140

PLAINTIFF'S EXHIBIT

SH-1676

FEBRUARY 23, 1988

FROM: TRAINING COORDINATOR, BD/HT/IP
DEER PARK MANUFACTURING COMPLEX

TO: BD/HT/IP SHIFT FOREMEN

| | |
|---|---|
| P. R. ABOWD | J. D. FELIX |
| L. J. ALBITZ | L. T. MENDOZA |
| J. D. BRIGHT | R. W. PENLAND |
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| J. R. CARMICHAEL | R. B. YOUNG |

SUBJECT: SAFETY PROGRAM FOR MARCH, 1988

Safety Meeting

Review Safety Order: Asbestos S-125, Barricade Tapes S-118

Emergency Drill

Broken gasket drill.

Conditions: Both trains in Isoprene Unit running at maximum rates. Wind out of the NW at 12 MPH. The first 10" flange outside the bottom skirt of C-IP 103 going to E-IP 115 breaks and starts leaking column bottom product to the pad at about six GPM. The product is coming out around the insulation on the 10" flange.

How would you handle this emergency?

R C Gentry

R. C. Gentry

RCG:sw

cc: W. J. Daniels
J. W. Griffiths
E. P. Manley
B. R. Parker
Olefins Satellite File

DPBD054.1
BD1

DPMC-00845

LAM 007347

SHELL

DEER PARK MANUFACTURING COMPLEX

COMPLEX

SUMMARY: Asbestos, S-125.

Safety Order Points of Interest:

1. Asbestos is a potential health hazard when taken into the body. If exposed, it may enter the body through breathing, eating or drinking.

2. Asbestos may be found in insulation purchased prior to 1973, gaskets, building materials and brake linings.

3. Unless proven otherwise all insulation should be treated as asbestos.

4. Personal hygiene is very important in protection from asbestos.

5. Storage, preparation, and consumption of food and beverages where exposure to airborne asbestos is likely shall not be permitted.

6. Respiratory protection is required. Protective clothing is required except for incidental work.

7. Annual medical exams are provided for certain Shell employees.

8. Annual training is required and training records shall be maintained.

9. This order specifically details:

   A. Health effects of asbestos.
   B. General practices in asbestos management.
   C. Definitions
   D. Work practices applicable at DPMC.
   E. Demolition and renovation of asbestos materials.
   F. Disposal.
   G. Medical exams and employee training.

All employees are responsible for knowing and understanding the details in the text of this safety order.

SHELL
DEER PARK MANUFACTURING COMPLEX
COMPLEX

ASBESTOS

SAFETY S-125
PAGE 1 OF 7
JANUARY 15, 1987(R)

## I. INTRODUCTION

Asbestos is a mineral silicate occurring naturally as a variously colored fiber. It is non-combustible, non-conducting, and resistant to deterioration and chemical attack. Because of these properties, it has found widespread use in thermal insulation, asbestos floor tile, roofing and transite materials, gaskets, coatings, plastics, and brake linings. Because of its fibrous nature, it can be woven into cloth, or used to add strength to other materials.

Asbestos is a potential health hazard when taken into the body even in very low concentrations. Asbestos fibers are associated with a variety of diseases, including (1) Asbestosis - a non-malignant scarring of the lungs; (2) Bronchogenic Carcinoma - a malignancy (cancer) of the lung; (3) Mesothelioma - a malignancy of the lining of the chest cavity; and (4) cancer of the stomach, colon, and rectum. These diseases develop slowly, and usually do not become evident until many years after initial exposure. Asbestos fibers can enter the body via the breathing process or via eating/drinking. The small lightweight asbestos fibers easily become "airborne" and can contaminate the work area. Recent scientific studies have shown that individuals who smoke and have exposure to asbestos have a significantly greater health risk than asbestos workers who don't smoke.

The 8-hour time-weighted average (TWA) permissible exposure limit (PEL) for asbestos is 0.2 fibers, longer than 5 micrometers, per cubic centimeter of air (f/cc). No employee shall be exposed to airborne concentrations of asbestos equal to or exceeding the PEL.

Asbestos is most frequently encountered within the Complex as insulation on pipes and structures installed prior to 1973. While purchase of new insulation containing asbestos has been discontinued, asbestos insulation may be encountered in older units for many years to come.

## II. GENERAL PRACTICES

1. Asbestos-containing materials shall be handled in a wet state whenever practical. Engineering controls, such as enclosures, exhaust ventilation, or dust collection should also be used where required to maintain exposure to asbestos below the PEL. As a precaution, respirators shall be worn for all tasks which involve disturbance of asbestos-containing materials (refer to Respirator Safety Order for proper respirator selection).

persons working in areas surrounding regulated areas shall be informed as to the nature of the work to be performed and of the existence and requirements of the regulated area. Negative pressure enclosures shall be established where required to maintain asbestos concentrations below 0.1 f/cc in areas surrounding the regulated area. Exposure monitoring will be required (contact Industrial Hygiene). A competent person will be required onsite to insure all requirements are being followed.

2. Restricted Area - Any work area where asbestos-containing materials will be disturbed, such as, removing insulation or transite materials, and the work will last longer than 1 hour. Exposures to asbestos are not expected to equal or exceed the PEL. Restricted areas shall be identified with warning signs (Attachment I) and hazard warning tape. All persons entering the restricted area shall wear an approved respirator and protective clothing.

3. Incidental Asbestos Work - Short duration work tasks (less than 1 hour) with asbestos-containing materials where asbestos exposures are not expected to exceed the PEL.

4. Competent Person - The competent person will generally be a Certified Industrial Hygienist, an industrial hygienist with training and experience in handling asbestos, or a person who has such training and experience as a result of on-the-job training and experience. Contact Industrial Hygiene regarding appropriate training courses which are available.

IV. WORK PRACTICES

The following work practices apply at DPMC:

1. Identification of Work Areas - Post warning signs (Attachment I), which are available from the tool room, around all work areas while involved in removal or disturbance of asbestos-containing insulation, or cutting of asbestos-containing transite, except for incidental work. If airborne concentrations of asbestos can reasonably be expected to exceed the PEL, a regulated area must be established.

2. Respiratory Protection - All persons shall wear respiratory protection during any operation where airborne asbestos fibers could be generated. Approved respirators include: half and full face twin cartridge respirators equipped with HEPA filters (purple cartridges), or any supplied air respirator. Respirators are available from the green respirator cabinets. (See Respiratory Protection Safety Order). Employees who use respirators are to be trained annually, and fit tested semi-annually. Semiannual fit testing will apply only to employees who wear respirators in areas where asbestos concentrations exceed the PEL. All other employees who wear respirators will be fit tested annually.

Coveralls are not required for maintenance or operations tasks encountering incidental asbestos work, providing generation of airborne asbestos and contamination of street clothing is prevented by procedures outlined in this section.

8. Change/Decontamination Areas - Decontamination areas shall be established for all "regulated areas". The decontamination area shall be adjacent and connected to the regulated area, and shall consist of an equipment room (contaminated change room), shower area, and clean room in series. All employees shall enter and exit the regulated area through the decontamination area. The clean room shall be equipped with a locker or appropriate storage container for each employee. The showers shall be located between the equipment room and clean room where feasible. Where the shower area is not located here, asbestos must be removed from employee's work clothing using a HEPA vacuum before proceeding to the shower area.

## V. DEMOLITION AND RENOVATION OF ASBESTOS MATERIALS

Demolition and renovation of insulation and transite containing asbestos must be accomplished in accordance with OSHA and EPA regulations, and written notification to the EPA is required. Demolition of insulation may be encountered when process units are retired, when interunit insulated pipelines need replacement, or when individual columns or large vessels are replaced or retired. Maintenance of insulation may be encountered during upgrading of insulation, or during major turnarounds in some units. To prepare for asbestos demolition maintenance work, the responsible Process Manager, Supervisor, or Project Engineer shall contact Health & Safety to determine whether the material contains asbestos. The Environmental Conservation Regulatory Affairs group shall then be advised if more than 260 square feet or 160 linear feet are involved. One-month's advance notification to the Regulatory Affairs group is required. Separate written notification to the EPA may be required for each job that involves long interunit pipelines, a column, or a large vessel. Small jobs will be covered by an annual notification described below. The Regulatory Affairs group is responsible for the EPA notifications.

The responsible foreman, supervisor, or project engineer shall prepare written instructions for the job. These instructions shall then be used as a basis for EPA notification, and for conducting the job. Environmental monitoring will normally be performed by Industrial Hygiene personnel for jobs that require EPA notification.

In July of each year, Regulatory Affairs will provide an annual notification to EPA, estimating the quantity of incidental asbestos removal that will be encountered during the year. This notification will then permit the Complex to accomplish all small demolition jobs involving asbestos without further EPA notification. Larger jobs will still require separate EPA notification by Regulatory Affairs.

6. Purpose for and proper respirator use, fitting, and limitations.

7. Medical surveillance program requirements.

8. A review of the OSHA Standards.

9. The use of warning signs where exposure may apply.

The manager shall retain appropriate training records documenting the names and dates of the training for 40 years.

Updating Responsibility:
Superintendent Health, Safety & Environmental

ATTACHMENT I

ASBESTOS WARNING SIGNS AND LABELS

SIGN

Standard OSHA Warning Sign - 14" x 20" - with legend per OSHA Standard:

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

LABEL

Self-Adhesive Type Label, bearing legend per OSHA Standard:

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