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C. F. Porter
1962

TEXAS DIVISION GENERAL PLANT SAFETY RULES



THE DOW CHEMICAL COMPANY
FREEPORT, TEXAS

ST0014137

GENERAL PLANT SAFETY RULES
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soon as possible to Industrial Medicine for treatment. The employee must notify his supervisor of the injury, as soon as practical.

2. Employees must not attempt to remove foreign particles from the eyes, except by washing with water. If a corrosive material (either solid, liquid or gas) gets in the eye, the eye must be washed immediately with running water preferably at an eyewash station and the washing continued uninterrupted for at least fifteen minutes. The ambulance must be called so that washing of the eye can be continued enroute to the Industrial Medical Department. The fifteen-minute procedure must be carried out in all eye-wash cases.
3. If corrosive chemicals come in contact with the body, the affected parts must be washed with running water for at least fifteen minutes. If necessary, clothing should be removed to make sure that adequate washing is being accomplished.

B. EMERGENCY PROCEDURE

1. In the event of an emergency such as a spill, gas release, fire or explosion in any area of the plant, all except those charged with the responsibility of taking care of the situation must leave the area and remain at a safe distance until the emergency is over. Exception to the above may occur when a specific request for assistance is made by supervision of the plant area involved or by the Plant Protection or Fire Department.
2. The following procedure should be used to call an ambulance, report a fire, spill of volatile materials or release of hazardous gases; Dial 666 and state that you want to report an emergency, give your name, the exact location (building number, door, etc.,) and the nature of the emergency. The person

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reporting the emergency should stay on the line until sure that the message is understood and confirmed. If there is a malfunction on the "666" number, emergency calls may be placed by dialing "0" as stated in the plant telephone directory.

3. The Standard Emergency signals are:

   Gas Release ——————————————(Continuous)

   This signal is sounded by the department where the release occurs. All personnel downwind of the signal must standby and be prepared to use necessary protective equipment, or to leave their area if necessary.

   Alert- - - - - - - - - -(series of short blasts)

   This signal cancels welding permits and all personnel in the area where this signal is given must be prepared to use proper protective equipment if required to stay, to evacuate if ordered, or return to work at the All Clear signal.

   Evacuate--- --- ---(series of 3 short blasts)

   Upon hearing this signal in your work area, leave the area according to your Unit Emergency Plan. After evacuation you should remain clear of the area, but ready to return when the All Clear signal is given.

   All Clear —— —— ——(series of 3 long blasts)

   When this signal is given, return to your work area as soon as possible.

4. If operating a motor vehicle in an area where a Gas Release signal is given, turn off the engine, get out of the vehicle, and be prepared to leave the area if necessary. Never drive a motor vehicle into an area where there is a gas release.

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Always be alert for the standard emergency signals given above.

C. INDIVIDUAL ACTION

An individual's actions must constantly reflect safety consciousness. Always work with safety for yourself and your fellow employee in mind.

1. All employees are expected to know and abide by their departments' safety rules. They must familiarize themselves with, and be governed by the written safety rules of any department they might enter.
2. Horse-play in any form must not be engaged in by employees in the plant or while on duty.
3. Running in the plant must be avoided except in case of an emergency.
4. Employees must not climb through, under, over or between railroad cars except in performance of assigned duties.
5. Compressed gases, including air, must not be used for cleaning of clothes or the body.
6. Employees must not make inoperative, as a matter of convenience, such safety devices as relief valves, electrical and mechanical interlocks, or guards.
7. Unsafe shortcuts, such as walking across ditches or pipelines, and cutting corners to save a few steps, must be avoided.
8. Before beginning work in areas where contact with corrosive chemicals is possible, employees must familiarize themselves with the location of the nearest safety shower, eye bath, and telephone, and know the location of emergency equipment such as gas masks, fire extinguishers and fire blankets in the area in which they work.
9. All containers such as bottles, jugs, or cans of chemicals must be properly labeled.

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10. Smoking is strictly prohibited in the plant in those areas posted with "No Smoking" signs, except in smoke shelters at designated times.
11. Maintenance personnel must report to the operating supervision before beginning work in a production plant area on a non-routine job, and daily thereafter until the job is completed. Upon completion of the work, operating supervision must be notified that they are leaving the area.
12. Flammable materials must not be dumped into sewers without permission of the supervisor.
13. Every employee must insist on the observance of safe practices of fellow workers.

D. VEHICLES AND TRAFFIC

1. Pedestrian paths and walkways must be used whenever provided. In their absence, employees using streets and roadways must walk on the left side, facing approaching traffic.
2. The driver of a company vehicle is entrusted with the responsibility for its proper use. Any malfunction of brakes, lights or horn, or fumes in the cab or any unsafe condition must be reported to the Garage at once, and the vehicle repaired before any further use is permitted.
3. Drivers of plant vehicles must keep on roadways designated for such traffic as much as possible.
4. All traffic signs in the plant must be obeyed. Emergency vehicles on call may be exempt, but drivers of the same shall be responsible for driving with due regard for the safety of others.
5. The speed limit in the plant is 30 miles per hour for cars and trucks and 20 miles per hour for scooters, unless other wise designated by signs. The removal of, altering or otherwise tampering with the

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carburetor or governor settings on motor scooters to increase the speed is prohibited.

6. The maximum number of people who may ride in a pick-up truck is three in the cab and six seated on the pick-up bed, or on approved "built-in" seats. Under no circumstances should arms or legs hang outside the vehicle cab or bed.
7. Employees, when riding on open type trucks, must not stand up or hang their feet over the sides.
8. Hauled material that overhangs the sides or ends of trucks must be red flagged at the extent of the overhang.
9. Personnel newly authorized to operate motor scooters must be given proper instructions in their safe operation.
10. The load capacity for truckster model scooters is 500 pounds. Not more than two passengers and the driver may ride in truckster model scooters, and then only when an approved seating arrangement is provided by the Garage.
11. Motor scooter engines must not be left running while scooter is unattended.
12. Night operation of bicycles, scooters and powerbuggies without lights and reflectors is prohibited.
13. Passengers standing on plant route busses must stay to the rear of the front row of passenger seats, and passengers must not attempt to get on or off busses while they are in motion.
14. Smoking is not permitted in vehicles in designated no smoking areas.
15. Gasoline tanks on motorized equipment must not be filled while the engine is running.

E. PROTECTIVE EQUIPMENT AND CLOTHING

Protective equipment is provided and specified in these and departmental rules. This equipment must be periodical-

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ly checked to assure good working order.

1. When entering any designated compulsory eye protection area, all persons are required to wear eye protection as specifically approved for that area.
2. Proper type goggles must be worn when chipping, grinding, buffing, cleaning welds, loading or unloading material, or any similar operation where flying particles constitute an eye hazard.
3. Departmentally-approved eye protection must be worn by employees when transferring corrosive materials (such as acid, caustic, etc.,) from one container to another by pouring and when taking process samples of such materials.
4. Chemical goggles must be worn in areas where corrosive materials may be splashed or spilled. In addition, adequate protective clothing, such as face shields, slicker suits, rubber gloves and rubber boots must be worn when breaking into, or disconnecting, piping, pumps, vessels, or related equipment that contains, has contained, or may contain acids, caustic, or other corrosive materials.
5. Employees working with or around electric arc welding or cutting must wear approved eye protection, and provide adequate ventilation.
6. Employees should wear proper eye protection under the following conditions:
   (a) When handling carboys or glass bottles of corrosive liquids.
   (b) When a high wind is blowing.
   (c) When riding motor scooters or open trucks on plant roadways.
7. All employees subject to any hazardous exposure, including dust, chemicals, or toxic irritants, must wear adequate protective equipment approved by their supervisor and the Safety Department, such as

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face shields, head protection, rubber jackets, slicker suits, coveralls, fire resistant clothing, protective sleeves, spats, gloves, aprons, protective footwear, respirators and gas masks. Company-furnished clothing and protective equipment must not be altered.

8. All employees must wear personal clothing that is safe and proper for their job. Life jackets, and/or life belts, must be worn as required by department rules. In no case shall an employee in the plant work in an undershirt, shorts only, or stripped to the waist.
9. Metal safety hats are prohibited in areas that are electrically hazardous. An approved safety hat must be worn by all employees while in areas where there is a hazard of falling objects.
10. Adequate ventilation must be maintained when using solvents. If ventilation is inadequate, then respiratory protection must be worn.
11. Safety belts, with lifelines attached, are to be worn by employees when performing work in elevated positions where the use of scaffolds or ladders is impractical and where a slip might result in a serious accident.
12. All full-face respiratory protective equipment must be sent to the Fire Department at least annually for checking.
13. In the event it becomes necessary to enter a vessel that may not be completely free of hazardous contents, a safety belt and lifeline must be worn in addition to other protective equipment needed. Safety belts and lifelines must be worn by those entering vessels whenever it is deemed advisable by supervision.

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CHINERY, TOOLS, AND EQUIPMENT

Machines must have all guards in place before operated, unless the specific job is approved by the supervisor. When permission is given by the supervisor to remove a guard from a machine or tool, the supervisor must instruct the employee on special precautions to be taken while operating the machine or tool with the guard removed.

All pedestal and bench grinders and buffers must have a satisfactory guard over the wheel. Portable grinders and buffers must have a satisfactory guard over the wheel except in cases where special conditions make the use of a guard impractical and the employee's supervisor has approved its use without a guard. The guards on wire buffing wheels mounted on pedestal or bench grinders should be cut back at the bottom about 30 degrees from the vertical center line of the guard.

3. Grinding on the side of emery wheels must be done only on wheels that are designed for this purpose.
4. Tool rests on grinders must be set not more than 1/8 inch from the wheel. Buffers are not to be operated with tool rests.
5. Gloves must not be worn while using grinders, buffers, or drill presses unless permission to do so is secured in advance from the supervisor.
6. Neckties, loose clothing and jewelry, such as tie chains, watch chains, and rings, must not be worn around moving machinery.
7. Moving machinery and process equipment in service must be shut down before adjustments or repairs are made, except as follows: If it is not feasible to shut the equipment down before performing work upon it, then it is necesarry for department supervision to:

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(a) Determine for each item of such equipment what jobs must be performed, with a listing of these jobs made for the use and information of the workmen and their supervisors. Any non-listed jobs of any nature are not to be done.

(b) Prepare a detailed safe job procedure for each listed permitted job, and also a list of personnel authorized to perform these jobs.

8. Vessels to be entered, or worked upon, must be made safe for personnel by such means as dis-connecting, blinding, or double-block and bleed. If such precautions are impractical, a detailed procedure for performing the work in a safe manner must be prescribed by supervision.
9. The use of non-ferrous tools is to be given consideration on jobs and in areas where an explosion or fire hazard exists.
10. Tools, material or equipment must not be intentionally dropped or thrown from a higher to a lower level unless adequate precautions have been taken to make sure that no injury to persons or damage to equipment will occur.
11. Defective tools are to be tagged with a "Defective Tool Tag", and returned to the Tool Room for repairs.
12. Air pressure on pneumatic tools must be bled down before disconnecting them from the air supply.
13. Spring-loaded snap.on "Cleco" quick hose connections must be reserved for use on air and water service only. A part of the "Cleco" connector must not be left connected to a process line or equipment.
14. Unmarked, or unlabeled, lines must not be used without approval of the owner. Service Lines commonly used must be identified on the valve end. In

addition, all methane lines one inch and smaller must be identified on the valve end, and approval must be obtained before use.

15. "Boss-type" hammer union connectors must be used on steam hose service.
16. All power transmission couplings must be guarded unless the design or location is such that the chance of personal contact is extremely remote.
17. Employees must not ride a load that is being handled by a crane. The riding of crane slings is prohibited, except where a bosuns' chair is provided.
18. Vessels moved to the shops and salvage must be cleaned whenever practical, and tagged as to condition and previous contents before they can be moved from one location to another. See Safety Standard #1.

G. HOUSEKEEPING

1. Compressed air from a hose must not be used in an attempt to clean a work area nor should it be used to clean machinery or parts unless specific safe procedures are established to protect the user as well as others in the area.
2. Walkways and stairways must be kept clear of all tripping hazards such as material, tools, hoses, etc,.
3. Job sites must be kept orderly during the performance of the work. When a job is completed, the work area must be left in a neat and orderly condition.
4. It is the responsibility of each employee to help keep lunch rooms, change rooms, and toilet facilities orderly, clean and sanitary.
5. Empty soft drink bottles must be replaced in the racks provided.

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H. LADDERS AND SCAFFOLDS

1. The following rules are to be observed when using ladders:
   (a) Make certain that ladders are in good condition and of proper length before using them.
   (b) Face the ladder and keep both hands free for climbing.
   (c) Where practical, grasp the ladder by the side-rails, rather than the rungs.
   (d) Set straight ladders so that the bottom is out from the vertical about one-fourth of the distance from the upper support to the bottom.
   (e) Employees must not stand on the top step of a stepladder.
2. All straight ladders must be made secure at the top or must be held at ground level while in use.
3. Makeshift scaffolds, such as boxes, crates, and drums must not be used.
4. The following rules are to be observed while working on or over transite roofs:
   (a) Employees must not walk, drop or jump onto a transite roof.
   (b) Where a permanent platform or walkway is not provided, a temporary walkway or spread-footing should be used to distribute the load over a large area of the transite.
5. Ladders must be provided on scaffolds, and cross braces are not to be used for climbing.
6. The following rules apply to rolling scaffolds:
   (a) All caster brakes must be applied when scaffold is not in motion.
   (b) Riding rolling scaffolds is prohibited.
7. Any scaffold of a height greater than three times the minimum base dimension must be guyed or tied off during use.

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8. Do not attempt to use scaffolds as material hoists or for mounting derricks unless they have been designed for this purpose.
9. Platforms and scaffolds must be kept clear of tripping and slipping hazards.
10. Permanent ladders on towers or vessels are not to be blocked by scaffolding inserted through the cage.

I. DANGER TAGS

1. To insure that equipment is not operated while it is being worked on, Danger Tags are attached to the controls so that personnel will know not to use them. These tags must be used to protect personnel exposed to the hazards of the equipment involved and must be respected by all personnel. The personnel responsible for the operation of equipment must clear and tag the equipment; any personnel whose safety could be endangered while working on this equipment may affix their tag. Violation of Danger Tag Rules must result in disciplinary action up to and including discharge.
2. No control such as a valve, switch, clutch, etc., is to be operated by anyone while a Danger Tag is attached. If a control must be operated intermittently such as for testing equipment, the Danger Tag must be properly cleared and removed before each operation.
3. Whenever the operation or use of any equipment may endanger anyone, a request must be made to supervision of the group which operates the equipment to clear and tag the equipment. "Clearing" means making the equipment inoperable and safe for others to work on. The authority to clear and tag equipment may be delegated by this supervision to qualified personnel after supervision has assured themselves that the person delegated can clear the

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particular job involved properly.

4. After the group which operates the equipment has cleared and tagged the equipment, each worker or group of workers who may be exposed to the hazards may tag the equipment for their protection.

   When Danger Tags are attached to equipment by persons other than those responsible for its operation, prior approval from the person responsible shall be obtained.

5. As the individual jobs have been completed each worker or group of workers must remove their tags immediately.
6. The group responsible for the equipment must place their tag first and remove their tags last.
7. Danger Tags may be removed only upon authorization of the person designated on the tag. The supervisor of any preson who fails to remove a Red "Danger" Tag when a job has been completed may authorize the removal of the tag after he has determined to his complete satisfaction that the equipment can be operated in a safe manner.
8. At the discretion of the supervisor, locks may be used on valves and switches in addition to, but not replacing, Danger Tags.

J. WARNING TAGS (green)

1. When it is necessary to convey instructions or information prior to operation of equipment controls, Green "Warning" Tags are to be attached to the controls.
2. Green "Warning" Tags should be removed when conditions set forth on the tag have been met.

K. SAFE WORK PERMITS

1. "Safe Work Permits" are designed to provide a convenient means of checking at the job site the safe-

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ty of such jobs as entering closed vessels, breaking into or repairing pipelines that have contained hazardous materials or pressures, work involving the use of flame or spark producing equipment in hazardous areas and work on machinery. These permits are to be requested and/or issued at the discretion of the supervision involved in any jobs where the "Safe Work Permit" is applicable. A Safe Work Permit must be re-issued for a job if there is evidence that conditions have changed subsequent to the issuance of the original Safe Work Permit.

L. ELECTRICAL

1. 32 Volt transformers are to be used in connection with drop lights when working inside metallic vessels. Exceptions to the above shall be considered when the use of 115 volts is required to accomplish the work. Special precautions shall be taken in grounding, handling, and inspecting electric cords, and permission shall be obtained from the supervisor before entering a vessel.

M. EXCAVATIONS AND FLOOR OPENINGS

1. Where a safety hazard would be created for the personnel involved, and/or others, excavations such as ditches, trenches, or bell holes, should be sloped sufficiently to prevent cave-ins or slides. If sloping is impractical, shoring must be used in cases whenever the vertical dimension exceeds four feet. All excavations must be barricaded by the persons performing the work.
2. All floor or trench openings where grating or floor plates have been removed must be barricaded or marked by suitable warning signs by the persons performing the work.

N. PRESSURE CYLINDERS & PRESSURE SAMPLE CONTAINERS

Each individual responsible for filling, handling, & storage of Pressure Cylinders & Pressure Sample Containers must be familiar and comply with the requirements of Safety Standard #9 Compressed Gas Cylinders and Pressure Sample Containers.

1. Hoses must be disconnected from welding and cutting torches before torches are stored in toolboxes or cabinets. Torches and hoses must be removed from vessels that have been vacated by personnel.
2. The supply of oxygen and fuel to torches that are left unattended must be shut off at the cylinder valves when a job has been completed and the regulators and hoses must be depressured.

O. GLASSWARE

1. All broken glassware must be repaired or discarded.
2. Do not heat glass bottles on a hot plate without precaution against breakage.
3. No pressure systems are to be used with glass without approval of personnel completely familiar with the possible hazards.
4. Hand protection is required when force is applied to glass, such as in inserting or removing glass tubing from stoppers or in breaking off at a file mark.
5. Broken glass should be removed by use of broom and dust pan and placed in dempster box or suitably marked container. In no case place broken glass in waste baskets.
6. To prevent breakage in transit, all glass containers shall be properly crated or otherwise suitably packaged before being transported from the immediate area in which they are being used or stored.
7. All glass bottles with capacity on one gallon or

more, containing toxic, corrosive or flammable materials, and all glass bottles larger than four liters, regardless of contents, shall be kept in crates or provided with other suitable means of protection to prevent breakage. If necessary, bottles may be removed from their protective devices to facilitate the safe filling of the bottles, or the safe removal of their contents.

P. RADIATION

Note: In locations where a radiation source is used or stored, regulations require that it be marked with a "Radiation Material" sign. This sign is for the purpose of informing anyone in the area that such material is present, and not that a safety hazard due to radiation exists.

1. Only personnel completely familiar with the possible hazard may enter an area marked by "Radiation Area" signs.
2. All areas where a radiation hazard exists must be marked conspicously by standard signs at a safe distance from the source of radiation. These signs bear the radiation symbol of magenta (or purple) on a yellow background with the words "Caution – Radiation Area."
3. "Radiation Area" signs must be removed when a radiation hazard no longer exists in the affected area.

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R. TEXAS DIVISION SAFETY STANDARDS

1. Plant Shipping Tags
2. Pressure Gauge Mountings
3. Isolation Motor Circuits for Work on Motors & Motor driven Equipment.
4. Gas Cylinder-Type Pressure Regulators, Gauges & connections.
5. Railroad Derails and Blue Warning Flags
6. Grounding of Portable Electrically Operated Equipment and Tools
7. Electrical Bonding and Grounding
8. Procedure for the Disposal of Waste Materials in Drums and other Containers.
9. Compressed Gas Cylinders and Pressure Sample Containers
10. Acetone used in Laboratories.
11. Inspection of hand operated hoisting equipment.