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ETHYL CORPORATION

INTER-OFFICE



TO: Mr. H. O. Bourque

FROM: Len Guretsky

SUBJECT: Safety Topics For 1982 DATE: January 7, 1982

As per your request, I have prepared a monthly safety topic for each month in 1982. The suggested topics are:

JANUARY	- Declaration Of Management Policy And Assignment Of Safety Responsibility
FEBRUARY	- Emergency Procedures
MARCH	- Fire Fighting Equipment
APRIL	- Signs And Barricades
MAY	- First Aid/Medical Emergencies
JUNE	- Self Contained Breathing Apparatus
JULY	- Accident Reporting And Investigation
AUGUST	- Danger And Caution Tags
SEPTEMBER	- Personal Protective Equipment
OCTOBER	- Fire Prevention
NOVEMBER	- Confined Spaces
DECEMBER	- Annual Plant Safety Performance Review For 1982

A write-up for each topic is attached. A number of these topics were covered in 1981 meetings, but because of their importance, they are being covered again in 1982.

Len Guretsky

LG:dar

cc: D. M. McDonald

E-01006

SAFETY TOPIC FOR FEBRUARY -

EMERGENCY PROCEDURES

I. Reporting Emergencies

A. Emergency Phone Number: 3300

B. Medical-Ambulance Phone Number: 2160

C. Fire Alarm Boxes

II. Plant Alarm Systems

A. Fire alarm - activated at fire alarm boxes or by fire sprinkler system trips. A complete fire signal consists of 4 rounds of short blasts coded to specific locations. Employees should review the coded signals for their work area and pertinent adjacent areas. Only alerts fire crews and Supervision in area involved. All fire crews report to stand-by. Area involved fire crews immediately answer alarm in their area.

B. Chlorine Alarm - activated at Main Gate. Uses fire alarm system with following code:

1 long - 1 short for Formosa Chemical NW of PVC
1 long - 3 short for Sodium Area
1 long - 5 short for H.C. Area

A complete signal is 3 rounds of above code. Alerts all plant personnel.

C. Plant Emergency Alarm Signal - activated at Main Gate. Consists of 20 short, consecutive blasts on the Plant Fire Alarm System. This system is used to alert every employee on the plant to an emergency or impending condition which may require emergency action or evacuation. Whenever possible, a fire alarm signal is activated prior to the emergency 20 blast signal in order to provide immediate location identification of the trouble for all plant personnel.

III. Emergency Telephone System

A. Activated at Main Gate to ring designated phones throughout plant at the same time. Employee should know designated phones in their area.

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B. When emergency phones are activated, pick up and listen to information. Do not talk or ask questions! Follow information given.

IV. Radio System

There are fixed and mobile radio units on the plant which are used for either two way communications or for receiving emergency information. Their use by those who have them should be reviewed. Maintain radio silence during an emergency or drill. Use radios only for emergency communications.

V. Emergency Reporting Stations

Emergency reporting stations are established on the plant. Each area needs to review the location of their stations and when they are to be used.

VI. Emergency Procedures

On-plant general emergency procedures have been established for the different areas and groups. Review those specific to your area and group. The red covered Ethyl "Emergency Manual" should be referred to for specific information.

LG:dar

1/7/82

Emergency Procedures

Plant Emergency

A plant emergency is a situation of a disastrous or potentially disastrous nature resulting from failure of or damage to a plant facility. An emergency condition may arise from fire, explosion, natural hazards such as windstorms, gas release or incidents. Damage either on our premises or on the premises of a neighboring plant

Principal considerations

The principal considerations in case of any emergency are

a) to rescue & provide medical care of injured employees

b) to organize or provide for protection of other plant personnel

c) to prevent spread of the emergency

d) to protect property from damage

Preparation

On-plant emergency preparation, like efficient operations & production can only come as a result of planning & training at every level.

WHEN AN EMERGENCY OCCURS IN ANY AREA OF THE PLANT, WHOEVER FIRST DISCOVERS THE CONDITION WILL, IF PRACTICAL, IMMEDIATELY ACTIVATE THE NEAREST ACCESIBLE FIRE ALARM BOX. HE WILL THEN NOTIFY THE MAIN GATE @ 3300 WHAT HE IS REPORTING AN EMERGENCY AND THE EMER GENCY ALARM SHOULD BE ACTIVATED. HE SHOULD GIVE HIS NAME, THE EXACT AREA INVOLVED, AND AN APPRAISAL OF THE EMERGENCY SITUATION. (THIS SHOULD BE MODIFIED THROUGH HIS SUPERVISION WITH PERSONNEL)

WHOEVER ACTIVATES THE EMERGENCY SYSTEM OR AN ALARM WILL REMAIN AT THE FIRE ALARM BOX ACTIVATED UNTIL THE PATROL TRUCK ARRIVES TO ESTABLISH EMERGENCY COMMUNICATIONS. THE INDIVIDUAL DISCOVERING THE EMERGENCY OTHER THAN A FIRE SHOULD CALL IT IN ON 3300 & STAND-BY UNTIL THE PATROL TRUCK ARRIVES.

THE FIRST ACTION OF ALL MAINT PERSONNEL ON THE PLANT WILL BE TO CHECK THE WIND DIRECTION.

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OPERATIONS AREA EMERGENCY COORDINATOR. TAKES CHARGE & DIRECTS ACTIVITIES.

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EVACUATION WARDEN — AREA FOREMAN WILL LEAD ALL PERSONNEL TO SAFETY IN THE EVENT AN EVACUATION IS NECESSARY. HE WILL ACCOUNT FOR EVERY MAN IN HIS AREA AND STAND-BY IN A SAFE AREA WITH ALL EVACUATED PERSONNEL.

SUPERVISOR IN NON-EMERGENCY AREA REPORT TO NEAREST EMERGENCY PHONE FOR INSTRUCTIONS & INFORMATION. PLANNING TO END PHASE.

MAINTENANCE PERSONNEL TO ASSEMBLE AT MAIN GATE OR CHANGE HOUSE DEPENDING ON WIND DIRECTION. TAKE CAR PHONE — [illegible] OR CELL SITES. TCCO AS TL.

1) CUT OFF EQUIPMENT
2) GO TO ASSEMBLY AREAS
3) CHECK ON YOUR PEOPLE.

RESPOND TO EMERGENCY ALARM & ALARMS IN OUR AREA —

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SAFETY TOPIC FOR APRIL -

SIGNS AND BARRICADES

Signs are classified according to use:

1. Danger signs - should be used only where an immediate hazard exists. There shall be no variation in the type of design of signs posted to warn of specific dangers. All employees are to be instructed that danger signs indicate immediate danger and that special precautions are necessary.

2. Caution signs - should be used only to warn against potential hazards or to caution against unsafe practices. All employees are to be instructed that caution signs indicate a possible hazard against which proper precaution should be taken.

3. Safety instruction signs - should be used where there is a need for general instructions and suggestions relative to safety measures.

Each area should review all their signs to see that they are:

1. Still needed.

2. Posted in the right location and the mounting is in good condition.

3. The wording is clear and the message is understood by everyone.

4. Being obeyed.

Barricades are installed to give warning of a hazardous condition or to physically deny access to an area. The following types of barricades are used on this plant:

1. Permanent - are constructed around equipment or hazards of a permanent nature such as open electrical equipment, pits, flair openings and restricted work areas.

2. Temporary Restraining - are installed to temporarily deny access to an area where a hazard developed. Only authorized persons are to enter such areas. Yellow tape is commonly used for this type of barricade.

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3. Warning - are installed around an area where a hazard may exist but where it is not desired or necessary to restrict passage. This type of barricade is used to call attention to a hazard. Green tape barricades are used to call attention to tripping hazards on the ground and in walkways.

Detailed instructions on barricades are covered in the plant "Safety How" manual, Section 4.

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SAFETY TOPIC FOR MAY -

FIRST AID/MEDICAL EMERGENCIES

I. General - all employees are required to immediately report all injuries to their supervision and to report back to supervision upon return from medical and before returning to work. To have all job related injuries promptly treated by the plant medical system:

A. Weekdays, 5:30 AM to 4:30 PM - report to medical in the M&P building.

B. Weekends, and 4:30 PM to 5:30 AM - report to shift coordinator in your area or other person responsible for first aid box.

II. Obtaining Assistance - if the injury is of a serious nature requiring help in the field or transportation in the plant ambulance:

A. Phone Medical-Ambulance number: 2160 (24 hours/day).

B. If no phone available, activate fire alarm box to get help.

III. Situations which require proper, fast response - the following are some of these types of emergencies which could occur at work:

A. Bleeding - if a major artery is severed, a person can bleed to death in less than 1 minute. Stop bleeding by applying direct pressure with your hand(s) and clean cloth (if available) directly on bleeding location.

B. Breathing - a person can suffer brain damage within 4 to 6 minutes after breathing stops. Mouth-to-mouth resuscitation must be administered. Carotid pulse should be checked to see that the heart is still pumping, if not, CPR must be administered.

C. Heart Attack - when the heart stops pumping blood (cardiac arrest), CPR (cardiopulmonary resuscitation) must be administered immediately to maintain life.

D. Chemical Exposure - accidental exposure to corrosive and/or toxic materials can be very dangerous to health and life.

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1. Skin/Eye Exposure - quickly get to nearest safety shower/eye wash fountain or other clean water source and thoroughly wash chemical off for 15 to 20 minutes. Remove any contaminated clothing while under safety shower. Report to medical.

2. Respiratory Exposure - get to fresh air immediately and report to medical.

3. Special Antidote Kits - some chemicals like hydrofluoric acid and hydrogen cyanide require special antidotes to be used when there is exposure. These should be kept at the work site. Employees working with chemicals that have special antidotes must be familiar with their location and use. These special kits are in R&D areas.

IV. Injury to back, neck, and fractured bones - when a person suffers fractured bone(s) and/or a neck or back injury, movement of the injured without proper preparation with splints and/or backboards may result in further injury or even death. Generally speaking, if a person suffers a bad fall where broken bones or a back or neck injury is suspected, it is better not to move the injured, but to summon medical help to the accident scene.

V. Life Support Members - there are employees in all areas of the plant who have been trained in:

A. Red Cross Multimedia First Aid.

B. American Heart Association CPR.

Learn who these people are in your work area so that you will be able to immediately call for their assistance when needed.

LG:dar

1/7/82

SAFETY TOPIC FOR JUNE -

SELF CONTAINED BREATHING APPARATUS

(EMERGENCY AIR PACK)

There are self contained breathing apparatus (SCBA) stationed all over the plant ready for emergency use. The SCBA is for respiratory protection against high concentrations of toxic vapors and gases and/or oxygen deficient atmospheres. Basic components of the SCBA are:

1. Cylinder of breathing air which is carried on the persons back. The cylinder is color coded yellow for breathing air.

2. A pressure regulator to reduce cylinder pressure and regulate the flow rate.

3. Main Line (yellow) and By Pass (red) valves for control of air flow. Normal operation is with the Main Line and cylinder valves fully opened and the By Pass valve fully closed. If the regulator should fail, the By Pass valve is opened and adjusted for continuous flow, and the Main Line valve closed. When a By Pass valve must be used, the person must leave the hazardous area immediately.

4. Pressure gauges (on the cylinder and regulator) which should show the same pressure when unit is in operation.

5. Full face mask to protect eyes and respiratory system from contaminants.

6. Breathing tube which connects the face mask to the regulator.

7. Harness system to secure cylinder and regulator to body.

8. "Audi-Larm" signal which warns of low cylinder pressure (around 540 psig). When alarm sounds, it is time to leave for fresh air.

The MSA brand SCBA units are all Pressure Demand type which always provides a positive pressure inside the mask so that any seal leakage would be out keeping out contaminant, and provides more air flow as the wearer "demands" it. Leaks cut down on useful service life of the unit.

The MSA brand SCBA unit is rated for "1/2-hour duration" based on the fact that when the equipment was tested on men performing moderate-to-heavy work, it was found to last 30 minutes or

more in each of the different types of work tests. The wearer should not expect to obtain exactly 30 minutes service life on each use, because when the work is more strenuous, the duration may be shorter, possibly as short as 15 minutes.

Employees must know the SCBA locations in their work area, how to put it on quickly, and how to use them properly.

These units must be maintained in good condition with full air cylinders (2216 psig).

Whenever a unit is taken out of its storage box, fire inspection at phone number 3181 must be contacted to be sure that it is put back in good, ready-to-use condition.

(Note to person conducting meeting: Using a demonstrator obtained from the fire inspection group, review the components of the SCBA. Then demonstrate how to put on and use. Complete instructions are located inside the storage box. If the class is small and time permits, have each person train in putting it on and operating it. Otherwise, keep the unit on hand where each person can train in its use as time permits. Keep a record of those trained for your files.)

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1/7/82

SAFETY TOPIC FOR AUGUST -

DANGER AND CAUTION TAGS

Danger Tags - (white tags with red and black print) protect the lives of employees working on equipment or an electrical circuit which is shut down or inactivated for repairs.

Caution Tags - (yellow tag with black print) protect equipment which is shut down, inoperative, or damaged, but on which no one is working.

The "Danger and Caution Tag" procedure shall be followed "to the letter" by all employees at all times.

Never work on equipment tagged with a "Caution" tag.

Unauthorized employees should never remove or alter these tags.

Employees must always honor these tags by not operating the machinery, by not using the equipment and by not energizing the electrical circuits so tagged.

The prescribed plant "Danger and Caution Tag Procedure" is in Section 201 of the plant "Safety How" manual. Each area should review the procedures to be sure everyone understands these procedures and is using them properly.

LG:dar

1/7/82

SAFETY TOPIC FOR SEPTEMBER -

PERSONAL PROTECTIVE EQUIPMENT

There are all kinds of personal protective equipment, but the key things to remember are:

1. Protective equipment does not prevent accidents. At best, protective equipment will prevent injury, and more likely it will only lessen the severity of the injury. There is no substitute for good job procedures and good execution of the procedures.

2. Proper selection of protective equipment which includes suitability for protection against the potential danger, the fit, durability, and ease to keep clean.

3. Maintenance in good working condition.

4. The use of the protective equipment at all times the potential danger is present.

There are two basic types of hazards which we try to protect the body with protective equipment:

1. Inhalation hazards - the inhalation of toxic/corrosive gases, dust, mists, vapor, and fumes, and insufficient concentration of oxygen. All kinds of respiratory protective equipment is available.

2. Contact hazards - to eye/skin/body by corrosive/toxic materials, hot/cold materials, electrically energized materials, noise, energy rays (ultraviolet rays, etc.), and sharp/blunt materials.

Each area should review their personal protective equipment to see that:

1. Everyone knows what equipment is needed and when and how it is to be worn.

2. That the equipment is being maintained in good working condition.

3. That the equipment fits properly.

4. If there is a need for more or different types of protective equipment.

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SAFETY TOPIC FOR JANUARY

ANNUAL PLANT SAFETY PERFORMANCE REVIEW FOR 1982

I. Review statistics.

II. Set goals for 1983.

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1/11/83

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