PLAINTIFF'S EXHIBIT

UC-3268

8(a)

To: W. L. Browning
T. L. Collins
P. L. Graham
R. R. Keller
M. L. Mills
L. R. Noble
H. E. Rucker

September 12, 1986

Subject: OSHA Amended Asbestos Standard Training

For Your Information - attached are copies of the overhead slides Manhar Patel prepared and used in a training session he conducted this morning for the Services and Construction Department supervisors. The training session went very well & the information well received as Manhar did a fine job of presenting the material.

C. P. Maxwell

cc: Letter to M. A. Patel

(8)

UCC 016874

OSHA AMENDED ASBESTOS STANDARD

Employees exposure to asbestos is regulated by OSHA under two seperate standards.

1. **General Industry Standard**
2. **Construction Industry Standard**

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GENERAL INDUSTRY STANDARD 1910.1001

INCLUDES

1. SHIP REPAIR AND REBUILDING
2. MANUFACTURING
3. SECONDARY PROCESSING (eg. gasket cutting)
4. BRAKE AND CLUTCH REPAIR

CONSTRUCTION INDUSTRY STANDARD 1926.58

INCLUDES

1. CONSTRUCTION (USE OF A/C PIPES, SHEETS, ASPHALT ROOFING FELTS AND COATINGS

2. ASBESTOS ABATEMENT

   ASBESTOS REMOVAL

   A. SPRAY-ON OR TROWEL-APPLIED

   B. INSULATION OF PIPES, BOILERS, OR PROCESS EQUIPMENT

   ENCAPSULATION

3. RENOVATION/REMODELING OF EXISTING STRUCTURES

4. ROUTINE FACILITY MAINTENANCE

5. DEMOLITION

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PERMISSIBLE EXPOSURE LIMIT

0.2 FIBER PER CUBIC CENTIMETER OF AIR (0.2 F/C.C.) AS AN EIGHT (8) HOUR TIME-WEIGHTED AVERAGE

0.1 FIBER/C.C. ACTION LEVEL STANDARD

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COMPLIANCE REQUIREMENTS:

REGULATED AREA:

An area is called a regulated area where airborne concentration of asbestos exceeds or can reasonably be expected to exceed the permissible exposure limit.

OUR CURRENT PRACTICE OF DEMARCATING AN AREA WITH A YELLOW TAPE AND NEW SIGNS IS ACCEPTABLE FOR **SMALL JOBS**

SMALL JOBS ARE SMALL SCALE, SHORT DURATION OPERATIONS SUCH AS PIPE REPAIR, VALVE REPLACEMENT, INSTALLING ELECTRICAL CONDUIT, INSTALLING OR REMOVING DRYWALL, ROOFING, AND OTHER GENERAL BUILDING MAINTENANCE OR RENOVATION.

ADDITIONAL RESTRICTIONS ON LARGE JOBS:

- **NEGATIVE PRESSURE ENCLOSURE**
- **DESIGNATE A COMPETENT PERSON**

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EXPOSURE MONITORING:

1. INITIAL

TO ESTABLISH EXPOSURE CONDITIONS FOR EACH TYPES OF JOBS.

2. PERIODIC

DAILY MONITORING THAT IS REPRESENTATIVE OF THE EXPOSURE OF EACH EMPLOYEE IN THE REGULATED AREA.

MONITORING IS NOT REQUIRED WHEN ALL EMPLOYEES IN THE REGULATED AREAS ARE EQUIPPED WITH SUPPLIED AIR RESPIRATORS OPERATED IN THE POSITIVE PRESSURE MODE.

3. TERMINATION OF MONITORING

IF THE PERIODIC MONITORING DATA REVEAL THAT EMPLOYEES EXPOSURES ARE STATISICALLY BELOW THE ACTION LEVEL STANDARD OF 0.1 FIBER/C.C. THE EMPLOYER MAY DISCONTINUE MONITORING FOR THOSE EMPLOYEES WHOSE EXPOSURES ARE REPRESENTED BY SUCH MONITORING.

EMPLOYEE NOTIFICATION OF MONITORING RESULTS:

RESULTS OF EXPOSURE MONITORING MUST BE NOTIFIED TO ALL EMPLOYEES MONITORED IN WRITTING AS SOON AS THE RESULTS ARE AVAILABLE TO THE SUPERVISION

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METHODS OF COMPLIANCE:

1. ENGINEERING CONTROLS AND WORK PRACTICES

   ONE OR ANY COMBINATION OF THE FOLLOWING

   - LOCAL EXHAUST VENTILATION EQUIPPED WITH HEPA FILTER DUST COLLECTION SYSTEM
   - GENERAL VENTILATION SYSTEM
   - VACUUM CLEANERS EQUIPPED WITH HEPA FILTERS
   - ENCLOSURES OR ISOLATION OF PROCESSES
   - USE OF WET METHODS, WETTING AGENTS
   - PROMPT DISPOSAL OF WASTE
   - USE OF WORK PRACTICES

2. WHENEVER THE CONTROLS DESCRIBED ABOVE ARE NOT ENOUGH TO REDUCE THE EXPOSURE BELOW THE ACTION LEVEL THEN IT IS ACCEPTABLE TO CONTROL THE EMPLOYEES EXPOSURE BY THE USE OF RESPIRATORY PROTECTION.

3. PROHIBITED ACTIVITIES

   HIGH SPEED ABRASIVE DISC SAWS WITHOUT APPROPRIATE ENGINEERING CONTROL

   COMPRESSED AIR UNLESS USED IN CONJUNCTION WITH THE TOTAL ENCLOSURE

   SPRAYING ASBESTOS CONTAINING MATERIALS

   EMPLOYEES ARE NOT PERMITTED TO EAT, DRINK, SMOKE OR CHEW TOBACCO OR GUM OR APPLY COSMETIC IN THE WORK AREA

4. EMPLOYEES CAN NOT BE ROTATED AS A MEANS OF COMPLIANCE WITH THE PERMISSIBLE EXPOSURE LIMIT

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RESPIRATORY PROTECTION:

POWERED AIR PURIFYING RESPIRATOR MUST BE PROVIDED IN LIEU OF ANY NEGATIVE-PRESSURE RESPIRATOR WHENEVER EMLOYEE CHOOSES TO USE THIS TYPE OF RESPIRATOR AND WHEN THIS TYPE OF RESPIRATOR WILL PROVIDE ADEQUATE PROTECTION.

HALF -MASK AIR-PURIFYING RESPIRATOR EQUIPPED WITH HIGH EFFICIENCY (HEPA) FILTERS	NOT IN EXCESS OF 2 F/CC (10 X PEL)
FULL FACE AIR-PURIFYING RESPIRATOR EQUIPPED WITH HEPA FILTER	NOT IN EXCESS OF 10 F/CC (50 X PEL)
POWERED AIR-PURIFYING RESPIRATOR EQUIPPED WITH HEPA FILTER (OR) SUPPLIED AIR RESPIRATOR	NOT IN EXCESS OF 20 F/CC (100 X PEL)
FULL FACE SUPPLIED AIR RESPIRATOR OPERATED IN PRESSURE DEMAND MODE	NOT IN EXCES OF 200 F/CC (1000 X PEL)

RESPIRATOR FIT TESTING

INITIALLY AND EVERY SIX MONTHS THEREAFTER EMPLOYEES WEARING NEGATIVE PRESSURE RESPIRATOR MUST BE GIVEN A RESPIRATORY FIT TEST. THE FIT TEST MAY BE QUALITATIVE OR QUANTITAVE.

THE QUALITATIVE FIT TEST MAY BE USED FOR TESTING THE HALF MASK RESPIRATOR.

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PROTECTIVE CLOTHING:

COVERALLS, HEAD COVERINGS, GLOVES, AND FOOT COVERINGS.

CONTAMINATED CLOTHING MUST BE TRANSPORTED IN SEALED IMPERMEABLE CONTAINERS AND LABELED.

HYGIENE FACILITIES AND PRACTICES:

FOR LARGE SCALE JOBS: CLEAN CHANGE AREAS

FOR SMALL SCALE JOBS: CLEAN PROTECTIVE CLOTHING WITH A PORTABLE HEPA EQUIPPED VACUUM CLEANER BEFORE SUCH EMPLOYEES LEAVE THE REGULATED AREA.

LUNCH AREAS

REQUIREMENTS FOR REMOVAL, DEMOLITION, AND RENOVATION OPERATIONS

DECONTAMINATION AREA ADJACENT AND CONNECTED TO THE REGULATED AREA. THIS AREA WILL CONSIST OF AN EQUIPMENT ROOM, SHOWER AREA, AND CLEAN ROOM IN SERIES.

THERE ARE SPECIFIC REQUIREMENTS AS TO HOW TO USE SUCH FACILITY.

HOUSEKEEPING:

VACUUMING WITH HEPA EQUIPPED CLEANER. THE EQUIPMENT MUST BE USED AND EMPTIED IN A MANNER THAT MINIMIZES THE REENTRY OF ASBESTOS IN THE WORKPLACE.

WASTE DISPOSAL:

ALL ASBESTOS WASTE AND CONTAMINATED COVERALLS MUST BE COLLECTED AND DISPOSED OFF IN SEALED, LABELED, IMPERMEABLE BAGS OR OTHER CLOSED LABELED, IMPERMEABLE CONTAINERS.

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MEDICAL SURVEILLANCE:

ALL EMPLOYEES ENGAGED IN WORK INVOLVING LEVELS OF ASBESTOS ABOVE THE ACTION LEVEL FOR 30 OR MORE DAYS PER YEAR OR WHO ARE REQUIRED TO WEAR NEGATIVE PRESSURE RESPIRATOR.

FREQUENCY: INITIALLY AND ANNUALLY THEREAFTER.

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SIGNS AND LABELS:

SIGNS SHOULD BEAR THE FOLLOWING INFORMATION:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

LABELS MUST BE AFFIXED TO ALL CONTAINERS OF ASBESTOS
CONTAINING MATERIALS WITH THE FOLLOWING INFORMATION:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

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EMPLOYEE INFORMATION AND TRAINING:

TRAINING MUST BE PROVIDED PRIOR TO ININTIAL ASSIGNMENT UNLESS THE EMPLOYYE HAS RECEIVED EQUIVALENT TRAINING WITHIN THE PREVIOUS 12MONTHS,

ANNUALLY THEREAFTER

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RECOMMENDATIONS:

1. NOTIFY INDUSTRIAL HYGIENE GROUP BEFORE YOU START THE JOB.

2. IDENTIFY AND LIMIT NUMBER OF EMPLOYEES QUALIFIED TO CONDUCT ASBESTOS RELATED JOBS.

3. DO NOT UNDER TAKE LARGE JOBS WHICH REQUIRES EXTENSIVE PREPARATION (NEGATIVE ENCLOSURES, DECONTAMINATION AREAS, COMPETENT PERSON ETC.

   ALTHOUGH IT COULD BE CHALLENGED SMALL JOBS MAY BE DEFINED AS THOSE JOBS WHERE PIPE INSULATION IS NO GREATER THAN 50 FEET OR COVERING ON EQUIPMENT IS NO GREATER THAN 25 SQUARE FEET.

4. TAKE EXTRA PRECAUTIONS IN REMOVING OLD INSULATION SUCH THAT WE CAN KEEP THE EXPOSURE LEVELS BELOW THE PERMISSIBLE LIMIT AND IF POSSIBLE BELOW THE ACTION LEVEL.

5. OBTAIN A HEPA EQUIPPED VACUUM CLEANER WHICH SHOULD BE LOCATED AT EACH LOCATION.

6. OBTAIN WETTING AGENT TO AMEND THE WATER.

7. OBTAIN WATER SPRAYING DEVICE WHICH WILL ALLOW GOOD COVERAGE OF THE SURFACE WHILE REMOVING OLD INSULATION.

8. PROVIDE EMPLOYEES WITH THE INNER CLEAN CLOTHING ALONG WITH THE OTHER REQUIRED CLOTHING.

9. PROVIDE SHOWERING FACILITY AND THE INNER WORK CLOTH WASHING FACILITY.

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