

Section 6

SAFETY, HEALTH AND ENVIRONMENT

Subject

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Effective

January 1, 1980

PLAINTIFF'S EXHIBIT

CEL-1043

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POLICY & RESPONSIBILITY STATEMENT PAMPA NO. 6.0

Effective

January 1, 1980

POLICY

The Pampa Plant will provide a safe and healthful working environment throughout the plant, and will encourage and promote the safety, health and welfare of all the employees. Employees are expected and encouraged to participate in the Plant Safety and Health Programs and to report unsafe working conditions. Employees are to observe and practice plant safety rules and regulations.

RESPONSIBILITY

- *The plant Safety Section operates under the direction of the Safety, Health & Environmental Department. Safety of employees and plant fire prevention and fire protection are direct responsibilities of Plant Management.

It is the responsibility and authority of the line management and/or Safety Section to stop any work where the safety of employees or plant is in imminent jeopardy. Work cannot be resumed until necessary and corrective action is taken to make the job and/or equipment safe for continued operation.

Employees asked to perform certain jobs, which in the judgment of the employee may constitute a hazard to the employee or the equipment, will discuss the proposed work with his/her supervisor. If the employee cannot be convinced the requested job or work does not constitute a hazard, the supervisor will ask the Safety Section to review the job and any questionable hazard that it may present. The decision of the Plant Management concerning the safety aspect of the job will be final.

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PROTECTIVE CLOTHING AND EQUIPMENT

Pampa No. 6.1

Effective

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POLICY

Protective clothing and equipment shall be provided by the Company to ensure the safety of personnel. Employees shall wear protective equipment in accordance with the provisions of this policy.

General Provisions

It is the responsibility of Management to instruct and direct plant personnel in the use and care of all protective clothing and equipment.

*The Safety section is responsible for buying or approving necessary equipment. No safety equipment may be purchased without Safety's approval signature on the purchase order or BOM.

The tool room personnel in the Maintenance Department will maintain necessary stock items for repairing or reconditioning all repairable equipment with necessary assistance, advice or instructions from the Safety section.

*Visitors who do not have their own equipment will be issued eye protection, hearing protectors, and a hard hat upon entering the plant and must return them when leaving.

Employees can purchase certain safety articles, such as safety shoes and spare eyewear through the security guard. Celanese will pay a fixed amount toward the purchase of safety shoes twice each year.

EYE PROTECTION

All persons entering the fenced area of the plant and those performing job assignments outside the fenced area must wear industrial grade safety glasses with the following exceptions:

*Safety glasses are not required while in control rooms, offices, and lunch rooms.

*New employees who wear prescription glasses will be permitted to use their own glasses until their safety glasses arrive. They must order glasses within the first week of employment.

*Visitors who wear prescription glasses will be permitted to wear their own glasses.

Prescription safety glasses shall be provided at Company expense to employees every two years or with a change in the prescription. The prescription (not more than one year old), should be submitted to Plant Protection.

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*Safety glasses both prescription and non-prescription (with tinted lenses), are also available. Pipefitters and welders must have #2 or #3 green lens. These glasses will be provided in addition to the normal authorization stated above.

*Contact lenses are not allowed to be worn in the fenced area of the plant unless the employee furnishes the Company with a doctor's statement that vision cannot be corrected by other corrective measures. In this case, approval must be obtained from the employee's supervisor, Department Manager and Safety Supervisor. The employee will complement the contact lenses with tight-fitting goggles.

*CHEMICAL GOGGLES - FACE SHIELDS

Those employees in jobs requiring extensive use of goggles are encouraged to attach goggles to their hard hats. Goggles are stock items in the warehouse.

Chemical goggles or face shields will be worn by employees working with or near hazardous chemicals, under any circumstances that chemicals could be released or spilled, and where there is danger of flying particles. This includes but is not limited to:

Catching samples.

Opening flanges, piping, instruments, or equipment which may contain chemicals.

Using abrasive grinders.

When chipping, cutting, breaking or drilling concrete, bricks, glass or other materials which may result in flying particles.

Working with molten materials, pitch or tar.

Scraping or wire brushing metallic surfaces.

Renewing or tightening gauge glasses or rotometers.

When sand-, air-, or water-blasting.

Operating drum fill devices.

Depressuring or draining equipment through bleeder valves.

Connecting or disconnecting chemicals hoses.

Mixing catalyst or inhibitor solutions which are not fully enclosed.

Working in the vicinity of the tube stripping vat.

Removing insulation.

Adding chemicals, inhibitors, filter aids, catalyst, and other materials to vessels, including mix vessels and process vessels.

WORK CLOTHING

Work clothing shall be provided by the Company to employees assigned to special jobs where regular work clothing might be damaged or is inadequate for proper protection. *Company furnished coveralls shall be made of fire retardant cotton.

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*Revised March, 1982

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The immediate supervisor shall be responsible for obtaining proper clothing from the Warehouse or toolroom.

SAFETY HATS

Safety hats are required to be worn inside the fenced area of the plant and while performing job assignments outside the fenced area, with the exception of control rooms, maintenance lunch and change room, offices, warehouse and laboratories and the maintenance main shop or the instrument shop during break and lunch provided no work is in progress at that time.

Exception: Hardhats are not required when traveling to and from the Main Gate at the beginning and end of the workday, provided that the main roads are used for travel.

ACID SUITS, FIRE BLANKETS AND SIMILAR GEAR:

Each department will procure, inspect, and maintain such equipment as may be needed in its normal operations, and for emergency situations. All equipment must be approved by the Safety Department.

Supervision of the involved unit or location will be responsible for the maintenance of all such gear in a safe, usable condition. Actual minor repairs of safety equipment will be made by the Safety section. The Safety section will maintain a stock of essential repair parts.

Supervisors of the involved unit or location will instruct and periodically drill their personnel in the location, use and care of all emergency protective clothing and equipment.

*FOOT PROTECTION

Safety toed shoes are not required, but are recommended. Footwear worn inside the plant must be made of a substantial, non porous material and cover the entire foot. This prohibits the wearing of open-toed or canvas type shoes. Individuals traveling to and from Purchasing and the Laboratory offices are excluded from this requirement, however, those employees working in the chemical handling areas of the Laboratory are not excluded.

Personnel with medical problems involving the feet and ankles may be excluded from this requirement with the concurrence of their supervision and the S.H.E. Department.

HEARING PROTECTION

Hearing protection is covered under Pampa Plant A.P. 6.20.

RESPIRATORY PROTECTION

Respiratory protection is covered under Pampa Plant A.P. 6.19

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SAFETY PERMITS

PAMPA NO. 6.2

Effective

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POLICY

The safety permit system is to assure that any hazardous job will be made as safe as possible.

Work requiring a Flame or Entry Permit should be done only if no alternate, safer means of accomplishing the same end result is available. Each request for a permit should be examined critically to determine if the work can be done without the use of spark or heat producing methods or without having personnel enter the vessel. If heat or spark producing methods are required, the equipment will be removed from the unit when practical. Only if no other method exists or the alternate is impractical, should a permit to employ these more hazardous procedures be issued.

GENERAL RULES

*Permits shall be valid for the duration of the job or for a maximum of 24 hours. The permit is voided if the job is not begun within two hours of the time of issuance or if the job is abandoned for more than two hours. Relieving Shift Supervisors shall countersign existing permits if work is in progress at the time of relief.

During plant emergencies, all permits are automatically canceled. Work shall not be resumed until the All Clear Signal has been sounded and the permit is reapproved and initialed by the first line supervisor of the area concerned. If any questions exist, the first line supervisor will call a Safety Representative for a second opinion.

The permit shall clearly describe the work location and shall not be construed to include any location other than that designated.

*Where unusual safety hazards exist, the Operations or Maintenance Representative may request a Safety Representative to standby at the work location.

*The first line supervisor of the area concerned is responsible for the preparation of the equipment for permit work. He will see that a detailed check of the preparations for the work has been made prior to contacting Safety (if Safety is required). He may utilize subordinates to expedite the issuance of permits.

Refer to A.P. 6.25 for permit blinding requirements.

*For all permits, the first line supervisor of the area must be contacted. This supervisor will contact Safety Representative for the permits that require their involvement.

*Deviations from this policy require the approval of upper supervision of Operations, Maintenance, and Safety.

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*FLAME PERMITS

A flame permit is required prior to using any spark or flame producing device inside the fenced area of the plant. The only exception to this is fabrication work being performed in construction areas or the Maintenance Shop.

The first line supervisor shall issue the following flame permits. He may call Safety for consultation if there are questions about the job.

- . Concrete related tools.
- . Electric and pneumatic hand tools.
- . Chipping, buffing, and grinding when not on process equipment.
- . Cutting and welding on structure.
- . Cutting and welding on new equipment not connected to the process yet.
- . Restarting of H₂ flame analyzers.

All other flame permits must be co-signed by Safety.

Specific Rules

All welding machines used in Area II will be, at all times, equipped for and connected to the centralized emergency welder shutdown device. All jobs will require a qualified stand-by employee for fire watch by observing the work activity to insure safety on the job. The Area II supervisor will have a list of qualified employees.

Welding on pressurized pipelines, tanks, vessels, or towers is normally prohibited. All possible alternate methods must first be considered. Approval for a "hot tap" must be obtained from Safety, Operations and the Maintenance Engineering Group under the conditions outlined in the "hot tap" procedure.

General Rules

When cutting or welding is involved, a stand-by employee with suitable fire extinguishing equipment shall be present at the location.

The employee assigned to the job shall be responsible for preparing the job site to insure a safe work area prior to inspection by a Safety Representative and the work supervisor.

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*Revised March, 1982

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A duplicate of all flame permits shall be kept on file in the Safety section office.

When the work is completed, the original flame permit will be discarded.

Welding machines must be stopped and acetylene or hydrogen and oxygen must be shut off at the cylinder during lunch periods and at the end of the work period.

Oxygen-acetylene, hydrogen or other flammable gas cylinders shall not be taken into confined areas, rooms or buildings where an uncontrolled flame could lead to an explosion or fire.

When welding or cutting is done above ground level, sufficient hose must be provided so that oxygen, acetylene or inert gas cylinders can be left in a safe position on the ground. It is not permissible to lift cylinders to an elevated work level. All cylinders must be secured to prevent falling or rolling.

The ground cable from welding machines must be clamped directly to the piece of metal being welded. Using building steel or structural members for grounding shall not be permitted.

Outside contractors shall comply with all provisions of this section.

CONFINED SPACE ENTERING PERMITS - Refer to A.P. 6.27

VEHICULAR PERMITS FOR ENTERING RESTRICTED AREAS

Vehicular entering permits shall be required before any motorized vehicle or equipment will be allowed to enter restricted areas. This permit must be issued by the supervisor of the unit.

Motorized vehicles and equipment include automobiles, trucks, tractors, scooters, draglines, maintainers, rollers, high lift diggers, welding machines, electric or gasoline driven pumps and air compressors, and electric carts.

Restricted areas include production areas, loading and unloading facilities, storage barrel house, and all areas restricted due to emergency conditions, except for the Purchasing and Stores building and the Maintenance Shop building.

In case of an emergency, all motorized vehicles and equipment in restricted areas shall be shut down and shall not be started again until the supervisor of the unit declares the area safe. If he has any questions, he will call Safety for a second opinion. 010613

Motorized vehicles and equipment in restricted areas will be shut down during lunch periods or in the absence of an operator.

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PERMISSION TO USE FIRE LINES

Use of fire lines for routine service is restricted to areas where no adequate water source is available.

Before fire lines are used for purposes other than fire, emergencies or fire training, permission must be obtained from the Utilities Supervisor and the Safety Department.

Fire hoses shall be disconnected from hydrants at permanent hose houses before the hydrants are used for service purposes.

The service hose couplings attached to fire hydrants must have standard fire service lugs to permit instant disconnection.

Hydrant valves must always be fully turned on to prevent valve seat scoring.

All service water hoses must be disconnected from fire hydrants immediately following use and fire hoses reconnected at permanent hose houses.

Line cut off valves must not be removed from fire hydrants.

PERMIT TO WORK ON 13.8 KV ELECTRICAL SYSTEM

A permit is required before climbing poles, or structures, or before working on electrical equipment containing 13.8 KV electrical lines.

This permit must have the verbal approval of the Utilities Supervisor and the written approval of the Maintenance Electrical Supervisor or his/her supervisor, and a Safety Representative.

HOT TAPPINGScope

It is intended that this document cover recommended practices and procedures pertaining to "hot tapping" and related welding on pressurized enclosures such as vessels, towers, and piping.

Purpose

The purpose of these recommended practices and procedures is to ensure that all "hot tapping" and related welding techniques are performed in the safest known manner.

Description of a "Hot Tap" Operation

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"Hot tapping" is the operation of drilling or boring a hole under pressure through the wall of a pressurized enclosure. Normally, this "hot tap" operation is accomplished by first making a nozzle or piping

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in operation, and under positive pressure. A gate valve is then attached to this nozzle and a "hot tap" machine is then attached to the valve so that the drilling or boring operation can be performed under pressure. After retraction of the drilling or boring bar the gate valve is then closed to permit removal of the "hot tap" machine.

Basic Requirements

Ideally, all welding to pressurized enclosures should be performed when the vessel, tower, or piping has been removed from service and properly cleared of potentially hazardous chemicals in accordance with our normal safety and fire permit regulations. These regulations are covered in our Pampa Plant Administrative Manual and Corporate Administrative Procedures.

Certain piping connections and/or nozzle installations can be made to pressurized enclosures by utilizing the "hot tapping" technique. However, "hot tapping" should be permitted only when it is deemed relatively safe and economically justified. This technique can be considered justified when the use of "hot tapping" would eliminate production outages that would result in excessive profit loss.

Safety Precautions

Evaluation of the characteristics of the chemicals in the pressurized enclosure must be made to determine if the "hot tapping" and related welding would create a potential fire, explosion, or exothermic reaction hazard. The "hot tap" operations should be performed at a location on the piping or vessel where the internal environment is in the liquid phase.

Before any "hot tapping" operation is permitted, it must be established that the pressurized enclosure is under positive pressure. It should also be established that flow or sufficient volume of material (preferably liquid) is present to aid in cooling the pipe or vessel wall during the welding operation.

Before any "hot tapping" operation is permitted it must be established that the vessel or piping wall is of metallurgically sound material and adequate thickness for the pressure and temperatures involved.

"Hot Tapping" Operation

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Welding Operation

In addition to the welder for the "hot tap" operation being qualified in accordance to Celanese's Standards and ASME Code, he/she should also be a seasoned welder that has had experience in "hot tapping."

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The welding operation should be made with the maximum rate of rod travel so that minimum heat will be applied to the base metal of the pipe or vessel. The welder should apply the maximum heat concentration to the nozzle wall and fuse to the vessel of a "washing" technique. Where hazardous chemicals are involved, the weld should be air and soap tested prior to the drilling or boring operation.

Where the weld is to be made below ground level, the ditch or trench must be large enough to permit the welder to work freely and allow for quick escape in case of an emergency. Above ground locations should also be unobstructed.

Drilling or Boring Operation

The "hot tap" machine must be rated to cover the pressure and temperature of the system being "hot tapped." During the drilling or boring operation suitable protective clothing must be worn such as an acid hood, face shield, gloves, etc., where required for the type of chemicals involved.

Department Functions and Approval Requirements

Safety Department

The Safety Department shall be responsible for determining whether or not a "hot tap" can be made safely. Before any "hot tap" is made, the Safety Department must give their written approval on the standard Fire Permit, Form P-41.

The Safety Department is also charged with the responsibility of obtaining the opinions and/or approvals of other departments such as Operations, Engineering and Maintenance. The Safety Department shall also be responsible for maintaining a stand-by observer for those "hot tapping" operations where extra hazardous conditions prevail such as harmful or dangerous chemicals or relatively high pressure and/or temperatures.

Operations Department

The Operations Department shall be responsible for supplying the Safety Department with the necessary information pertaining to the internal environment and characteristics of the chemicals involved. Operations shall also be responsible for determining whether or not a proposed "hot tap" is economically justified. Operations shall give their written approval on the standard Fire Permit, Form P-41 before any "hot tap" is permitted.

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Maintenance Department

The Maintenance Department shall be consulted by the Safety Department to obtain their opinion on the relative safety hazards and merits of any proposed "hot taps." Maintenance is also responsible for performing the "hot tap" operation in the safest manner possible.

Maintenance Engineering Group

The Maintenance Engineering Group shall be consulted by the Safety Department to obtain their opinion on the corrosive and/or metallurgical condition of the vessel or piping to be "hot tapped"; plus their opinion on the relative safety hazards and merits of any proposed "hot tap." The Maintenance Engineering Group shall give their written approval on the standard Fire Permit, Form P-41 before any "hot tap" is permitted.

Special Limitations

Unless unusual conditions prevail that may warrant otherwise, the following chemical and physical limitations shall prohibit the use of the "hot tapping" operations.

Chemical limitations (Basis - chemicals that are subject to exothermic reaction and/or poisonous in nature)

- . All Acids
- . Nitric Acid
- . Acetaldehyde
- . Benzene
- . Ammonia
- . Chlorine
- . Hydrogen
- . Caustic
- . All Acrylates
- . Air or O₂
- . Lines containing air or oxygen

Prohibitive Physical Limitations for "Hot Taps"

- . Pressure greater than 500 psi
- . Temperatures greater than 400°F
- . Thickness less than 1/10"
- . Piping smaller than 1½"
- . Non-Code Welding on coded vessel
- . Bottom 180° of pipe
- . Angle to pipe other than 90°
- . Ells or other fittings
- . Through Weld joints
- . Directly upstream of equipment easily damaged by cuttings
- . Equipment having internal lining or coating

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- . Operation at pressure or temperature in excess of tapping machine

TEMPORARY LEAK REPAIRS

When it is necessary to make temporary repairs, to process equipment with hose clamps and bandits, the following will apply:

- . The location of the repair should be tagged with a colored ribbon.
- . The installation should be recorded in unit log book, giving the date and location of repair.
- . The shift supervisor involved will submit the necessary paper work to Maintenance for repairs to said equipment. The equipment should be repaired at the earliest opportunity.

Temporary methods other than the above, to include outside contractors, must have written approvals of the Safety and Operations Departments and the Maintenance Engineering Group using the Standard Fire Permit Form P-41.

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SAFETY COMMITTEES

PAMPA NO. 6.3

Effective

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THE MANAGEMENT ACCIDENT AND FIRE PREVENTION COMMITTEE

*The Management Accident and Fire Prevention Committee is composed of the Plant Manager; Department Managers; one Superintendent each from the Technical, Operational and Engineering/Maintenance Departments; and Safety Supervisor. This committee aids the Plant Manager in the guidance and coordination of the accident and fire prevention program.

THE SUPERVISORY SAFETY COMMITTEE

*The Supervisory Safety Committee is composed of all Superintendents that are not on the Management Accident and Fire Prevention Committee Unit Supervisors or Group Leaders from the groups of the Superintendents on the Management Committee, Industrial Hygienist and Safety Supervisor. This committee is responsible for inspections and proposes recommendations to the Management Accident and Fire Prevention Committee for improved plant safety.

*DEPARTMENT SAFETY COMMITTEES

Safety committees representing the various departments in the Plant are appointed by the Departmental Manager or Superintendent. Each of these committees addresses matters relative to practices and conditions in their particular department in order to promote safe and healthful working place. Periodic evaluations are made and reports with recommendations submitted to the Department Superintendents.

Departmental Safety Committees include:

- Controller Department
- Acids Department - Operations
- Monomers Department - Operations
- Utilities Department - Operations
- Engineering/Maintenance Department
- Technical Department
- Traffic Department - Operations

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Subject SAFETY MEETINGS

PAMPA NO. 6.4

Effective January 1, 1980

*Safety meetings for employees of Operations Departments will be held each Tuesday at 2:00 PM. All employees are organized into groups by departments and shifts so that each group will meet once every four weeks.

*Safety meetings for Maintenance employees will be held on the second Thursday of each month at 12:00 noon.

*Safety meetings for the employees of the other departments will be held on the second and third Tuesdays of each month at 12:30 p.m.

Safety meetings of supervisory personnel may be called periodically by the Safety Supervisor.

Safety meetings shall be held on Company time for discussing safety and health programs and fire crew training.

Employees scheduled for safety meetings shall attend unless excused by their immediate supervisor.

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SAFETY INSPECTIONS

PAMPA NO. 6

Effective

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UNIT AND AREA INSPECTIONS

Supervisors shall inspect all buildings and operating areas to which they are assigned every thirty (30) days for adequate ventilations, safety or health hazards, housekeeping and the condition of fire and safety equipment. A report of this inspection will be sent to the Safety Supervisor for follow-up. Safety representatives will conduct supplemental monthly inspections to insure overall plant safety.

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SAFETY APPROVAL OF NEW
PROJECT DRAWINGS

PAMPA NO. 6.6

Effective

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The Engineering Department shall submit approval prints of engineering projects to the Safety Supervisor.

The Safety Supervisor will make the necessary arrangements for involvement by Corporate safety department and insurance carrier representatives for final approval or projects.

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SPECIAL WEATHER REPORTS

PAMPA NO. 6.7

Effective

January 1, 1980

The Safety Section and Plant Protection will report to the plant personnel concerning any predicted weather conditions which may require special precautions or procedures. These reports shall be made as outlined in the Pampa Plant Emergency Plan.

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WARNING SIGNS

PAMPA NO. 618

Effective

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All warning signs posted in the plant must be made of metal or synthetic material designed for outdoor or corrosive atmosphere exposure. These signs shall conform to colors and size as prescribed in O. S. H. A. standards.

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IN-PLANT SMOKING

PAMPA NO. 6.

Effective

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POLICY

Smoking will be permitted only within the confines of designated areas in the plant. Lighting devices and a cigarette disposal container will be provided at each location. All other areas are restricted.

DESIGNATED SMOKING AREAS

Authorized smoking stations are as follows:

Inside Stations

Control Rooms and Offices of Operating Units, exclusive of unit labs and the area behind the instrument panel

Maintenance Shop Building

Maintenance Lunch Room

Purchasing and Stores Offices

Traffic Supervisor's Office

Laboratory Offices, Library and vending machine corridor

Safety Building

Outside Stations

Area I - South side of area, west of No. 8 boiler

Area II - South side of area, west of electrical substation

Area V - Riggers Building

Area VI-A - South Side of area, in the snack house

Area VIII - North side of area, by the east entrance road

Arthur Brothers Fab Shop and Offices

Any additions or changes in existing, designated smoking areas must be approved by the Management Accident and Fire Prevention Committee.

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IN-PLANT SMOKING

PAMPA NO. 6.9

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All smoking stations will be closed when the fire alarm sounds. When the "All Clear" signal is given, those stations outside the emergency areas may be reopened by the supervisor. Stations in emergency areas will not be reopened until authorized by Safety and Operations representatives.

Any smoking area will be closed whenever conditions arise which make the area unsafe such as leaks, spills or the close proximity of work projects.

Outside smoking stations will be controlled by the Operations Department.

Matches or other flame producing devices will not be permitted in the plant.

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VEHICULAR SAFETY

PAMPA NO. 6.10

Effective

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The speed limit inside the fenced area of the plant is 15 m.p.h.
The speed limit outside the fenced area on Company property is
15 m.p.h.

No riders are permitted on tractors, forklifts, cranes or cherry
pickers except where permanent seats are provided.

Passengers will be permitted in cabs of pickup and trucks providing
the total number in the cab does not exceed three (3).

Riders are permitted in pickup beds, on winch trucks and on flatbed
trucks provided the riders are sitting inside the bed and there is
no loose material in the pickup bed or on the flatbed.

Employees are not permitted to board or dismount a moving vehicle.

All materials transported by bicycle must be carried in the racks
provided on the bicycle.

*Revised June 1981

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FIRE PREVENTION

PAMPA NO. 6.11

Effective

January 1, 1980

FIRE CREW SELECTION AND TRAINING

Unit Supervisors will select employees to serve on fire crews for the various shifts.

*Fire crews will be trained by the Fire Captain and Safety personnel in classroom and in field training sessions. Eight hour training sessions will be held on a quarterly basis. Additional training sessions may be scheduled during off months to maintain the proficiency of the fire crews.

Additional training during the evening and night shifts, or on weekends, may be given by the Fire Captain or the Safety Supervisor.

FIRE EQUIPMENT

The Safety Supervisor is responsible for determining the most effective location of fire fighting equipment and fire walls.

The Safety Section is responsible for the inspection and maintenance of all fire protection equipment and ordering new equipment as needed.

The Safety Section will replace or recondition any defective or expended fire fighting equipment. Any employee using fire fighting equipment must report the use immediately to the Safety Section.

Backup equipment is stored in the fire station for immediate use or replacement.

FIRE REPORTS

The Safety Section will be responsible for preparing and distributing reports concerning all fires.

The Engineering Department will examine and report to the Plant Manager the extent of major damage as required by applicable corporate insurance manuals.

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*Revised June 1981

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SAFETY, HEALTH AND ENVIRONMENT

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HOUSEKEEPING AND SANITATION

PAMPA NO. 6.1

Effective

January 1, 1980

MAINTENANCE DEPARTMENT RESPONSIBILITIES

The Maintenance Department is responsible for all janitorial services including the removal and disposal of all garbage and refuse.

INSECT AND RODENT CONTROL

The safety section is responsible for the control of insects and rodents as specified in O. S. H. A. regulations.

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Section 6

SAFETY, HEALTH AND ENVIRONMENT

Subject

OCCUPATIONAL ACCIDENTS AND
ILLNESSES

PAMPA NO. 6.13

Effective

January 1, 1980

DEFINITION

An occupational accident refers to any accident which arises out of and in the course of employment.

An occupational illness is an illness caused by exposure to environmental factors associated with employment.

REPORTING AND TREATMENT

An employee who is injured or becomes ill on the job must report to the dispensary, if able to do so. If not able, then any employee present shall immediately call the Safety or Plant Protection Section and report the injury or illness. The employee will be provided transportation to a doctor or hospital, if necessary.

*For all injuries, the supervisor of the injured employee completes the form "Supervisors Incident Investigation". This report must then be routed to the next level of supervision and a copy placed on the Safety Supervisor's desk within 24 hours. Additionally the following procedure will be implemented on all injuries requiring a physician's treatment.

PROCEDURE:

Department managers will report all plant injuries requiring doctors attention to the Plant Manager immediately (day or night) following the occurrence.

*A note as to the nature of injury and a brief description of the incident will be due on the Plant Manager's desk by 7:30 AM the day following the accident.

*The department manager of any OSHA loggable or lost time injured employee will arrange for a review meeting with the Management Accident & Fire Prevention Committee as soon as the incident is thoroughly investigated. If holidays or weekends are involved, the earliest practical time for such a meeting shall be selected by the department manager. All line supervisors of the injured employee shall attend, and the injured employee's supervisor shall present the review.

Corrective action will be determined by the department manager, reviewed by the I. R. Manager and approved by the Plant Manager.

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*Revised June 1981

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SAFETY, HEALTH AND ENVIRONMENT

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OCCUPATIONAL ACCIDENTS
AND ILLNESS

PAMPA NO. 6.1

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The safety section shall prepare the form "Employer's First Report of Injury" and submit it to the Industrial Accident Board and the covering insurance company.

An employee who is absent for one (1) or more days as a result of an occupational accident or illness must have a release from the attending physician before returning to work. This release must be presented to and accepted by the Plant Nurse on Form P-93 "Notice of Recovery from Disability."

First aid equipment will be kept in the plant dispensary only. A safety representative, security guard, or nurse can provide first aid treatment. He/she will also complete the form "Dispensary Case Record" and log the case on the "Dispensary Treatment Log."

MEDICAL ATTENTION AT HOME

If an employee requires medical attention for an occupational injury or disease while at home, he/she shall attempt to contact the physician designated by the Company. If that physician is not available, the employee may then contact a licensed physician of his/her choice providing the safety section is notified immediately.

ACCIDENT INVOLVING COMPANY OWNED OR LEASE VEHICLES

The Company provides insurance on all Company owned or leased vehicles. Any accident involving Company owned or leased vehicles must be reported to the plant protection section immediately.

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Section 6

SAFETY, HEALTH AND ENVIRONMENT

Subject

SAFETY DEVICES

PAMPA NO. 6.14

Effective

January 1, 1980

Employees may not by-pass, alter, remove, or disengage any safety device installed on plant equipment when such machine or equipment is in use or being operated. The Shift Supervisor shall have authority to make temporary exceptions only if, in his/her judgment, a greater safety hazard can thereby be avoided. Any supervisor who makes such exceptions must report the action, through his/her immediate supervisor, to the Operations Manager prior to the end of the shift.

*By-pass, alteration, removal, or disengagement of a safety device installed on plant equipment shall require prior approval of the Plant Manager, Operations Manager, Technical Manager, Maintenance Manager, and Safety, Health and Environmental Manager, except as noted above.

No employee is allowed to change the pressure setting on any relief valve (PSV) unless he/she is a member of the Instrument Section of the Maintenance Department, and then only on the approval of the Plant Engineering Superintendent. All PSV's must be sealed by the Instrument Section at the time they are tested and the pressure rating recorded on the valve, as well as in Maintenance records.

Certain plant equipment is protected by PSV's which may be blocked in for PSV removal, repair and adjustment. Such block valves shall be locked open except for maintenance. Such maintenance must be performed immediately upon closure of the block valve and only if secondary methods are available to detect and relieve abnormal vessel pressure. An operator must be available to observe vessel pressure during such maintenance activity.

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*Revised June 1981

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SAFETY, HEALTH AND ENVIRONMENT

Subject

RESPIRATORY PROTECTION PROGRAM

PAMPA NO. 6..

Effective

January 1, 1980

SCOPE

This program establishes the minimum requirements for the selection, use, and maintenance of respiratory protection used for safeguarding employees against airborne contaminants, and oxygen deficiencies.

This program does not apply to:

- a. Mine and tunnel rescue work.
- b. Protection against airborne radionuclides and radon daughters.

RESPONSIBILITIES

All levels of management are responsible for implementation of this program.

Each supervisor, within his/her jurisdiction, shall assure that the selection, procurement, use and maintenance of respiratory protection is accomplished in accordance with the requirements of this program.

The Purchasing Department shall ensure that respirators procured for plant use comply with the specifications listed in Section 5 of this program.

Supervision shall ensure that a sufficient supply of approved respiratory protection for contaminants likely to be encountered, is provided and readily available, and that respirators are worn by the employees when required.

Safety personnel shall be responsible for training each employee who may be required to use a respirator, as specified in Section 8 of this program.

The Plant Industrial Hygienist is responsible for certifying key personnel to provide employee training in respiratory protection. These certified personnel shall also handle or direct fitting, maintenance and repair of respirators.

The Industrial Relations Department shall provide a training course in respiratory protection to be used as a guide by employees and supervision.

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SAFETY, HEALTH AND ENVIRONMENT

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RESPIRATORY PROTECTION PROGRAM

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The Plant Industrial Hygienist shall evaluate environmental control measures, approve respiratory protection programs, and monitor employee exposure to airborne contaminants.

The Industrial Relations Department shall screen employees who must wear respirators for physical impairments or complications which may cause difficulty in functioning safely and adequately when respirators are worn.

HAZARDOUS PROPERTIES

In general, environmental respiratory hazards are of three types:

- a. The air may contain one or more contaminants such as toxic gases or harmful dusts,
- b. There may be an oxygen deficiency,
- c. Or there may be a combination of contaminants and an oxygen deficiency.

For the first category, simple filter-type or chemical cartridge respirators are often adequate. However, if the concentration of a contaminant is high (usually more than ten times the TLV), or if an oxygen deficiency exists, supplied-air type respirators must be used.

CONTROL MEASURES

General

Airborne contamination shall be controlled, to the extent feasible, by engineering control measures such as local ventilation of enclosure. Administrative measures and material substitution shall also be utilized, when applicable and practical, to limit employee exposure to airborne contaminants.

When engineering and administrative measures prove infeasible or inadequate in controlling air contamination, or when an oxygen deficiency exists, and during emergencies, employees shall be given and shall wear the required respiratory equipment.

Respirators shall not be used as a substitute for the control of unsafe conditions or unsafe acts when engineering or administrative controls are feasible, except as an interim measure.

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SAFETY, HEALTH AND ENVIRONMENT

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RESPIRATORY PROTECTION PROGRAM

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All areas requiring the use of respirators shall be properly identified.

An employee shall not be assigned to tasks requiring the use of a respirator unless the Industrial Relations Department has established, through physical examination, that he/she is physically capable of performing the task, without impairment, while wearing the respirator.

Frequent monitoring of the contamination levels to which workers are exposed, and periodic evaluation of the Respiratory Protection Program, shall be performed by the Plant Industrial Hygienist.

RESPIRATORY PROTECTION PROGRAM

The following requirements are necessary considerations in a Respiratory Protection Program and shall be implemented.

A. Selection and Procurement

1. The selection of respiratory protective equipment shall be based upon:
 - a. the nature and extent of contamination (or oxygen deficiency)
 - b. work requirements and conditions
 - c. characteristics and limitations of approved respirators
 - d. comfort to the wearer
 - e. cost
2. Respiratory equipment used at the Pampa Plant should be selected from that listed in the "Celanese Respiratory Protection Manual and Guideline".
3. The Plant Industrial Hygienist shall be consulted for assistance in selecting protective devices when no respirator from the above document is suitable.

B. Inspection

1. Employees assigned respirators for routine use shall inspect them before and after each use and during cleaning, as instructed by the Safety Department.

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2. The Safety Department shall regularly perform random inspections of personal respirators and shall inspect monthly all respirators placed in work areas for quick access (including emergency and other respirators not used routinely). Respirators stationed in work areas for quick access shall also be inspected before and after each use.
3. Records shall be kept of monthly inspections for all emergency-use respirators. The date of inspection and the findings must be indicated in these records.
4. Periodic checks of respiratory equipment remaining in stock shall be made to ensure that items such as canisters and cartridges have not exceeded their expiration dates.
5. The Plant Industrial Hygienist shall perform random inspections of respirators to ensure compliance with this program.

C. MAINTENANCE

1. Routine maintenance of personal respirators such as replacement of cartridges, filters, or straps should be performed by the wearer after consultation with the Safety Department. Only "approved"* replacement parts shall be used.
2. The Safety Department shall see that routine maintenance is performed on all non-assigned respiratory equipment as needed. (This would include such maintenance as replacement of inhalation valves, hoses, etc.).
3. All non-routine repairs on personal and non-assigned respirators shall be performed or personally directed by the Safety Department or shall be referred to the manufacturer.

D. STORAGE

1. Reusable personal respirators shall be stored in airtight plastic bags within rigid containers when not in use. Respirators shall not be stored unprotected in tool boxes or other areas where they may incur damage or distortion.

*See definitions

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2. Respirators should not be stored in areas of extreme temperatures.
3. Emergency and non-routinely used respirators should be stored away from areas in which they are like to incur damage but in easily accessible areas.

E. CLEANING

1. Reusable personal respirators should be washed thoroughly with soap and water after each use. They should then be dried and properly stored.
2. Non-assigned respirators must be washed, disinfected and dried by the user after each use.

F. FIT

1. Before a new type of respirator is assigned to an employee, the Safety Department shall perform a leak test to assure a good fit of the respirator to the wearer.
2. Eyeglasses shall not be worn under full-face respirators except where they have been properly installed in approved adapters and do not interfere with the face-to-respirator seal. Employees who need corrective lenses should not wear full-face respirators without these adapters and glasses, except during emergencies.
3. Contact lenses shall not be worn in contaminated areas where respirators may be worn.
4. Employees who wear respirators shall not wear beards or sideburns which prevent a proper face-to-respirator seal.
5. Respirator wearers shall perform a simple leak test before entering a contaminated atmosphere.

G. APPLICATION

1. Where respirators are required for routine use they should be individually assigned, if possible.
2. In confined spaces and other areas which might be subject to oxygen deficiencies or dangerous concentrations of toxic contaminants, the atmosphere shall be monitored before entry.

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3. Oxygen Deficiency*

- a. Where an oxygen deficiency exists, or may be expected, workers must wear an air-line respirator with auxiliary air tank, or a self-contained unit.
- b. An attendant shall be present and located such that he is not likely to be overcome by an event affecting the wearer. The attendant shall have the necessary equipment for an emergency rescue.
- c. Communications shall be maintained between all parties present.

4. Immediately Dangerous Atmospheres*

- a. Where an atmosphere immediately dangerous to life or health may be expected, a self-contained respirator or an air-line unit with auxiliary tank must be worn.
- b. In atmospheres immediately dangerous to life or health, persons wearing air-line respirators must be equipped with safety harnesses and lines.
- c. At least one standby man shall be stationed outside the toxic atmosphere.
- d. The standby man shall remain in communication with those in the toxic atmosphere. He shall have the necessary self-contained breathing apparatus and equipment on hand for emergency rescue.

5. Emergency Use

- a. Adequate respiratory protection shall be kept easily accessible to facilitate the safe escape of all employees from areas in which immediately dangerous atmospheric contamination may occur.
- b. Emergency escape respirators should be of a type which is easily put on, such as a full-face canister unit or a plastic hood. These should be kept in the immediate vicinity of work stations subject to dangerous contamination or oxygen deficiency.

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*See definitions

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- c. Respirators used for emergency re-entry should be of the supplied-air type required for Immediately Dangerous Atmospheres. These should be kept immediately outside areas likely to be quickly contaminated. Additional units may be kept at a central location or on vehicles.
- d. Consideration should be given during emergency planning to assure that a fully adequate supply of breathing-air tanks is available, or that adequate refilling capacity exists on site.

H. TRAINING

All employees who may have to wear respirators, either routinely or in emergency situations, shall be trained in the proper use of appropriate respiratory protection. This training shall include the nature of the hazard to which the employee is exposed and effective emergency procedures. Inspection, cleaning, maintenance and storage procedures shall also be included when the employee will be assigned a personal respirator.

SPECIFICATIONS

Respirators procured for use by Pampa Plant employees shall bear the joint approval of the National Institute for Occupational Safety and Health (NIOSH) and the Mining Enforcement and Safety Administration (MESA), unless such approved device does not exist for a specific case. In this event, the Plant Industrial Hygienist should be consulted.

Breathing-air and breathing-air compressors shall comply with specifications for Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1-1966.

Protective hoods used in abrasive blasting shall comply with regulations outlined in the first paragraph of this section (SPECIFICATIONS).

DEFINITIONS

Administrative Measures - means of controlling employee exposure to contaminants by limiting the time allowed in the contaminated area, rotating tasks, etc.

Airborne Contamination - the presence in air of abnormal amounts of a substance which may cause harmful effects or create a nuisance.

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Air-line Respirator - a respirator which supplies fresh air through a small diameter hose from a compressor receiver or from cylinders.

Approved - Equipment approved by NIOSH-MESA for a specific purpose.

Assigned - equipment given to individuals for personal use only.

Auxiliary Air Tank - a small compressed air cylinder used for escape only.

Chemical Cartridge Respirator - a respirator equipped with special cartridges for removing specific gases or vapors from the breathing air.

Contaminated Atmosphere - air containing harmful or irritating amounts of a substance.

Extreme Temperature - temperatures low enough to make respirator parts brittle or high enough to distort the unit's shape.

Filter-type Respirator - a respirator employing a fibrous medium to mechanically remove solid or liquid particulate. Filters alone are inadequate for removing gases and vapors.

Immediately Dangerous to Life or Health - An area in which an unprotected person will immediately be overcome or will suffer severe delayed health effects due to exposure.

Non-Assigned - equipment available for use by more than one person.

Oxygen Deficiency - an atmosphere containing less than 20% oxygen.

Self-contained Respirator - a respirator supplying fresh air or oxygen from a cylinder or generating unit carried by the wearer.

REFERENCES

American National Standard Z88.2, Practices for Respiratory Protection.

American Industrial Hygiene Association and American Conference of Governmental Industrial Hygienists, Respiratory Protective Devices Manual.

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RESPIRATORY PROTECTION PROGRAM

PAMPA NO. 6.2

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January 1, 1980

Los Alamos Scientific Laboratory, Respirator Training Manual.

U. S. Department of Health, Education, and Welfare, National
Institute of Occupational Safety and Health (NIOSH), NIOSH
Certified Equipment.

U. S. Department of Interior, Bureau of Mines, 30 CFR, Part 11,
Respiratory Protective Devices.

U. S. Department of Labor, 29 CFR, Part 1910.134, Respiratory
Protection.

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