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Long Grove, IL 60049 • 312|540-2400

Loss Control Survey

a subsidiary of [redacted]

UNION CARBIDE

BUSINESS CONFIDENTIAL

Prepared for
Union Carbide Corporation, Chemicals and Plastics Division

Address
P.O. Box 471

City	State	Zip
Texas City	TX	77590

By	Title
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Date of survey	Contract No.	Location Code
May 22, 23, & 24 1979	904570 -	50515

The objective of this service is to assist you in controlling accidents and losses.

Number of Employees: 2230

INTRODUCTION

The general liability oriented loss control survey of your Texas City Plant was completed. A pre-survey conference was held with R. G. Taylor, Safety Director, and D. R. Reem, Assistant Plant Manager. The survey was conducted in company with J. D. Summers, Safety Engineer.

The objectives of this audit were to review loss control programs, to conduct an analysis of loss experience and to conduct a physical survey of supplemental areas including bulk loading and unloading facilities, central shops and field maintenance work sites.

Other plant personnel contacted include J. D. Parker, Safety Supervisor; Harry Milward, Safety Coordinator; E. N. Lund, Safety Supervisor; George Hunter, Insurance Representative; Ray Tunis, Distribution Engineer; O. C. Jones, Distribution Supervisor; J. D. Washington, Building 124 Supervisor; K. B. Criddle, Marine Terminal Supervisor; Steve Campbell and Bob Fleming, TNI Supervisors; B. W. Phelps and Bob Tyler, Rigging Supervisors; Bob Sewell, Maintanance Department Head; Wes Haskins, Contract Services; A. R. Paoli, Superintendent, Tellepsen Construction Company; Liz Spurgeon, Purchasing; and, Otto Kissinger, Purchasing.

Loss Control Program documents were reviewed, and the safety department, distribution, test and inspection, maintenance, contract services, and purchasing offices.

EXECUTIVE SUMMARY

The following topics were briefly reviewed during the closing conference with D. R. Reem, R. J. Taylor, and J. D. Summers.

In distribution, procedures and physical hazards are inadequately controlled. Loading procedures need to be reiterated with personnel to maintain loading and unloading flex hoses free of products leaks such as vinyl acetate leaks at spots 3 and 9 at the West Tank Car Loading Rack. Derails and blue flags need to be in place at times that tank car loading and unloading is in progress. JLH

Product, hose and fitting arrangement, and potholes along some railroad spurs are an exposure to personnel such as the Texas City Terminal Railroad Crew. JLH

Trucking operations appear to be inadequately controlled. Plant personnel are under the assumption that the gateguards are providing personal protective equipment, and are orientating the drivers as to plant safety rules, whereas the guards indicate that they ask drivers if they have their hard hats and goggles and sign the equipment out to the drivers if they indicate that they do not have the personal protective equipment. Hearing protection is not dispensed at the gate. The guards indicated that plant personnel issue hearing protection as required. Observations in the plant were that drivers were in their cabs while loading was in progress. In some instances, one driver was eating while in his cab, two were outside of their cabs without hard hats, and one was told to go into the driver's provided shelter, but went into the operator's shelter on the loading rack instead. JES JLH LEC JLH

Outgoing vehicle inspections are ineffective. A leaking trailer which was supposedly empty, and which had flamable placards was allowed to proceed to the Marine Terminal through Gate 5-E without first stopping the leaking product. JES

Some contractor operations do not appear to be adequately controlled by the plant. Areas of concern include decking installation over water at the Marine Terminal Cleaning Dock. Six employees were without floatation work vests, the dock access ladder was too short for the job, and the ladder had non-uniform rungs. Texas City Terminal Railroad employees switching at the Marine Terminal were not wearing their hard hats. Construction and plant maintenance contractor employees using Union Carbide Corporation cranes are another area of concern. The contracts with Bechtel and Tellepsen are incorporate and it could not be determined if a hold-harmless clause is in the contract signed by each contractor. LEC WPH LEC TCB NYO

Some tests and inspection records of elevators and hoisting equipment WPH

LAS/WP

were either not readily available for review or were incomplete. It is suggested that index files be maintained by the Safety Department to indicate the location of the records in the plant, and the person or persons who are responsible for maintaining the records.

Maintenance supervisory personnel should be given additional training in the recognition of hazards. This training should include, but not necessarily be limited to: welding safety, faulty equipment, flamable liquids storage/use, combustable material storage, and hand tool safety.

ANALYSIS OF LOSS EXPERIENCE

A general liability computer print-out analyzed was for the period from 4-10-70 through 1-1-79. A total of 41 claims were submitted totaling $579,596.07. The amount paid on the claims was $262,316.42. Outstanding claims total $317,279.65. Bodily injury claims submitted by contractry employees were approximately 60% of the total.

Two significant claims are that of Acie Nobles, submitted 1-1-73, alleging inhaled oxide fumes causing metal fume fever, and of Milton Henry Jierspeck, submitted 11-8-76, as a result of a broken ankle from a fall from a pipe rack. The claims were for $125,000 and $225,000 respectively.

Texas City Terminal Railroad employees reported several injuries incurred on the premises. Those claims were not costly, but were frequent. The type of injuries reported include fall on level, fume inhallation, chemical burn and stepping on objects.

A driver was sprayed with residues on 5-13-73, resulting in a $17,000 bodily injury claim.

Property damage claims paid include the result of a decomp on 2-5-73, and a building 119 non-solvent autoclaves explosion in 1977.

A concerted effort is needed to reduce exposure to liability incidence such as those experienced in the past and documented in the computer print-out.

The following table outlines incidence rate comparisons concerning OSHA recordable occupational injuries and illnesses developed by your facility vs. the National Industry Average (Industrial Chemicals - SIC #281) for the years shown:

A source of the industry average statistics is the US Department of Labor, Bureau of Labor Statistics, Report 535. Your incidence rates were calculated on the basis of information contained in your OSHA record keeping documents. Manhours of exposure were obtained from your office records.

The incidence rate methods of measuring the effectiveness of your plant's safety program clearly demonstrates a most favorable comparison to your industry on a national basis for the most currently available data.

The computer print-out of 1978 employee work-related injuries indicates that paid claims total $5,795.91, and your open claims total $151,630.00.

Of 66 claims, 14 were NOC, 9 were bending/stooping and 5 were foreign particles in eyes. The NOC cases, code 99, were listed as: 4 back pain; 1 back injury; 1 hurt shoulder; 1 hurt ankle; 1 burn; 1 cough; 1 finger injury; 1 tooth chip; 1 cut finger; 1 sore knee; and one felt light-headed.

To reduce the number of NOC classifications, specific information is needed on the E-1 reports so that the cases can be properly classified. Specific injury cause should be indicated such as "lifting --, low back strain", etc.

Employee work-related injury costs were 28% NOC, 22% foreign particles in eyes, 16% as a result of explosion, and 9% hand tool injuries.

SUPPLEMENTAL AREAS

Bulk Loading and Unloading Facilities

JLH/LEC

Various definiencies noted at the loading racks indicate that they are overlooked by supervisors, they are not being reported, or they are not being corrected when reported. Some physical hazards noted during the course of the survey include walking/working, surfaces deficiencies along loading racks; toe board missing on the first step of stairway to loaders' shelter, and at pipe risers of Marine Terminal Rack Number 5; leaking vinyl acetate at flex hose couplings at spots 3 and 5 of West Tank Car Rack and Distribution; propionaldehyde fumes expelled from dome of tank car RA 1X 9125 being washed at the Tank Car Rack during the course of this survey; blue flags not in use at 2 derails on West Tank Car Rack; derails and blue flags not in use at East Tank Car Racks; 1 broken blue flag not in use at derail on ethyline oxide unloading rack; faulty ground clamp on cable at spot 8, East Tank Car Rack where isopropanol anhydrous was being loaded in AC FX 15408 Tank Car; some loading hoses and steam hoses with expired or no-test dates in various areas; and combustables in open refuse

drums on various racks.

Operating procedures manuals and aids were reviewed in Mr. Jones' office.

Driver shelters are provided in most areas, however, some drivers were in their cabs while loading was in progress, one driver was eating while in his cab; one driver went into the loader's shelter rather than in the provided shelter; and some drivers were outside of their vehicles, and were not wearing their hard hats. LEC/JLH

Younger Brother's Truck Number 564 was being loaded with tri-glycol at the Marine Terminal Rack Number 5. Although the product is non-hazardous, combustable placards were being displayed by the driver. LEC

A leaking valve cap was noted on a supposedly empty Kile Petroleum Products tank truck at 9:30 a.m. on 5-23-79. The tank truck left Gate 5-E to pick up a load at the Marine Terminal. Flamables placards were displayed on the tank trailer. The leak was not stopped before the truck was allowed to leave the plant by the security guard. JES & ?

TEST AND INSPECTION PROCEDURES

TOB/FLK/LAS

Test and inspection procedures appeared to be in need of up-grading in the area of elevators, man-lifts, crane baskets and lifting devices.

Contract services receives certificates of time and service on elevators serviced by Houston Elevator Company. There are no records provided by the service company in regards to the elevator inspections. Items to be checked by the service company are included in the contract with the plant. WPH

Two man-lifts in the plant are one each in buildings 178 and 184. The man-lifts are supposedly out of service and no inspections or service are being performed. Both man-lifts were checked and power to them was energized. Entrance and exit gates to the man-lifts were open. JLH ?

Four crane baskets were visually inspected, and no records are being kept of the inspections. FLK

Records of cranes and hoists were not readily available. One of the reasons may be the filing system. Some of the inspection records dating back to December, 1978 had not been filed in the equipment file folders. FLK

No inspection records are available on 6 JLG lifts. Procedures are being FLK ?.

Chemicals and Plastics Division

FLK

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Written by Bob Tyler.

Slings are visually inspected before use, and are color coded during annual inspections. A sleeve is provided at one eye of each sling, indicating the sling ID number and other pertinent sling date. No sling inspection records are kept.

DO I.D. NOS. SERVE ANY PURPOSE? IF NOT WE COULD DISPENSE WITH RECORDS FLK RJT

MAINTENANCE SHOPS

FLK

With the exception of the paint storage area of Building 214, the general condition and layout of the maintenance shops are satisfactory.

Paint storage is on open shelving in an unprotected area with no containment sills and drains and unapproved electrically.

Exits are not marked in the maintenance buildings surveyed. FLK

Safe work practice deficiencies noted include: FLK

Welding rods, orbs, planes, pipes and rags on floor in area that a coil was re-worked in Building 209, West side, South end.

Floor sweep storage in oily open top fiber drum in Building 189, Vanbox Repair Garage.

Unsecured helium cylinder in sheet metal shop.

Unsecured oxygen cylinder in heavy structural shop.

Slings not color-coated as to inspection in pipe shop and in light structural shop.

Two empty acetylene cylinders stored with full oxygen cylinders in the compressed gas cylinder storage rack near Building 215.

An employee hammering on the head of al ball peen hammer with another ball peen hammer in the electrical shop.

Chemical and Plastics Division

Machine guarding and other machine deficiencies noted include:

Belt not fully enclosed at nip point of band saw in boiler shop.

Rollers travel after brake is engaged in Wysong form roller in sheet metal shop.

De-Walt Radial Saw cutting head does not return to the starting position when released by the operator. (Carpenter Shop Building 216)

At Sand Blasting Shop Building 226, a bulk sand hopper is used, a dust collection system is installed, and sand is augured from the approved sand blasting booth to outside dumpsters. Although some sand blast operations have been performed in the new building, none was in progress during this survey. An area of concern is the possible dust exposure to plant and contractor employees at the augur exhaust to the dumpster.

General exhaust ventilation is used in the area of the welding booths, but no local exhaust ventilation is provided in the booths.

Fiber drums used as refuse containers were noted in some welding areas.

Two fiber drum refuse containers were noted in the spray booths in Building 124. The paint equipment cleaning vats on the outside of the paint spray booth were open, and the lids are not provided with fuse links.

JB:jak