PLAINTIFF'S EXHIBIT

AL-2013

asbestos file

R. W. KNAPP

MASSENA OPERATIONS

MR. R. C. HINKLE

BADIN WORKS

CONFIDENTIAL

June 20, 1973

RE: OSHA ASBESTOS COMPLIANCE QUESTIONNAIRE - MASSENA OPERATIONS

Since submission of information on your asbestos questionnaire (our reply dated 4/13/73), Dr. M. J. Elder has reviewed and examined twenty-six (26) of our previously exposed carpenters and masons and has found no asbestos associated problems.

R. W. KNAPP

RWK:bl

Cc: Dr. P. R. Atkins/Mr. T. B. Bonney - Pittsburgh
Dr. M. O. Colwell/Dr. W. N. Dawson - Pittsburgh

Copy Circulated To
Dr Elder
J Walker
H. Burgert
S. Jones
P Hinds
W Barr
G. Fairbanks
H McLaughlin
H. Cassio
W Pashby
G Scott
G. Duckworth
R Kopecky
R Knapp
(6-20 BK)

FROM R. C. HINKLE
BADIN WORKS

TO MR. R. W. KNAPP
MASSENA OPERATIONS

Confidential

May 29, 1973

OSHA ASBESTOS COMPLIANCE QUESTIONNAIRE

The captioned questionnaire was sent on March 30 to the thirteen locations which had Smelting and/or Ingot operations; replies have now been received from all. Replies from the five "Ingot only" locations have been forwarded to Mr. J. A. Dunbar in Pittsburgh. Copies of the remainder are herewith forwarded to him.

Mr. G. R. Swany and I have reviewed the replies from the eight joint Smelting-Ingot locations, and a brief summary is being made. In general, the plants appear to be aware of the detailed requirements of the OSHA regulations, and are working toward compliance with them. Table I summarizes the Industrial Hygiene and Medical section responses. Mr. T. B. Bonney and Dr. W. M. Dawson are receiving copies of the Industrial and Medical sections of the completed questionnaires, and it is assumed that they will take any action which appears to be appropriate in their areas of responsibility. The initial sampling surveys are still under way at Badin, Rockdale, Tennessee and Warrick; these plants are hereby requested to report to me their status as of July 31, 1973. Massena alone has decided that no dust-count surveys are needed, on the basis of their elimination of fabrication of non-locked-in asbestos products. (Marinite shapes are purchased).

The third section of the questionnaire dealt with compliance, materials, and operations. Copies of the replies to this section are herewith forwarded to Mr. V. M. Rieke of Environmental Engineering. Table II is a compilation of the operations and materials which the eight plants considered to be of concern. Every plant is asked to examine the list, to see whether there is a material or operation which has been overlooked locally. No one mentioned the potentially hazardous maintenance of dust collectors and ducting which handle asbestos. Bag changing and other work might easily expose workers to conditions outside the ceiling concentration (10 fibers), so the operation should be sampled, and proper precautions taken.

Wenatchee, Vancouver, Tennessee, Rockdale, Massena, and Badin should examine their procedures for removing and disposing of potlining insulation and other installations containing asbestos-bearing Hi-Temp or Superex. Only sampling can determine whether the exposure limits are being exceeded. The requirements of paragraph "(h)(2) Waste disposal" should be examined for application to the local situation.

Vernon Works very kindly enclosed some asbestos control measure information which had been provided by the Seattle Area Office of OSHA. A copy is attached. Mr. Bonney comments that while the dust-count information may be a useful guideline, variations in plant procedures make actual local dust counts necessary.

R. C. HINKLE

RCH:bpc

ALCOA

SF-4563 (REV 11-68)

cc: E. M. Morgan - Badin Works
R. W. Knapp - Massena Operations
A. A. Rambikur - Pt. Comfort Operations
E. B. Parker - Rockdale Works
G. W. Anderson - Tennessee Operations
P. F. Woodward - Vancouver Operations
R. L. Parsons - Warrick Operations
J. E. Owen - Wenatchee Works
M. O. Colwell - Pittsburgh (29)
L. V. Cralley/P. R. Atkins - Pittsburgh (7)
V. W. Rieke/R. C. Cook - Pittsburgh (2)
W. N. Dawson - Pittsburgh (7)
M. J. Caprio - Pittsburgh (19)
R. W. Wrenn/J. A. Dunbar - Pittsburgh (23)
S. A. Jones/G. R. Swany - Pittsburgh (23)
J. Z. Nelson/A. J. Sartschev - Oliver Plaza (7)
R. P. Carter/T. B. Bonney - Pittsburgh (7)

TABLE I

A brief summary, the status of the Industrial and Medical sections, as of April 1973, is given below:

PLANT	INITIAL SAMPLING	AREAS FOUND EXCEEDING LIMITS	INITIAL ASBESTOS MEDICAL EXAMINATION
Badin	Under way	None yet	Complete
Massena	None	-	None — Dr Elder has exam[illegible] carpenters + [illegible] — no problem
Pt. Comfort	Complete	0	Complete
Rockdale	Under way	None yet	None
Tennessee	Under way	Three	Under way
Vancouver	Complete	0	Getting set up
Warrick	Under way	None yet	Complete
Wenatchee	Complete	0	Under way

TABLE II

A compilation of the operations which the eight plants considered to be of concern, as of April, 1973:

MATERIAL	OPERATIONS
Marinite	Sawing, drilling, routing, sanding Work area clean-up Movement to and from Stores Dismantling and disposal after use Properzi spouts
Asbestos Millboard	Sawing, shaping
Superex, Hi-Temp	Removal of insulation from various installations: Potlinings, carbon baking furnaces, crucibles, metal filters
Chicago Firebrick Co. Super-insulation cement	Insulate mixers and Tar pumps, Dough-balls for plugging furnace tap holes, Removal and disposal of used material
JM 352 (Asbestos Shorts)	Trough lining and removal of material Insulation of steam pipe elbows Joint between furnace sidewalls & roofs
JM No. 19 Cement	Trough lining & removal
Eagle Pitcher PV Block	Furnace Door insulation: install, remove, dispose

ASBESTOS HAZARD CONTROL - GENERAL

CHANGING WORK PRACTICES IS A SIMPLE, ECONOMICAL, AND PRACTICAL APPROACH TO CONTROL OF ASBESTOS DUST PRODUCTION

Some recommended practices are:

1. Use plastic waste bags for collection, transportation, and waste disposal of asbestos refuse.
2. Use a portable industrial vacuum cleaner for pick-up of asbestos waste and dust at the work site.
3. Use plastic impregnated paper coveralls and dust respirators for dusty operations of an incidental nature. The coveralls are throw-away and eliminate processing and cleaning.
4. Use down-draft ventilated portable work tables for precutting and assembly at asbestos materials at remote locations, mobile situations or inside ships.
5. Precut all block insulation in shops under ventilated condition and then deliver it to location.
6. Package pre-cut block insulation in plastic and add water to contain dust, maintain integrity of gores, indetification, and ease of handling.
7. Reduce airborne asbestos dust 50 to 60% by prewetting the materials before handling.
8. Mix asbestos cement (15%) at remote locations under ventilated conditions. Mix small batches in plastic bags.
9. Spread plastic or canvas drop cloths at work site to contain and facilitate clean-up.
10. Conduct modular assembly of asbestos materials on piping prior to installation.

11. Consider disposable forms of respiratory protection for onetime or intermittent use situations.
(U.S. Bureau of mines Approved.)

12. Substitute non-asbestos products whenever suitable, acceptable and feasible.

13. Use enclosures to limit the spread of dust from unit operations.

14. Separate clean-up areas for workmen.

15. Limit exposure of other trades in the vicinity of asbestos work.

16. Develop asbestos work stations, either portable or stationary, to control dust production.

17. Develop suitable storage and storing areas.

Some practices that produce high asbestos dust levels:
and SHOULD be prohibited.

1. Do not clean up fallen asbestos debris with brooms or brushes.
2. Do not allow debris to be thrown from staging or from one deck to another.
3. Do not shake coveralls or drop cloths.
4. Do not remove respirators before asbestos dust laden clothing.
5. Do not clean dusty clothes with an air gun.
6. Do not vent asbestos dust picked up by ventilation into adjoining work areas, or ships compartments.
7. Do not wear respirators covered with asbestos dust.
8. Do not wear street clothes to handle asbestos materials or under known dusty conditions.
9. Do not use asbestos for welders pads.
10. Do not allow uncontrolled cutting, ripping, sawing, or bracking of asbestos in small enclosed spaces.

PREDICTED ASBESTOS DUST CONCENTRATIONS

(Taken From Actual Measurements of Industrial Operations)

Type of Work	Present	Improved	Change of Work Practice & Approved Respirator
	Fibers/ml		
1. Mixing & Applying Cement and Cloth to Insulation Material			
Good Ventilation	2.5	.5	.05
Poor Ventilation	4.6	1.0	.10
2. Cutting & Applying Insulation Block or Sections to Piping			
Good Ventilation	5.2	2.5	.30
Poor Ventilation	11.5	5.0	.50
2a. Cutting & Materials for Later Use in Cutting Sheds	7.6	1.5	.20
3. Spraying Turbines or like Machinery in partially enclosed Spaces			
Spray Operator	67	.7	3.0
Hopper Fender	10	.1	1.0
4. Asbestos Cloth; Cutting Fitting, Glueing & Installing	25-30	10	.5
5. Magnesia Block Cutting			
Ventilated	10	5	1
Unventilated	100	20	5
6. Amosite Cloth Cutting	5-15	5	1
7. Asbestos Cloth Cutting			
Ripping	50	2	1
Cutting	10	2	1

Type of Work	Present	Improved	Change of Work Practice & Approved Respirator
8. Amosite Installation or Ships (enclosed Spaces)	10-45	10	1
9. Magnesia Block Cutting & Installation			
Ventilated	5	2	1
Unventilated	25	5	1
10. Asbestos Cement Mixing			
Open	100-200	25	10
Enclosed Bag	3	1	1
11. Spraying Asbestos Materials (5%) on New Building	68-100	50	10
12. Mixing & Charging at Hopper	10-40	10	5
13. Incidental Exposure from Spraying Nozzle 75 Feet away	40-60 75-100	30	5
14. Wetting Down of rip-out materials	50-70	20	5
15. Rip out of Materials-dry	200+	100+	50
16. Brake Shoe Repair Shop	25	10	2
17. Coveralls Covered with Asbestos Dust	5 (Intermittent)	1	>1