial sampling would make this possible. Reliance upon historical data is allowed under the OSHA Standard. The industrial hygienist would then be free to determine the sample frequency based upon professional judgement rather than having to meet the arbitrary sample frequency from the OSHA standard.

The type of tasks being studied in this phase of the data collection project are those having exposures less than the action level (0.1 fibers/cc). For the purposes of this project these will be called "small jobs." Please use the attached form as a "master" in order to supply necessary information on the personal sampling data which has been done using the new sampling method specified in 29CFR 1926.58 (25 mm diameter filters). Only data which has been collected after the publication of the new OSHA asbestos rules can be used for this project. Each asbestos sampling data sheet will contain asbestos exposure data for one person performing one task. Please send completed asbestos sampling data sheets to the writer.

All company and employee identification will be treated as confidential information and will be available only to Alcoa and ORC. This information will be removed from the form before transmittal to the company that has been contracted to computerize the data.



ALCOA

PLAINTIFF'S
EXHIBIT
AL-845

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The data collection phase of this project is expected to be completed 24 August 1988 and no data can be accepted after that date. This project has a potential of being able to provide Alcoa with valuable information but in order to have access to that information, we must contribute information. I encourage you to participate.

Laura

LAURA RIPPEY

asbest3.LLR

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ASBESTOS SAMPLING DATA SHEET

Small Jobs

ORC Asbestos Data Collection Project

Please Use Red Ink to Complete the Form

1. SHEET NUMBER _____

2. TASK (REMOVAL OF ACM IS NOT PRIMARY GOAL)

a. TASK DESCRIPTION (CHECK ONE PER SAMPLING ACTIVITY)

- ☐ Open ceiling tiles
- ☐ Remove cable cover
- ☐ Cable maintenance
- ☐ Splicing cable
- ☐ Pulling cable
- ☐ Task clean-up
- ☐ Equipment installation
- ☐ Equipment removal
- ☐ Brake work
- ☐ Clutch work
- ☐ Gasket work
- ☐ Boiler maintenance
- ☐ Pipe maintenance
- ☐ Valve maintenance
- ☐ Other equipment maintenance
- _____
- ☐ Shipwork _____
- ☐ Other _____

b. ACM ACTIVITY RESULTING FROM TASK (CHECK ALL THAT APPLY)

- ☐ Wetting
- ☐ Removal
- ☐ Bagging
- ☐ Transportation
- ☐ Drilling/cutting/grinding
- ☐ Incidental disturbing
- ☐ Other _____
- ☐ None

c. ACM FORM (CHECK ALL THAT APPLY)

- ☐ Sprayed on insulation
- ☐ Troweled on insulation
- ☐ Equipment insulation
- ☐ Boiler insulation
- ☐ Pipe insulation (g.t. 12" diameter)
- ☐ Pipe insulation (l.t. 12" diameter)
- ☐ Pipe fittings
- ☐ Transite Pipe
- ☐ Floor tiles
- ☐ Ceiling tiles
- ☐ Roofing
- ☐ Transite Board
- ☐ Asbestos cement
- ☐ ACM fabricated items
- ☐ Other _____

d. ACM LOCATION (CHECK ALL THAT APPLY) (Telecom/Utility Specific)

- ☐ Above hung ceiling
- ☐ Beams/columns
- ☐ Crawl space
- ☐ Tunnel
- ☐ Manhole
- ☐ Cable vaults
- ☐ Piping
- ☐ Other

e. LOCATION OF JOB WITH RESPECT TO ACM (Telecom/Utility Specific)

- ☐ Adjacent to
- ☐ On
- ☐ Through
- ☐ Other _____

ORC Asbestos Data Collection Project

SHEET NUMBER _____

f. DISTANCE TO ACM
(Telecom/Utility Specific)

- ☐ <1 ft.
- ☐ 1-3 ft.
- ☐ 3-5 ft.
- ☐ 5-10 ft.
- ☐ 10-20 ft.
- ☐ >20 ft.

3. TYPE OF ASBESTOS
(INDICATE % IF KNOWN)

- ☐ _____ % amosite
- ☐ _____ % chrysotile
- ☐ _____ % crocidolite
- ☐ Unknown

4. ACM CONDITION

- ☐ Loose/friable
- ☐ Hardened/non-friable
- ☐ Encapsulated

5. ACM DISTURBED

- ☐ Yes
- ☐ No

**6. ESTIMATED AMOUNT OF ACM
REMOVED**

- _____ square feet
- _____ cubic feet
- _____ linear feet
- _____ pipe diameter
- ☐ unknown
- ☐ none

**7. OTHER FIBROUS MATERIALS
PRESENT**

- ☐ Yes
- ☐ No
- ☐ Unknown

8. PHYSICAL CONDITIONS

- a. ☐ Indoor
- ☐ Outdoor
- b. ☐ Elevated
- ☐ Ground level
- ☐ Below ground
- c. Temp. of Equipment
(if applicable)
 - ☐ approximately ambient
 - ☐ above ambient
 - ☐ below ambient
- d. Air Temperature
(when task begun)
 - ☐ >32°F
 - ☐ <32°FAir Temperature
(when task completed)
 - ☐ >32°F
 - ☐ <32°F
- e. Wind speed
(if applicable)
_____ mph

9. STRUCTURE OWNERSHIP

- ☐ Company Owned
- ☐ Leased
- ☐ Customer Premise

AIR SAMPLING DATA
ORC Asbestos Data Collection Project

SHEET NUMBER _____

1. **Cassette #:** * _____
(One worker only; One task only)

* If more than one cassette is used for the same task number each separately but combine the data for the questions below.

2. **Date of Sample:** ____/____/____
(month) (day) (year)

3. **Sample duration: (minutes)** _____

4. **Fiber Concentration: (f/cc)** _____

5. **Fiber Count: (f/100 fields) (if available)** _____

6. **Actual TWA Exposure:** _____

7. **8 hour TWA Exposure:** _____

8. **Pump flow rate: (ltr/min) Pre-sample** _____ **Post-sample** _____
Date Checked Pre: ____/____/____ **Post:** ____/____/____
(month) (day) (year) (month) (day) (year)

9. **Pump Serial Number** _____

10. **Worker ID (if applicable):** _____

11. **Upset conditions** ☐ Yes ☐ No

Comments (spills, unplanned events, etc.)

Signature/title of person filling out form

Print name in full: _____ **Phone No.** _____

Company name (print) _____

City _____ **State** _____

ORC Asbestos Data Collection Project

SHEET NUMBER _____

10. STRUCTURE

(COMPLETE EITHER A OR B)

a. Type of Building (CHECK ONE)

- ☐ School
- ☐ Hospital
- ☐ Office
- ☐ Telecom Central Office
- ☐ Warehouse
- ☐ Factory
- ☐ Garage
- ☐ Residential

b. Structure If other than building (specify, ex. tower, boiler, etc.)

11. CONTROL METHODS

(CHECK ALL THAT APPLY)

- ☐ Enclosure (without negative pressure)
- ☐ Enclosure (with negative pressure)
- ☐ Power tool with HEPA exhaust ventilation
- ☐ Local exhaust ventilation with fiber capture
- ☐ Wetting agent

- ☐ Glove bag
- ☐ HEPA vac
- ☐ Wet wipe
- ☐ Alternate route (telecom/utility)
- ☐ Removal of entire structure
- ☐ Mini Enclosure
- ☐ Other
- ☐ None

12. SAMPLING/ANALYTICAL METHOD

- ☐ Appendix A OSHA Standard
- ☐ Appendix A OSHA Standard;
(37 mm cassette)
- ☐ Confirmatory Analysis
(by SEM, TEM, XRD, PLM)

☐ Other _____

13. SAMPLING COMPLETED BY

- ☐ In-house
- ☐ Contractor
- ☐ Third-party contractor

14. PRIOR KNOWLEDGE OF PRESENCE OF ACM?

- ☐ Yes ☐ No ☐ Unknown

15. REMARKS

INSTRUCTIONS FOR FILLING OUT ASBESTOS SAMPLING DATA SHEET
FOR SMALL JOBS

1. Sheet Number

The sheet number will be preassigned.

2. Task

The Asbestos Sampling Data Sheet is to be completed only for jobs in which removal of asbestos containing material (ACM) is not the primary goal.

a. Task Description

What is the nature of the actual work being performed? Check the one entry which best describes the task.

b. ACM Activity Resulting from Task

What was done in regard to actually working with or handling the acm:

c. ACM Form

What is the form of the ACM encountered on the task? Check all that apply.

Questions 2(d), 2(e) and 2(f) are to be completed only by telecommunications and utility industry employees.

d. ACM Location

Where is the specific location of the ACM encountered on the task? Check all that apply.

e. Location of Job with Respect to ACM

Where, in relation to the ACM, is the task being performed?

f. Distance to ACM

What is the distance between the site of the task and the ACM. If the distance varies, indicate the average distance.

3. Type of Asbestos (Indicate & if known)

What type of asbestos is present - amosite, crocidolite, chrysotile, unknown?

Check all that apply and, if possible, indicate the percentage of amosite, crocidolite, and/or chrysotile present in the ACM.

4. ACM Condition

Is the material being removed loose, crumbly, - does it flake off, when worked with; is it hard to the touch; or has it been encapsulated with another material?
Check the appropriate box.

5. ACM Disturbed?

Was the ACM disturbed during the task.
Check the appropriate box

6. Amount of Asbestos Removed During Sample

How much asbestos was removed if any? Estimate in lengths of pipe removed, square feet of boiler insulation, or tiles etc. Fill in the appropriate amount.

7. Other Fibrous Materials Present

Are fibrous materials other than asbestos present?
Check the appropriate box.

8. Physical Conditions

a. Location

Is the task being performed indoors or outdoors?
Check the appropriate box.

b. Elevation

Is the task being performed at ground level, above ground level or below ground?
Check the appropriate box.

c. Temperature of Equipment

If the task involves working on equipment that has ACM content, indicate the temperature of the equipment.

d. Air Temperature

Indicate whether the temperature is above or below freezing when the task is started and whether it is above or below freezing when the task is completed
Check the appropriate box.

9. Structure Ownership

Is the task being performed on a company owned premise, company leased premise, or customer owned premise? This question addresses premise ownership only. Ownership of the ACM equipment or materials being worked on (i.e. phone company cables etc.) is not the focus of this question. Check the appropriate box.

10. Structure

Complete only section a) - type of building or section b) type of structure if other than a building. Do not complete both sections.

a. Type of Building

If in a building, in what type of building is the task being performed?
Check the appropriate box.

b. Structure if Other than a Building

If other than a building, identify the type of structure the task is being done in, or on (ex., tower, boiler, etc.)

11. Control Methods

What method(s) are being used to minimize the release or generation of airborne asbestos fibers?
Check all that apply.

12. Sampling/Analytical Method

What method is being used to analyze samples for the presence of asbestos, and if that test indicates the presence of asbestos, what kind of confirmatory analysis is performed?
Check the appropriate box or identify alternate method of analysis.

13. Sampling Completed By:

Was the sampling done by company employees, by an outside consultant/contractor hired by the company, or by a third party hired by the company's outside contractor?
Check the appropriate box.

14. Prior Knowledge of Presence of ACM:

Was there knowledge of the presence of ACM before the task was begun?
Check the appropriate box.

Each Task is to be Monitored from Start to Finish for the Purposes of this Survey

B. AIR SAMPLING DATA

1. Cassette #. One Worker Only. One Task Only

Each cassette should be given a distinct identification number. If more than one cassette is used for a single task, record a separate number for each cassette in this space, combine the data for the separate cassettes and record the data requested below for the task. Indicate the reason for using more than one cassette in the comment section.

2. Date of Sample:

Enter month, day and year.

3. Sample Duration (Minutes)

Sampling should begin when the task is initiated and end when the task is completed. The sample duration should be identical to the duration of the task.

4. Fiber Concentration

Record the fiber concentration (fibers per cc) as determined from the laboratory analysis. Use "GT" and "LT" for "greater than" and "less than" (respectively). If the sample filter is overloaded, note GT before the result.

5. Fiber Count (f/100 fields)

Enter fibers/100 fields fiber count if this information is available or obtainable.

6. Actual TWA Exposure

What was the time weighted average exposure for the duration of the job. This is to be determined from the information provided in numbers 3 (sample duration) and 4 (fiber concentration) above.

7. 8 Hour Time Weighted Average Exposure

If more than one sample was taken on a person during a shift, a time weighted average should be calculated using the below formula:

$$\frac{C_1T_1 + C_2T_2 + \dots + C_nT_n}{T_1 + T_2 \dots T_n}$$

Cn = the fiber concentration for sample n
Tn = the sample duration for sample n

7. 8 Hour Time Weighted Average Exposure (Cont.)

In extrapolating from an acm exposure period of less than 8 hours to an 8 hour time period, assume zero exposure during the time in which no acm task is being performed and no sampling for acm is being done.

8. Pump Flow Rate: (Liters/Min)

The pump flowrate should be the averaged flowrate as determined by calibration with a primary standard such as a bubble tube. Enter the date the pre-sample and post-sample flow rate was checked.

9. Pump Serial Number:

Enter the pump serial number

10. Worker ID:

Enter the worker identification number, if any, used by your company.

11. Upset Conditions

Was there a greater than normal exposure to asbestos due to an unplanned event? Specify the event in the comments section. Mark the appropriate box.

DKM/20