

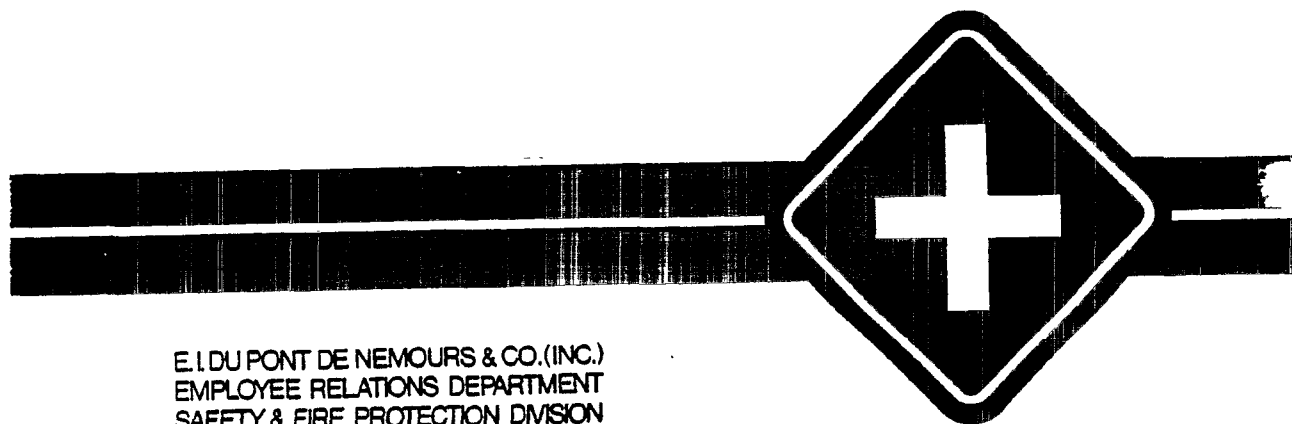
ER-8870

PLAINTIFF'S
EXHIBIT
DUP-2001

Occupational Health Survey

BEAUMONT WORKS
POLYMER PRODUCTS DEPARTMENT
HOUSTON, TEXAS

REPORT NO. 1022-H
MAY 1, 1981



E. I. DU PONT DE NEMOURS & CO. (INC.)
EMPLOYEE RELATIONS DEPARTMENT
SAFETY & FIRE PROTECTION DIVISION
WILMINGTON, DELAWARE 19898

DUP 0502256

DU 001900

SUMMARY

The overall rating was Good.

Organization for administration of OH programs, housekeeping and facility maintenance and radiation control are excellent.

Scope of information on carcinogenic and embryotoxic materials should be included in documentation of annual training.

Appropriate maintenance, cleaning and laboratory chemicals should be included in the collection of MSDS's or similar documentation.

The respirator program is good. It is recommended that employees who are now required to use half-mask respirators for which they have not been fit-tested be fit-tested as soon as possible. The need for a full-face escape mask for ammonia fumes should be evaluated and the breathing air systems should be brought into compliance with Engineering Standard S 1 H.

Selection of gloves is fair. Permeation data should be considered with other significant factors in choosing the most appropriate glove, with special attention given to carcinogenic materials.

The air monitoring program is excellent. Plant personnel should be trained on procedures to handle asbestos. Labeling of asbestos-free insulation should be considered.

Welders should be trained to place the exhaust hood so the required airflow can be maintained.

Spill procedures are fair and need to be upgraded.

Consumption of food or beverages should not be allowed in a laboratory where carcinogens are handled.

Plans to mark hearing protection zones at 87 dBA for 12-hour shifts are endorsed.

DUP 0502257

DU 001901

GENERAL

The third occupational health survey of the Beaumont Works was conducted by the undersigned engineers April 6-10, 1981. Escorts during the visit included members of area supervision and the occupational health coordinator.

The purpose of the survey was to evaluate occupational health programs and practices and to provide suggestions for improvements as needed. Practices, procedures and facilities for identifying, evaluating and controlling environmental factors that may cause illness, impaired health and significant discomfort to employees were addressed. The Beaumont Works was rated Good on a scale of Excellent, Good, Fair and Poor, with the first three being degrees of satisfactory performance.

This report summarizes the observations and recommendations presented to the manager and staff at the conclusion of the survey. Details and many of the specific recommendations developed during the survey are not included since these were discussed in field observations.

We would appreciate being advised within the next few months concerning the actions taken on recommendations in this report and your response to any of the field observations with which you disagree.

SAFETY AND FIRE PROTECTION DIVISION

N. D. Johnson

N. D. Johnson, Occupational Health Engineer

R. Schmidt

R. Schmidt, Occupational Health Engineer

J. R. Martin / msh

J. R. Martin, Consultant Supervisor, Occupational Health

NDJ/RS/msh

DUP 0502258

DU 001902

ORGANIZATION AND ADMINISTRATION

Program Administration

The organization for administration of occupational health programs is excellent. The Environmental Health Committee of the Central Safety Committee is composed of representatives of each plant group and the plant industrial hygienist. Routine meetings are held monthly and the minutes are issued to members of the Central Safety Committee.

Occupational health staff personnel are very knowledgeable in their areas of expertise. Extensive use has been made of ESD training courses. The plant OH coordinator is a certified industrial hygienist and the OH coordinator of the petrochemicals operation has successfully passed the first phase of certification.

Communications

Communication of occupational health information is good. Employees are trained annually on the health hazards in their areas and new employees are trained as they enter the area. This training is documented with the names of the employees and the dates of the training. It is recommended that the scope of the information on chemicals with carcinogenic or embryotoxic potential be included in the documentation. The maintenance organization has begun work on a program intended to eliminate deficiencies in their training programs for occupational health. Additional personnel have been committed to the task and completion is scheduled for this year. This program is commended.

Although plant policy was changed in late 1980 to eliminate disposable dust masks in favor of the Comfo II respirator, several members of supervision indicated that the disposable masks would be used for dusty operations and asbestos work. Some employees were noted with the disposable style of mask in their possession. It is recommended that significant communications of this type be highlighted to assure understanding and compliance.

Chemical Hazard Information

This area is good. Significant progress has been made in the description of raw, intermediate and finished production materials in the four page Material Safety Data Sheet (MSDS) format.

*

Support materials and catalysts are also included in the collection. It is recommended that maintenance chemicals, industrial cleaning agents and appropriate laboratory chemicals (as described during the survey) be included in the collection of MSDS's.

The Hypalon® Area prepared training sheets on carbon tetrachloride and chloroform for employee use, which omitted information on the carcinogenic potential of these chemicals. It is recommended that the description of the carcinogenic potential be included in employee training material.

Personal Environment Record System (PERS)

The site is currently entering work history data for all production operators and maintenance mechanics. First line supervisions' work history is also being entered. Exposure histories will be entered during the second quarter of 1981.

Medical Involvement

The site is currently without a full-time physician and is using a contract physician. The previous physician had toured the plant areas, but due to his ill health the frequency had declined significantly during the past year. The nurses are able to respond to plant areas during ambulance runs but have limited knowledge of plant areas. When a new physician is hired he should be involved in the occupational programs, as appropriate, and should make periodic tours of the plant areas to become familiar with employee working conditions. The nurses should also tour periodically, with or without the physician. Sanitary conditions of lunchrooms, restrooms and change rooms should be checked by the medical staff.

Contractor Operations

Contractor operations as they relate to occupational health are adequate. Programs and procedures are in place to protect contractor employees from Du Pont created hazards and vice versa. Few contractor operations were going on during the survey.

PROTECTIVE EQUIPMENT

Respirators

The respiratory protection program is good. The quantitative fit-testing equipment and program are excellent. However, there are some aspects of the program that need improvement.

- Disposable Masks. While previous plant policy allowed the use of the 3M 8710 for dust, two other types of masks (not site approved) were brought onto the site, a mercury vapor mask and a 3M 9920 mask used by a welder. It is recommended that the disposable masks be purged from the site and not readmitted unless a fit test is provided.
- Half-face Masks. When the disposable masks were removed from use, half-face Comfo II's were issued for use in those applications. Some employees have not been fit-tested or retested within the last year for these respirators. It is recommended that fit testing be scheduled as soon as possible for all persons required to wear respirators who have not previously been tested.

The Methanol Area has placed several half-face masks with ammonia cartridges in the reformer building. These are for escape in the event of an ammonia leak from the Ammonia Area. Since ammonia is an eye irritant it is recommended that the need for a full face respirator be evaluated.

- Air Line Respirator. The site installs tees (Hansen Couplings) on its air line respirators for attaching escape cylinders when necessary. This arrangement is convenient and probably does not affect the degree of protection provided but, technically, it appears to void the NIOSH approval. Although one OSHA compliance officer who saw the arrangement considered it acceptable, other OSHA personnel may not. It is recommended that this practice be discussed with the departmental Energy and Environmental Affairs office who may want to ask for legal input.

The breathing air systems should be modified to include the filter recommended in Engineering Standard S 1 E. A sign should also be provided to have the pressure adjusted correctly and blow down the air line prior to use.

- Self-Contained Breathing Apparatus. There was confusion between area personnel and the safety department on their respective responsibilities for inspecting and maintaining the self-contained breathing apparatus on the plant. It is recommended that training be provided to appropriate area personnel in the proper inspection and maintenance of the equipment.

Gloves

The selection of gloves to protect personnel from contact with hazardous chemicals is fair. Permeation rates have been considered along with other factors in selecting gloves for handling TEL and AN. However, the site uses a number of other chemicals, some with carcinogenic potential, for which skin absorption may be a significant route of exposure, e.g., carbon tetrachloride and perchloroethylene. It is recommended that permeation data such as that developed at Haskell Laboratory be considered along with other significant factors in choosing the most appropriate glove for all hazardous chemicals which may affect the skin or may be absorbed through the skin. For the compounds with carcinogenic potential impermeable gloves should be used as dictated by the nature of the operation.

EXPOSURE HAZARDS - IDENTIFICATION, EVALUATION AND CONTROL

Chemicals

The plant is commended for its excellent air monitoring program. Evaluation and verification of sampling and analytical methods is done by very knowledgeable plant personnel. The areas follow up where high exposure is evaluated. Basis for the evaluation is the LOGAN program as outlined in Engineering Standard S 12 T.

The sampling priorities are established on basis of Engineering Standard S 11 T by knowledgeable personnel but the priority determination has not been documented. It is recommended that the evaluation be documented to facilitate review whenever a change occurs which is likely to affect employee exposure.

Although asbestos is handled infrequently by plant personnel, field observations showed some inconsistency in the knowledge about who handles asbestos and what protective equipment is required. It is recommended that all involved parties be informed on the content of the plant's asbestos procedure and the involvement of Du Pont employees in handling asbestos. It is recommended that new insulation be identified as asbestos-free. In case of future removal, unnecessary and time-consuming precautionary measures can be avoided.

Ventilation

The ventilation program is good.

Plans to install new laboratory hoods in the Polymer Products (PP) Laboratory (project costs \$700,000) are endorsed. In the meantime, the maximum opening whereby the minimum required airflow can be obtained should be marked. The sashes should not be opened further when chemicals are handled in the hoods.

All local exhaust hoods for chemical control should be monitored for airflow annually, e.g., the hood over the rubber mill in the PP Laboratory was not checked.

Plans to replace the canopy hood in the water treatment laboratory of the Methanol Area are endorsed. The hood should be designed so fumes are drawn away from the operator and not through the breathing zone.

Three observations indicated that welders are not aware that the required airflow of 100 fpm in the welding zone has to be maintained. It should be considered to post the distance, within which the required airflow can be maintained. It gives the welder a practical reminder of how close he should place the exhaust opening.

Emergency Procedures

Spill procedures are fair and should be upgraded. Advice for protection in case of a spill is partially covered in different documents, e.g., MSDS's, emergency procedures primarily for environmental control and standard operation procedures. It is recommended that concise, readily accessible procedures be developed to protect people, environment and property. Based on the property of a chemical or a group of chemicals, definitions of major/minor spills should be established. The protective equipment, type of glove, respirator, acid suit, etc. should be selected and defined. The cleanup procedure and proper disposal should be covered. The requirements for reentry, e.g., air monitoring results should be specified. Drills are helpful training tools in implementing these procedures.

Housekeeping and Facility Maintenance

This program is excellent. Leaks are generally contained and areas roped-off.

Food Control

Food control is good. The interiors of microwave ovens need better cleaning. Thermometers are recommended for all refrigerators to assure that temperatures are kept at or below 45° F.

It is recommended that the consumption of food or beverage not be allowed in a laboratory where chemicals with carcinogenic potential are handled, e.g., as now practiced in the PP Laboratory.

Noise Control

The noise control program is good. Annual noise surveys are performed and boundaries for hearing protection are drawn at 90 dBA. Since employees work 12-hour shifts, it is planned to mark hearing protection zones at 87 dBA within 1981. This plan is endorsed.

Where noise exceeds permissible limits, compliance plans have been developed. It is recommended that the rationale for the decision to initiate or delay engineering controls be added. Success or failure of engineering controls should also be recorded.

Radiation/Laser

These programs are excellent. Source monitoring is in compliance with the appropriate standards.

Heat Stress

Several jobs have been evaluated for heat stress potential. Work/rest cycles have been established for some tasks. It is recommended that evaluation of current and future data be continued as planned to establish work/rest cycles where necessary.

PR REPORT

The ing items of the previous survey have not been addressed:
qua ressed:

- ✓● Im_e ment in documenting information to employees who handle carcinogens
- ✓● Material Safety Data Sheets for certain laboratory chemicals
- ✓● Glove selection based on permeation data
- ✓● Noise boundary at 87 dBA for 12-hour shift (Nordel● Area).

#

~~cc~~ R. L. McClure - #42

July 9, 1981

TO: I. M. SINGER - #36

FROM: N. M. SABATELLI - #80 *n.m.s.*

S&F SURVEY #1022-H - RESPONSE

Three observations indicated that welders are not aware that the required airflow of 100 fpm in the welding zone has to be maintained. It should be considered to post the distance, within which the required airflow can be maintained. It gives the welder a practical reminder of how close he should place the exhaust opening.

A total of 18 shop welding locations exist on the site. Airflow measurements have been completed at all locations to determine the proper placement of the exhaust opening to attain the required airflow of 100 fpm in the welding zone. Appropriate signs will be located at the exhaust blower on-off switches as a reminder to all welders.

NMS/kp
Attachment

DUP 0502265

DU 001909

TICKLER
NMS

6-22-81

cc: L. T. Freeland
J. E. Nauss

June 4, 1981

TO: ~~I. M. SINGER~~
FROM: R. L. MC CLURE

S&F SURVEY #1022-H

The following items are primarily in your area of interest. Will you please advise what you believe our response should be.

1. Although asbestos is handled infrequently by plant personnel, field observations showed some inconsistency in the knowledge about who handles asbestos and what protective equipment is required. It is recommended that all involved parties be informed on the content of the plant's asbestos procedure and the involvement of Du Pont employees in handling asbestos. It is recommended that new insulation be identified as asbestos-free. In case of future removal, unnecessary and time-consuming precautionary measures can be avoided.
2. Three observations indicated that welders are not aware that the required airflow of 100 fpm in the welding zone has to be maintained. It should be considered to post the distance, within which the required airflow can be maintained. It gives the welder a practical reminder of how close he should place the exhaust opening.

RLM/fb

DUP 0502266

DU 001910

DATE 6/16/81

TO: Roy

FROM: L. T. FREELAND
Beaumont Works
Mail Area 42
Ext. 9529

*Believe these will
better suit the reply.
JTF*

DUP 0502267

DU 001911

Respiratory Protection

The fitting used for the breathing air masks with the associated hose fitting has been reviewed by the area OSHA Compliance Office (during ^{an} earlier inspection). He stated the entire system was more than adequate to meet all OSHA Respiratory Protection Regulations. This system is used by a majority of Gulf Coast sites and in several other Company locations (Haskell). We are confident that this system will provide adequate breathing air for complete respiratory protection. The site will continue to use the present system until advised otherwise.

DUP 0502268

DU 001912

Gloves and Protective Clothing

The use of permeation data for selection of protective equipment has been used by site personnel. Experience in actual plant use (20+ years of experience) has demonstrated that the present selection is very satisfactory. Gloves and protective equipment are used primarily for splash protection with only a few very limited assignments requiring immersion for any period. This splash protection is one of the more important factors. Other factors that are considered are strength, wear and decontamination characteristics, minimum inventory of types and employee acceptance. As additional permeation data becomes available, it will be reviewed for appropriate plant applications.

DUP 0502269

DU 001913

S&F OCCUPATIONAL HEALTH SURVEY NO. 1022-H
FIELD NOTES AND PLANT RESPONSES (PROPOSED)

1-5 Breathing Air

- a. The plant purchases compressed air for its breathing air systems. Although each cylinder is checked for O₂ and CO content, there is no periodic check of the other Grade D breathing air parameters. It is recommended that the purchased breathing air be checked periodically for Grade D specifications.
- b. The breathing air supplier was visited several years ago to inspect his operation but no followup contacts have been made to insure that operations continue as initially inspected. It is recommended that annual contacts be made to assure continued acceptable operations (See Engineering Standard S2H).

Response

- a. One trailer per year will be checked for hydrocarbon content.
are being made.
- b. Annual contacts *will continue.*

* 2-7 Material Safety Data Sheets

The compilation of Material Safety Data Sheets should include maintenance chemicals and industrial cleaning agents. Household cleaning agents, consumer (not industrial) paints, inks, greases, etc., need not be included in the compilation. In laboratories, Material Safety Data Sheets or other equivalent safety monographs should be available for the following chemicals used:

- materials used in pilot plants or process development operations.
- materials of moderate or greater health hazard purchased in bulk quantities by the storeroom.
- peroxidizable compounds.
- compounds known to cause strong skin reactions or irreversible eye injury and,
- other highly hazardous materials used on an average of more than once per month which have an exposure limit ≤ 10 ppm, LC₅₀ $\leq$ ppm/4 hr. or LD₅₀ ≤ 50 mg/kg (oral rat).

Response

Maintenance chemicals, industrial cleaning agents, pilot plant and process development chemicals, and all materials purchased in bulk quantities will be included.

Material Safety Data Sheets for laboratory chemicals are not normally necessary. Hazards and appropriate precautions are adequately addressed in the individual laboratory procedures in which they are used.

DUP 0502270

DU 001914

* 3-5 Radiation Recordkeeping

The records for the dosimeter monitoring do not contain the cumulative exposure with the exception of the exposure data for the nurses. It is recommended that the year-to-date exposure as well as the cumulative lifetime exposure be recorded. It should also be considered to issue assigned personal dosimeters for plant personnel which repeatedly has potential exposure, like the employees which do the radiation surveys.

Response

Review of the last 10 years of radiation exposure data show that all exposures have been "M" (minimal). Adding year-to-date and cumulative lifetime exposure to the records would not provide any additional useful information.

Because of the infrequent incidence of use and the very low potential for exposure, the assignment of personal dosimeters to individuals (other than the nurses) is not warranted.

* 4-5 Calibration of Noise Level Meters

Several noise level meters and calibration sources are in use. Some comparison is made between sources calibrated by a vendor and others. But there is no schedule to have at least one source calibrated once a year and to have all other level meters as well as calibration sources compared with it. It is recommended that a formal schedule be introduced.

Response

The two proprietors of the noise survey meters maintain documentation of annual calibration. Upon return of a newly calibrated meter from the vendor, source validation is confirmed by direct comparison with the meter. Cross-checks between the three meters and the two sources have shown this practice to be satisfactory.

5-5 Noise Limit

The noise boundaries are presently marked at 90 dBA. Since employees work 12-hour shifts, it is agreed that plans to mark hearing protection zones at 87 dBA be implemented soon.

No response necessary.

5-6 Respirator Fit-Test

With the increased emphasis by OSHA in the fourth quarter of 1980 for the fit-testing of disposable respirators, the plant has elected to discontinue use of these types of respirators, in favor of the Comfo II® with appropriate cartridges. This policy has affected mechanics site-wide and selected employees (a phosphate sensitive individual in the Methanol Area). This group of employees are now using respirators for which they have not been fit-tested, although testing is due this year. It is recommended that employees not be required to wear respirators that they have not been fit-tested and trained in the use of.

DUP 0502271

Response

This program is underway and will be completed during the current year.

5-7 Self-Contained Breathing Apparatus

The pressure of the air supply cylinder of a 30-minute self-contained breathing apparatus was only 1600 psig. It is recommended that the cylinder be maintained in the full condition. A full cylinder will be one in which the pressure gauge is the full indication range or at least within 90% of the rated tank pressure. If monthly regulator checks are responsible for low tank pressures, it may be useful to use a spare cylinder for these inspections.

Response

All areas have been reminded of the need to maintain the cylinders "full."

* 5-8 Employee Respirator Cleaning

The site uses a cleaning solution of 30% isopropyl alcohol for daily cleaning of individually assigned respirators. Some locations have encountered problems when using alcohol containing solutions, which can damage the facepiece by causing swelling or hardening of the rubber. It is recommended that use of alcohols should be avoided. A convenient alternative way to do intermediate cleaning is with an aqueous cleaner/sanitizer solution, e.g., Antiseptic Towlette, by Med-Pak Corporation, P. O. Box 546, Boca, N.Y. 25159.

Response

Our experience using the 30% isopropyl alcohol has been satisfactory. We will keep in mind the availability of the Med-Pak product in event a problem should arise.

5-9 Gloves

PVC gloves are used as protection against carbon tetrachloride, chloroform and other solvents. PVC gloves have a low breakthrough time for these solvents. Plans to evaluate more protective gloves on basis of permeability data collected by Haskell are highly endorsed.

No response necessary.

5-10 Spill Procedures

The area has developed some emergency procedures. Three different sheets address this item and different statements about personal protective equipment are indicated, e.g., rubber gloves, PVC gloves or only protective equipment for carbon tetrachloride. It is recommended that concise emergency spill procedures be developed. They should contain beside other information the exact types of protective equipment that should be used in a spill situation. Chemicals with similar properties can be grouped together. Sample procedures can be provided. Other areas like Mordel®, TEL need to develop similar procedures.

DUP 0502272

DU 001916

S-11 Information on Chemical Hazards

- * a. Employees are informed about the hazards of the chemicals they handle annually. This training is documented with the names of the employees and the dates they received this information. It is recommended that the scope of the information on chemicals with carcinogenic or embryotoxic potential be included in the documentation.
- b. The Chemical Data Sheets (used and prepared by Hypalon® Area) on carbon tetrachloride and chloroform which serves as information basis for employees do not contain information on the carcinogenic potential of these chemicals. This information should be added.

Response

- a. The information to be covered is contained in the training instructions. Documentation by reference that the prescribed information was covered appears to be adequate. Recording the training session content on each occasion appears redundant.
- b. The information sheets used by the area have been corrected.

S-12 Respirators

- a. Two face pieces of Scott Air Paks had some soil on them. It is recommended that dirty respirators be cleaned when found during the monthly inspection. A dirty face piece was also found in the Nordel® Area.
- b. Breathing air stations for airline respirators are marked as such. It is recommended that the phrase 'blow out line before using mask' (Engineering Standard SM) be added. This appears to have plantwide application.

Response

Both recommended measures will be implemented.

* J-13 Air-Line Respirators

The air-line respirators in the Nordel® Control Room are all similar in appearance and function. The approval designation on one of the units was by the Bureau of Mines SM-19B-36.

This style of respirator was no longer approved for use past March 31, 1980, unless modified by the manufacturer (no modification was apparent). A similar style of respirator was in use in the Methanol Control Room, but it carried a current approval number. Both styles of respirator use a quick disconnect unit which appears to have been fabricated on site.

An approved air supplied respirator must use components and parts, which have been submitted to the NIOSH/MSHA approval organization and approved as a unit, this includes vortex coolers. Interchange of parts and substitution of other parts will void the approval.

A similar quick disconnect unit is present on the 5, 7.5 and 10-minute escape respirators.

It is recommended that the air supplied respirators be inspected to assure that the entire unit is composed of approved components. In addition, the breathing air station in the Nordel® Control Room should be properly identified (see Engineering Standard SM).

DUP 0502273

DU 001917

J-13 Response

The outdated respirators have been replaced with standard units.

Regarding the quick-disconnect feature, since it is so widely used (Beaumont, Sabine River, Victoris, Haskell Lab, Corpus Christi) we believe it would be more appropriate for Wilmington S&F to initiate an inquiry in order to obtain a Corporate answer.

J-14 Ice Machines

- a. A coffee cup was being used to remove ice from the ice maker. After use it was placed in the ice bin where the handle was in contact with the ice. It is recommended that the handle not be placed in contact with the ice, due to the potential contamination of the handle and subsequent ice contamination.
- b. The ice bin is beginning to rust creating difficulties in cleaning and the potential of rust particles in the ice. It is recommended that the unit be cleaned and painted to eliminate the rusty condition.

Response

Accepted.

S-15 Respirators

Two out of five Scott Ska Paks were filled below the full mark. It is recommended that the air pressure of emergency respirators be kept in the full range of the pressure gauge. The same deficiency was found at an escape pak in the Methanol Area.

Response

See J-7.

S-16 Refrigerator

Refrigerators for cooling food do not contain thermometers. It is recommended that all refrigerators on the plant be equipped with a thermometer (not mercury bulb) to assure that the temperature be kept at or below 45°F to assure proper food storage.

Response

Accepted.

S-17 Instrument Shop

Pans for catching mercury were installed under manometers. Various items were stored in the pans. It is recommended that nothing be stored in them to impair detection and cleanup of spills.

Response

Accepted.

DUP 0502274

DU 001918

J-18 Escape Respirators

- a. Air purifying respirators (half-mask Comfo II with ammonia cartridges) have been placed in various areas of the Methanol Area. The Methanol Area is adjacent to the Ammonia Area. Two of the respirators were dirty and the storage bag was not sealed to provide clean, uncontaminated storage. Spare cartridges were also stored in the box. It is recommended that the respirators be cleaned, stored properly and spare cartridges stored in a central location (in an emergency, an employee should not be concerned with changing cartridges).
- b. Since ammonia is an eye irritant, the area should evaluate the need for full face respirators in those locations that eye irritation could prevent successful escape in an emergency situation. It is recommended that the need for full-face respirators be evaluated.

Response

- a. Accepted.
- b.

S-13 Hearing Protection

- a. No hearing protection is required in the Water Treatment Laboratory but is required beyond both exits. It is recommended that signs be posted at both exits to remind employees that hearing protection is required when leaving the laboratory.
- b. An air powered portable grinder had no indication that hearing protection is required when it is operated. It is recommended that the noise level be evaluated and the tool be marked if the noise exceeds the applicable limit.

Response

Accepted.

* J-20 Welding Exhaust

The welding exhaust unit in the maintenance shop will not effectively cover the entire area of the welding table. It is recommended that the system be modified to provide effective coverage to the entire area.

Response

Welding will be restricted to the area which can be covered by the exhauster.

DUP 0502275

DU 001919

J-21 Chlorine Shed

The breathing air manifold at the chlorine shed is located at the center of the cylinder manifold area. A small chlorine leak had been detected and the area barricaded. Supervision indicated that the breathing air system would be used during repair efforts. The employee would have to enter the barricaded area to connect his respirator to the system. It is recommended that the breathing air manifold be repositioned so employees can use the system without potential exposure to leaks during respirator connection.

Response

Accepted.

J-22 Low Breathing Air Pressure

A portable breathing air cart was in use by a welder. The gauge on the low pressure side of the regulator showed 40 psig supplied to the respirator. The gauge was corroded and not responding properly. Plant procedures call for the pressure to be set at 100 psig. Use of the lower pressure could allow the respirator to be 'starved' for air creating a potential for the respirator to become a negative pressure device, allowing leaks of contaminated air to enter the facepiece and expose the user. It is recommended that the gauge be replaced and the regulator tagged to indicate the proper pressure.

Response

Accepted.

S-23 Ammonia Laboratory

Laboratory hood effectiveness improves dramatically as sources of emission are placed behind 6 inches of the plane of the sash (Engineering Standard H3U). It is recommended that lines be drawn in the hoods of the Ammonia Lab as already done in the hoods of the adjacent labs.

Response

Accepted.

S-24 Spill Prevention

Liquid waste containing acrylonitrile is collected in a container under a laboratory hood in the Petrochem Lab. It is recommended that the container be placed in a catch pan to contain spills.

Response

Accepted.

DUP 0502276

DU 001920

S-25 Welding Exhausts Hoods

Airflows are checked in 8 inches distance from the center of the hood openings. No actions are required if the airflow reaches 100 fpm and no reachings in other distances are taken if it exceeds 100 fpm. During welding in the P40 shops, the center of the exhaust opening was placed in greater distance than 8 inches. Since no airflow measurement results were posted on the distance was not determined within the required airflow of 100 fpm can be maintained, employees could not be sure whether they are adequately protected. It should be considered to give a practical guidance for the welder and post the distance within the required airflow can be maintained.

Response

S-26 Asbestos

Some discrepancies exist in the opinion whether asbestos insulation still be removed by Du Pont employees or only by contractors. Area personnel stated that maintenance work on asbestos insulation is still done by Du Pont employees. The electrical shop would still use respirators which no fit test is performed for. In the boiler house, the remaining asbestos insulation is not identified and labeled (Engineering Standard SMT). Maintenance employees are being informed about the carcinogenicity of asbestos.

It is recommended that a consistent procedure be implemented for the plant and that all involved parties be informed about its contents.

Response

DUP 0502277

DU 001921

I-27 Welding Exposure

A maintenance welder in the area shop had used a 3M 9920 disposable respirator for protection from zinc oxide fumes while working on galvanized metal. He spoke of having suffered from metal fume fever on one occasion in the past and of other more recent occasions when he felt he was developing similar symptoms. He did not mention if the experiences were related to Du Pont operation, but indicated the respirator helped him. It is recommended that these experiences be investigated for Du Pont causability and appropriate protective equipment provided, if warranted.

Response

The ZnO exposure was a pre-Du Pont incident. The 3M 9920 mask has been removed from service.

S-28 Self-Contained Breathing Apparatus

The pressure of two Scott Air Paks was below the full scale. The straps of both facepieces were not fully extended, and the regulator by-pass valves were open to flush contaminants from the face piece. It is recommended that area personnel be trained to perform the monthly checks properly.

Response

Accepted.

J-29 Eyewash Station

The eyewash station in the center of the nitrobenzene area did not function properly on initial operation, e.g., low water pressure. On the third attempt it functioned properly. It is recommended that the unit be repaired to function correctly.

Response

Accepted.

S-30 Noise Control

A telephone is situated in a noise zone (≥ 90 dBA). While calling, employees have to take out their hearing protection. It should be considered to install a noise protection enclosure which allows phoning without hearing protection and without exposure to the noise.

Response

Accepted.

S-31 Gloves

Rubber gloves are required in the spill procedures for protection against several chemicals. At least three different kinds of gloves were in use which were all called 'rubber gloves.' It is recommended that the use of gloves be reviewed on basis of their permeability, this is already planned.

Response

No response necessary.

DUP 0502278

DU 001922

S-32 Self-Contained Breathing Apparatus

A Scott Air Pak with a small cylinder was stored in a case labeled as 30-minutes unit. Even this small cylinder was filled under the full scale. It is recommended that only adequate emergency equipment be provided and personnel be trained to check it properly.

Response

Accepted.

DUP 0502279

DU 001923