

Safety



Bulletin

PLAINTIFF'S EXHIBIT

SH-2087

SAFETY AND INDUSTRIAL HYGIENE
DEER PARK MANUFACTURING COMPLEX
NEWSLETTER-MARCH-JULY 1978



This Newsletter is published periodically to help keep DPMC apprised of Safety and Industrial Hygiene activities. Managers are encouraged to make this Newsletter available to all Operating and Maintenance areas.

Safety Awareness

- (1) The "Near-Miss and Accident Investigating and Reporting" procedures specified in the Complex Safety Order are now in use effectively throughout the Complex. Managers should forward all appropriate reports to Operating and Maintenance areas. Copies of particularly important reports can be included in monthly safety program memoranda, and as topics for craft safety meetings. Copies of these reports are also provided to the Health and Safety Committee members.
- (2) The safety performance appraisal system for all supervisory personnel in operations and maintenance is ongoing. This program remains an essential part of the program to establish safety as the top priority in the Complex. These safety performance appraisal forms were recently reissued to insure that all supervisory personnel are aware of these DPMC safety performance standards. Managers are reminded that safety performance should constitute a substantial part of an individual's overall appraisal, and performance discussion.
- (3) Supervisor safety meetings - a round of safety meetings for all Operations, Maintenance, and field support supervisory personnel was conducted in the Chemical Plant. A similar program is envisioned in the Refinery this fall.
- (4) The safety bulletin program continues. Every supervisor should use the safety bulletins and hazardous materials bulletins to conduct discussions with his crew. Safety reminders are also published monthly in the Refinery, also serving as material for safety discussions.
- (5) Safety Training Programs conducted include:
 - Health and Safety Committee Training - a five day training program, conducted by the University of Houston.

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(5) (continued)

- Safety Inspector Industrial Hygiene Training - A two-day special training program in basic industrial hygiene for all safety personnel. This training will continue on a one-day-per-quarter basis, to improve the industrial hygiene skills of safety personnel.
- Foremen safety training - Chemical Plant - Five days of basic safety training for new operating foremen, followed by five days training specific to writing certain hot work permits. A number of Maintenance foremen also attended the basic safety training. The Oil Products Team has requested that a similar program be created in the Refinery.
- New Technical Professional Safety Training - Two days of safety training for all new technical professional personnel.

- (6) Home Safety - The National Safety Council quarterly magazine Family Safety was initiated as a home mailing for all DPMC employees.

Safety Procedures

Safety Orders are important tools for all Operating and Maintenance personnel. Individual Safety Orders can be reviewed during safety meetings and programs. Every employee needs to become conversant with the Safety Order system, and the specific Safety Orders.

Safety Orders that were issued or updated during this period include:

- Respiratory Protection - standardizes respiratory protection requirements and equipment, and establishes training requirements.
- Entering Vessels and Enclosed Spaces (a new Order at Refinery, and updated at Chemical).
- Hydroblasting - (a new Order at Refinery, and updated at Chemical; note that two separate contractor fatalities occurred at other Shell locations this year from hydroblast machines).
- Vehicle Safety - (a new Order at Refinery, and updated at Chemical).
- Breathing Air - (a new Order at Refinery - about to be issued, and updated at Chemical).

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Safety Procedures (continued)

- Safety for office personnel - (a new Complex Order).
- Procedures For All Activities Involving Sour Tanks - (a new Refinery Order).
- Alarms and Shutdown Systems - (a new Refinery Order).
- Danger and Caution Tags - (a new Refinery Order).
- Procedures For Locking Out Electrical Equipment - (a new Chemical Plant Order, equivalent to the Refinery Order).
- Safety Hats - (a new Chemical Plant Order).
- Overpressure Relief Devices - (a new Chemical Plant Order).

Other Safety-related Orders that were issued or updated include:

- . Control Procedures for Installation and Removal of Blinds (Ref.)
- . Radiography (Ref.)
- . OSHA Inspections (Complex)

In addition, the following Safety or Safety-related Orders are nearing completion:

- . Hearing Conservation
- . Asbestos
- . Emergency Callout
- . CIMA Response Procedures

Contractor Safety

Safety performance statistics for construction and maintenance contractors are being compiled and published on a quarterly basis. Significant improvements have been observed in Maintenance contractor safety performance during the first 6 months of this program, with apparent reduction of more than 50% in recordable injuries. The safety performance statistics will provide Shell with an overview of contractor safety performance, identifying areas for improvement, and providing criteria to influence the selection of contractors.

In Major Projects, the contractor safety overview program has provided 2 1/2 years of safety performance history on a variety of contractors, working in excess of 19 million man-hours.

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Contractor Safety (continued)

Benzene work practices were reviewed with the principal maintenance contractors in February. Another special session was conducted with Maintenance South contractors in June, covering benzene, AC/DD^R, and asbestos. Similar sessions are planned to discuss the forthcoming asbestos and ECH work practices.

A review session was conducted with Plant Engineering personnel, to review the role of the Safety Representative - Contractors. Also, assistance was provided to the Norco location in setting up a similar contractor safety program.

Emergency Medical Service

The weekly ambulance drill program continues, according to a monthly drill planning memo. Copies of the completed ambulance drill report form are sent to appropriate managers for employee feedback. The ambulance telephone system was improved to increase reliability of the primary number, and to provide a back-up number. Heavy duty rescue training sessions were provided for some members of the ambulance team and some of the safety inspectors. This training will be repeated.

Fire Protection

(1) Plans are underway for the annual fire brigade training programs at Texas A&M. Approximately 270 employees will attend this 3-day training program, half from Refinery and half from Chemical. In addition, the startup teams from Resins, OP-III, and CPS attended special fire training courses at Texas A&M during May.

(2) Radio-pager call-out systems have been approved to improve response time of Safety personnel to fire alarms during off-hours. When these devices become available, response time improvements of 5-10 minutes are expected. The Telephone Callout Services will be retained as an automatic backup to the pagers.

(3) The Channel Area Mutual Aid (CIMA) strengthening programs continue. Shell responded to two CIMA alerts recently. Shell personnel activity engaged in strengthening CIMA include R. P. Frutiger - Steering Committee; J. H. Burns - Vice Chairman; J. B. Floyd - Refinery Specialist; O. L. Chappell - Chemical Specialist and Inspection Officer. Shell has purchased several Mutual Aid frequency radios to permit direct communication with fire boats, municipal or volunteer fire departments, or other CIMA members that have similar radios. An Order establishing Shell's procedures for supplying and receiving CIMA assistance has been prepared.

(4) Shell has played a strong role in establishing an Industrial Fire Training Board within the State Firemen's and Fire Marshals' Association of Texas. The objective of this new Industrial Fire Training Board is to promote the competence of industrial fire fighting programs. The Board has the authority to develop and administer a voluntary program for industrial fire training in the State of Texas, to approve industrial fire training and educational programs as meeting the minimum criteria expressed by the Board, and to outline more comprehensive programs. O. L. Chappell has been appointed to the Industrial Fire Training Board.

Industrial Hygiene and Health

(1) Personal monitoring programs for VCM continued in accordance with the OSHA standard. Benzene monitoring continued on a quarterly basis in areas where monitoring was initiated for compliance with the benzene ETS. ECH monitoring was significantly expanded; the initial base line monitoring was performed at EPON 2-3, and the EPON 5 startup monitoring was performed, including around-the-clock monitoring. ECH monitoring is now leveling off to a basic quarterly monitoring frequency. Ketone monitoring was discontinued in the manufacturing areas where exposures have been shown to be very low, but is continuing in the west loading rack area to develop further data. EDB monitoring is in progress in the Refinery gasoline blending area (EDB is a component of TEL). Monitoring results are in substantial compliance with OSHA permissible exposure levels (PEL's). Results of all personal monitoring programs are provided for posting in control rooms.

(2) Special shutdown monitoring programs were conducted during the following shutdowns:

- | | |
|---------------------------|--------------------------------|
| . Benzene Monitoring | ACU, CR3, DU-2, OP-II Isoprene |
| . AC and D-D ^R | G Dept. |
| . ECH and AC | C Plant |

Both personal samples and area samples were obtained, and guidance provided regarding decontamination procedures, respirator requirements, etc.

(3) Asbestos monitoring is in progress on two asbestos demolition jobs (PP-1, SRL-2).

(4) Special personal monitoring of gaugers performing end-of-month sampling work on 11x7 shift is planned (August), as requested by the H&S Committee.

(5) Training manuals for AC/D-D^R, and for ECH were prepared, and will be fully implemented in appropriate operating and maintenance areas during September and October, respectively.

(6) Benzene work rules and toxicity information was reaffirmed via a safety bulletin issued in June.

(7) Hazardous material safety bulletins were published for (a) organic chloride by-products, (b) Phenol-Acetone Plant heavy ends, and (c) styrene.

(8) Work practices and toxicity information for RM-17 catalyst were updated and reissued in the butyl alcohol operating and maintenance areas.

(9) Updated safety and toxicity information on the following materials was provided to appropriate areas: (a) Butyl Glycidol Ether, (b) Allyl Alcohol, and (c) a grouping of Refinery products, including lubricants, asphaltic products, gasoline, turbine fuel, fuel oils, and LP-gas. Updated information is being developed for EDC, VCM, and poly-cyclic aromatics.

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(10) The Material Safety Data Sheet system has been improved to provide new and updated MSDS's for materials on a more timely basis. The availability of new updated MSDS are announced periodically by safety bulletin. Managers should request appropriate copies of new/updated MSDS's, and keep their MSDS books up to date.

(11) Health Studies

- The Lube Plant cancer-mortality epidemiology study results were announced, and copies of the report made available to Lube Plant employees. This study will be updated.
- NIOSH Health Hazard Evaluation pertaining to peripheral neuropathy in the Lube Plant area was also announced, and copies made available to the Lube Plant employees.
- An ECH Epidemiology study update was announced in early August. The consultant has concluded that the study is "highly suggestive" of a carcinogenic risk to man. Copies of the updated report have been made available to ECH areas.

Shell has adopted an internal "action level" for ECH exposure of 1 ppm, which is below the OSHA PEL of 5 ppm. The work practices and employee information included in the ECH Training manual should be understood and followed by all personnel.

- The Testicular Function Research program has been completed, and the results announced. This study is now being validated by a second independent consultant.
- Benzene Epidemiology Study -

DPMC has volunteered to participate in an American Petroleum Institute (API) benzene epidemiology study, which will be looking specifically for increased frequency of cancer or leukemia among Refinery workers exposed to benzene.

- API Mortality/Morbidity Study -

DPMC is one of six Shell locations that will participate in a major five year study to review the health status of refinery and petrochemical workers. The Memorial-Sloan-Kettering cancer center in New York City will coordinate the study, which is sponsored by the API. This study will key on absences (5 days or more) resulting from illness or injury.

- (12) Noise Surveys - Sound-level surveys have been completed for the entire Refinery and Chemical Plant, and plot plans depicting 95, 100, and 105 dBA contours are being prepared. The Complex Safety Order on Hearing Conservation (soon to be published) will establish work practices and hearing protection requirements.

- (13) Respiratory Protection - In conjunction with the Safety Order on Respiratory Protection, the approved respirators have been standardized in the Complex, and the initial round of respiratory protection training (using the new Order) has been completed.

Protective Equipment

- (1) Goggle program improvements were announced, providing employees a selection of three fog resistant goggles with approved straps and mounting clips.

Personnel

- Dick Frutiger was named Superintendent-Safety and Industrial Hygiene for the Complex.
- Al Rodriguez joined Safety-Chemical as a pass-through safety inspector.
- Senior Safety Inspector Jack Oliphant and Engineer Jim Beasley successfully passed their certification tests to become "Certified Safety Professionals". When each of these individuals accumulate the required years of experience, they will join Wes Neal as "CSP's" in residence at DPMC.

Safety Performance

Lost Work Day Injuries - Jan.-June, 1978

	<u>Number</u>	<u>Frequency Rate*</u>	<u>Target</u>
Chemical	8	0.87	-
Refinery	6	0.65	-
Complex	14	0.76	0.7

* OSHA Rate per 200,000 man hours (equivalent to 100 men working for a year).

Refinery performance through June was significantly improved from 1977 experience. Complex performance through June was 10% worse than target.

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