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PLAINTIFF'S EXHIBIT

SH-2733

Attached is an update draft of the Safety Order, "Respiratory Protection." Let's discuss on Wednesday, June 18 at 1 P.M.

Attachment

RPF:ikg

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SEFLL

DEER PARK MANUFACTURING COMPLEX

CHEMICAL

RESPIRATORY PROTECTION

SAFETY S-34
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I. GENERAL

Many types of respiratory protective devices are provided for routine and emergency conditions throughout the Complex. Each department in the Complex has respiratory equipment available where the possibility exists for employees to be exposed to potentially hazardous concentrations of vapors, fumes, gases, dusts or mists. This order addresses the different types of respiratory equipment, selection for specific tasks, personal limitations, some general precautions in the use of respiratory equipment, training responsibility, and work permits. Primary emphasis should be placed on engineering, administrative, or work practice controls. However, for those situations where such measures are not feasible, or while they are being instituted or evaluated, appropriate respiratory protection ~~should~~ ^{must} be used.

Each line manager is responsible for establishing and maintaining an effective respiratory protection program.

This includes:

- . Developing written operating procedures ^{identifying activities} ~~governing the~~ ^{that require the use of respiratory protection;} ~~selection and use of respirators.~~
- . Providing for employee training in the use, ^{and selection} ~~and~~ limitations of respiratory protection equipment; ^{before they are assigned to jobs requiring their use;} ~~before they are assigned to jobs requiring their use;~~

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- . Providing proper respiratory equipment; and
- . Auditing the program to ensure continued effectiveness;

Each employee is responsible for:

- . Using the respiratory protection equipment in accordance with instructions and training received;
- . Reporting any malfunction of the respirator to the ^{in supervisor} responsible person; and
- . assuring that an adequate respirator-to-face fit is achieved each time the respirator is worn.

II. TYPES OF RESPIRATORY PROTECTION

Each type of respiratory equipment has certain advantages and disadvantages. These must be considered in relation to such conditions as the type material which will be encountered, concentration, length of exposure, personal limitations, etc. When questions occur in regard to the type respiratory protection for a particular job, consult the Safety and Industrial Hygiene Department.

Respirators covered in this order fall into two general classifications:

Air-Supplied Breathing Apparatus (*positive pressure*)

1. Self-contained breathing apparatus (Scott Air-Paks, or similar)
2. Air-line breathing apparatus (fresh air masks)

Air-Purifying Respirators

1. Canister masks
2. Chemical cartridge respirators

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3. Particulate or dust respirators
4. Special air purifying respirators

The air-supplied breathing apparatus provides greater respiratory protection than air purifying respirators, ^{since a slight positive pressure is maintained} The Scott Air Paks are self-contained and provide protection for a limited period of time. Scott Air-Paks should be used in emergency conditions, or where mobility is necessary, and may be used for very short duration planned tasks. The air-line breathing apparatus (fresh air masks) should be used for jobs which are expected to require more than a few minutes to complete.

The air-purifying respirators provide protection for specific materials, and thus their use is limited. Air-purifying respirators do not provide oxygen and must never be used in oxygen deficient atmospheres (below 19.5% v oxygen).

Detailed information about the various types of respirators is presented in Appendix I of this order. Those persons studying this order for Respirator Training should read Appendix I in its entirety, before proceeding further.

III. GUIDES FOR SELECTION

A. The first step in the selection of respirators is to be familiar with the various types of respirators, their intended use and their limitations. This knowledge can be gained by a review of Appendix I and training as outlined in Section VII of this order.

B. Material Safety Data Sheets

Each work area shall have available to all personnel a set of material safety data sheets (MSDS) for materials encountered in the area. The manager in each area will insure that personnel are aware of these MSDSs and how they are to be

used to determine the type of respiratory equipment for any specific material.

- C. Some individual standards such as vinyl chloride, asbestos and lead have specific requirements regarding respirator selection. Selection of respirators for these materials are covered in training programs for the specific material to be handled.

D. Personal Limitations

Note:
Prior paragraph significantly changed

1. All employees, ^{contract personnel, and visitors} who are subject to the use of respirators are required to ~~make suitable alterations in grooming~~ ^{be clean shaven in the sealing surface area of the respirator where it fits on the face} if the extent of facial hair projects between the ~~respirator facepiece and the face~~. Acceptable industrial hygiene practice requires that respirators not be worn when conditions prevent a good face seal.
2. Since temple bars of glasses can cause "leakage" by the face mask, plain safety glasses should be removed when wearing full-face mask respirators. Personnel who require corrective (prescription) glasses can be fitted with special prescription glasses that fit inside a full-face mask. ~~Acceptable industrial hygiene practice requires that without exception the wearing of contact lenses be with a respirator be avoided.~~ Acceptable industrial hygiene practice requires that without exception the wearing of contact lenses in contaminated atmospheres with a respirator not be allowed.
3. For purposes of respirator selection, all Shell personnel who are subject to the use of respirators will be quantitatively fit tested on an annual basis. ^{This testing will be scheduled by Safety and Industrial Hygiene}
4. Personnel who are unable to obtain and demonstrate a tight

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in the quantitative fit-test
fit of a respirator mask because of unalterable physical
features shall ~~always select air-supplied breathing equip-~~
be assigned to jobs not requiring
~~the use of respirators.~~
~~ment, in pressure demand mode.~~

5. All persons assigned to tasks requiring the use of respirators
will be evaluated as to whether they are physically able to
wear one. An assessment of an individual's ability to use a
respirator will be done during pre-employment and voluntary
periodic medical exams, *by the Medical Department.*

Conditions which may compromise the safe use of a respirator include a punctured ear drum. A person with a punctured ear drum shall use only the air-supplied breathing apparatus in pressure-demand mode along with ear plugs. This is suggested to remove the slightest chance that contaminated air could be inhaled through the ear.

E. A few typical tasks where respiratory equipment is mandatory:

1. Asbestos insulation removal: to protect against inhalation of asbestos fibers. A "dust respirator" is the appropriate mask selection (see Attachment VIII).
2. Entry into flare lines: to protect against inhalation of harmful gases or vapors. The air-supplied breathing apparatus in pressure-demand mode is the proper selection
3. Sandblasting: to protect against silica. The special air-supplied hood is used.
4. Where personal exposure to vapors, gases, dusts, or particulates is above the permissible exposure limits (PEL) given by the Material Safety Data Sheets. The proper selection may be the air-line breathing apparatus, the self-contained breathing apparatus, an appropriate cartridge or canister respirator, or a dust mask, depending on the duration of the task, level of

F. A few typical tasks where respiratory equipment may be required depending on the material that will be encountered:

1. Gauging tanks
2. Sampling (laboratory and operations)
3. Installing isolation blinds
4. Repairs on pumps and compressors
5. Personnel rescue
6. Painting
7. Catalyst handling
8. Fire fighting

IV. MAINTENANCE OF RESPIRATORY EQUIPMENT

A. Cleaning

Each area of the DPMC will be furnished a satellite respirator storage cabinet. The cabinet will contain a supply of each type of respirator used in the area. The respirator service group will maintain the stock in the satellite cabinet with clean, sanitized and packaged respirators. All cleaned respirators will be sealed in plastic bags for further protection. All cleaning, sanitizing, inspection, repair and packaging will be performed by a respirator service group in the centralized facility, provided for that purpose.

B. Air Bottles

It is the responsibility of the ^{line}manager^{ment} to specify the number of Scott Air Pak air bottles to be maintained for the assigned breathing equipment. A guide is one extra bottle for every three pieces of equipment.

C. Storage

The respirator satellite cabinet is the primary storage

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location for all respiratory equipment. Respirators shall not be stored in tool boxes, tool lockers or any other common storage cabinet. Emergency respiratory equipment will be stored in a fixed location in specially designed storage cabinets or cases.

D. Replacement, Repairs and Inspection. (The departments listed below shall be responsible for the items listed.)

1. The Safety and Industrial Hygiene Department

- a. Repairs to air-supplied breathing equipment.
- b. Replacement of canisters on canister masks.
- c. Quarterly inspection of all emergency breathing apparatus.
- d. Fill small breathing air bottles, and check all breathing air bottles per Safety Order S-11.

2. Operations, Maintenance, and Laboratory

- a. Change breathing air bottles. See Safety Order S-11, Breathing Air.
- b. Change cartridge on chemical cartridge respirators.
- c. Monthly check of all emergency breathing equipment.
- d. Notify Safety Department for equipment repair.
- e. Documentation of canister mask use.
- f. Records and routine inspection of individually assigned respirators (See Attachment IX.).

V. EQUIPMENT REQUIREMENTS

A. Operations

A canister mask or a self-contained breathing apparatus shall be available for each permanent operating job and each operations foreman position on the unit.

B. Maintenance

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Each zone supervisor shall have at least one air-line breathing apparatus.

VI. GENERAL INSTRUCTIONS IN USE OF RESPIRATORS

- A. Before using any respirator, understand the correct way to use it.
- B. Check all fittings of the respirator to make sure they are tight.
- C. Always put on a respirator before entering a hazardous atmosphere.
- D. More detailed instructions for putting on respirators used at DPMC are contained in Attachment X.
- E. If the odor of gas is detected while using any respirator, leave the area immediately.

VII. RESPIRATOR TRAINING

- A. All personnel subject to the use of respirators will be trained in the use of that equipment. The required training is outlined in Attachment VI (Operations and Laboratory) and Attachment VII (Staff and Maintenance). The various training requirements are as follows:
 - 1. All new employees subject to use of respirators.
Initial training will be provided as part of new employee orientation, by the Industrial Hygiene and Safety Department. This training will include a review of this order and items 5-8 of Attachment VI. The completed forms on each trainee will be retained by the Safety Department.
 - 2. All operating personnel newly assigned to an operating area (regardless of prior experience).

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Training will be provided per Attachment VI, and the completed form for each person will be retained by the operating department.

3. All maintenance personnel newly assigned to a maintenance area (regardless of prior experience).

Training will be provided per Attachment VII and the completed form for each person will be retained by the Maintenance Department.

4. All operating and maintenance personnel will be retrained annually with the completed forms retained by the respective departments. This training shall include review of this order and as outlined by Attachment VI or VII.

- B. The manager for each operating area shall prepare a listing of materials that may require respiratory protection in each work area and use this list during the respiratory training. This list will also assist operating personnel in the proper preparation of work permits, insofar as respiratory protection is concerned.

VIII. WORK PERMITS

Operating personnel shall outline appropriate respiratory protection requirements for craftsmen as part of the work permit process. The materials that may be encountered which require the respirator will be specified on the work permit.

IX. SELECTION OF BRAND AND TYPE OF NEW RESPIRATORY EQUIPMENT

The Safety and Industrial Hygiene Department will select equipment to be purchased at DPMC from equipment with appropriate NIOSH/MESA certification.

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