

CHEMICAL PLANT SAFETY & HEALTH MANUAL
ABERDEEN, MISSISSIPPI

SUBJECT: EMERGENCY PLAN

EFFECTIVE DATE: JULY 26, 1985

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APPROVED BY: [Signature] MANAGER

References: CFR 1910, Subpart L-Fire Protection,
1910.1017 Vinyl Chloride

PURPOSE: The Aberdeen Plant Emergency Plan is written to achieve the plant's emergency management objectives. These objectives are:

1. To insure the safety and welfare of employees and the general public in the event of a plant emergency;
2. Minimize property damage and provide for the resumption of normal operations following a plant emergency;
3. Satisfy the legitimate concern of employees, their families, and the general public by providing prompt, accurate information concerning the extent and effects of plant emergencies;
4. Describe the duties of each position listed in the emergency organization; and, (ATTACHMENT A)
5. Outline the requirements for reporting of plant emergencies.

DEFINITION OF PLANT EMERGENCIES

A plant emergency is any unexpected event or condition which requires immediate action to prevent injury to personnel, harm to the general public, and/or serious damage to equipment. Plant emergencies include but are not limited to: release of toxic, flammable, or corrosive materials; fires, and/or explosions; or an injury which requires removal of an employee from an elevated location.

SUMMARY OF EMERGENCY ACTIONS

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The following items describe, in outline form, the actions that must be taken or considered in the event of a plant emergency. The items are not organized in order of priority. Details of this summary are found in the sections that follow.

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IMMEDIATE ACTIONS IN EVENT OF A PLANT EMERGENCY

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Immediate actions are the direct responsibility of the plant Emergency Officer. In his absence, they are the responsibility of the Emergency Crew Chief (shift supervisor).

The extent and severity of a plant emergency shall dictate the extent to which the Emergency Plan is utilized. The initial determination of required action shall be made by the shift supervisor of the affected areas(s). This action can vary from handling the problem with personnel available at the time to full alert of the Emergency Organization. The following items describe the actions which must be taken or considered in event of a plant emergency.

I. Activate The Emergency Alarm System

Anyone who detects an emergency situation shall communicate it to the Vinyl Control Room by the radio, the Gaitronics System, or by dialing 2200 on the plant telephone system. In each case, the caller shall clearly communicate the location and nature of the problem to control room personnel. The operator who takes the message shall activate the appropriate alarm and operate it for 10 seconds. Once the alarm has stopped, the operator shall announce the type and location of the emergency over the public address and Gaitronics system. The message shall be repeated three (3) times over each system.

The emergency alarm system provides electronically generated tones to the Gaitronics and public address systems simultaneously. This is the only time these systems are interconnected. To assure proper operation, the system is tested weekly by Vinyl Operations personnel. The following table describes the alarm tones and their associated meanings.

<u>Alarm Tone</u>	<u>Meaning</u>
Siren	Fire
Warble	Vapor
Pulse	Evacuation
Yelp	Tornado
Steady	All Clear

When testing with
personnel 15.
Program

II. Evacuate Non-Essential Personnel From Danger Areas

Always evacuate non-essential personnel and all personnel not properly equipped with necessary personnel protective equipment. Emergency personnel are to report to the emergency location as directed in the Emergency Crew Utilization section below. Evacuated personnel shall not be allowed to return until the emergency situation has been corrected. In all cases, evacuated personnel shall immediately proceed to primary evacuation areas as noted below. If the wind directs hazardous vapors into the primary evacuation areas, these personnel shall proceed to the secondary evacuation area at the guardhouse and assemble in departmental groupings as noted on the fence located east of the parking lot and south of the guardhouse. If that area is noted as being contaminated, evacuated personnel will be moved to a safe location along the property line north of the plant. If the guardhouse area becomes unsafe because of smoke or high vapor concentrations, the guard shall open the east gate for an evacuation exit. ALL EVACUATIONS MUST BE PROMPT AND ORDERLY - RUNNING SHOULD BE AVOIDED!

All visitors must be accounted for during plant emergencies. Non-Vista personnel should be taken to their point of entry by their Vista escort. Non-Aberdeen Vista personnel working in the plant during normal business hours must report to their point of entry so they may be counted. (The Main Office Visitors log will be taken to the guard house at the close of every business day. It will be returned at the start of the next business day. Non-Aberdeen personnel staying after hours will leave via the guard house to clear their name.) During non-business hours, or periods when work must be done during off-hours, non-Aberdeen Vista personnel must enter and exit via the main guard gate. Vista-Aberdeen personnel must enter at the guardhouse or call the guard whenever working during non-business hours. All personnel working off hours must be logged on the off-hours entry log.

Truck drivers will be escorted to the guard by the Yard Operator, Receiving or Warehouse leads as noted in Attachment D-Departmental Headcount Plans. Also, the guard will provide basic emergency action instructions to all non-Vista truck drivers.

Wind direction at the time of fire or vapor emergency will play an important role in the choice of escape routes. Evacuation routes should always be upwind and at right angles to the wind (cross-wind). Use the wind socks located on silos 417 and 281 or slurry blend tank 502 to determine the wind direction.

PRIMARY EVACUATION AREAS

Vinyl Area - At pad north of the control room.

Compound/Plasticizer - Warehouse at northwest corner of the staging area directly south of the plant auditorium.

Lab - First Aid Station

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Utility Technicians - Boiler house.

Maintenance - Main Shop

Administrative Services - Canopy at main west entrance to main warehouse.

Back-Shift Administrative Services - Guardhouse

Back-Shift - Mechanical Personnel - Shift Mechanics, Pad north of vinyl control room. All other personnel report to the guard.

Main office personnel - Main office lobby.

Back-Shift - Engineering, Research or Office Personnel-Guardhouse.

Contractors and Truck Drivers - North of main gate.

III. Account For All Personnel

When personnel have assembled in the primary evacuation areas, head counts must be made. Personnel not accounted for at this time must be regarded as trapped and/or injured and rescue efforts initiated. It is extremely important for all personnel to understand the location of their primary evacuation areas and to get to them as quickly as possible; otherwise, other personnel may have to jeopardize their personal safety to conduct search and rescue operations.

Each department has developed a plan to account for their personnel. Personnel in each department shall be trained in the prompt and proper execution of their plan. The designated headcounter will report the status of their personnel to the guard. Any missing personnel will then be reported to the Management Group (alt. Emergency Officer, Emergency Crew Chief) by the guard. Department Headcount Plans are shown as Attachment D.

IV. Rescue Missing Personnel

Search and rescue operations will be directed by the Emergency Officer. General searches will be conducted to locate personnel who were not present at the time of the headcount and would not have been in the area of the emergency. Searches in the immediate area of a vapor cloud or fire can be dangerous and attempted only with the proper protective equipment. The Emergency Officer should utilize the buddy system and protective equipment as necessary to protect search and rescue personnel.

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Rescue operations may become necessary due to serious personal injury in elevated plant locations. In this event, the rescue equipment kept in first aid and the Emergency Equipment Station must be assembled and utilized by plant personnel under the joint direction of the Emergency Officer the Safety Director, the Plant Nurse or ambulance attendant.

V. Use The Proper Emergency Equipment

Protective equipment needs are dictated by the emergency conditions. Personnel responding to an emergency must evaluate the risks before they attempt to correct problems. For emergencies involving VCM or propane vapor releases, the minimum requirements for personnel protective equipment would be a Scott Air Pak. For more serious releases where flammable vapors have been released into an area where an ignition could occur, protective equipment needs could reasonably include full fire turnout equipment, Scott air packs and water sprays from deluge systems, fire hose handline or all, again depending upon the needs.

- VI. STOP ALL HOT WORK! - Motor vehicles, portable transfer systems, welding machines and other sources of ignition must be shutdown immediately whenever the plant emergency alarm is activated! Shut down and secure operations as required to prevent further injury to personnel or damage to equipment.

VII. Direct Fired Process Equipment

- A. Stop flow of flammable materials feeding fires or potential fires, including dryer and incinerator gas burners, inert gas generator, building heaters, and the like.
- B. Boilerhouse operation is to be shutdown only in cases where unfavorable wind conditions and flammable material release is great enough to present a hazard. Boilerhouse shutdown will normally occur on orders from the Plant Manager, Plant Superintendent, Emergency Crew Chief, the Emergency Officer, or the Safety Director. The Utility Technician must however, rely on good judgement and shut down the boilers if there is a clear need. In such an event, the Utility Technician should act rapidly to shut down all ignition sources in the boilerhouse area. The forced draft fans on boilers may need to be operated to prevent vapor cloud flashback.

VIII. Emergency Condition Control

Emergency conditions can be caused by a number of different failures. The consequences, in most cases, are controllable. Prompt action by plant personnel can play a major role in minimizing the seriousness of an emergency. Actual emergency conditions in the plant will dictate a coordinated effort using every safe and reasonable control method at our disposal. (The Vinyl Department Power Failure Procedure is appended as Attachment E).

This section is divided into four major categories: vapor releases, fires, activation of fire protection systems, and utilization of emergency manpower.

Vapor Releases

Vapor releases present serious risks to personnel and should always be regarded with a great deal of caution. Uncontrolled vapor clouds that find a source of ignition are very destructive. For that reason, only personnel essential to the control of the emergency should be in the area. All others should be in a safe location some distance from the release area or evacuated if the conditions warrant.

NOTE: PERSONNEL should always avoid entering an area where explosive mixtures exist. Use deluge systems, fire monitors or hand lines to push the vapors away from people.

Activation of fire protection systems are critical to the control of ignition sources and vapor concentrations in the immediate area of the release. Fire protection water should be put on the leak or release as rapidly as possible. The details of how this should be done are shown below in the Activation of Fire Protection Systems section.

The remaining steps for the control of vapor releases are:

1. Obtain and utilize manpower necessary to control the emergency;
2. Obtain and use the proper personal protective equipment;
3. Block in vapor sources as close to the leak as possible.

Fires

Anytime a fire occurs, the employees faced with controlling it must apply sound judgment when considering the alternatives available. In some cases, straightforward extinguishment is the correct approach. In other cases, allowing the fire to burn in a controlled manner may be the best approach. This will prevent a deadly space explosion caused by fire heated metal.

The specific steps to be considered or done when dealing with fires are shown below:

1. Activate fire protection systems as noted below;
2. Activate the emergency organization as noted below;
3. Effectively utilize available manpower;
4. Utilize personal protective equipment;
5. Block in fuel sources remotely; and,
6. Utilize emergency crews to block in fuel at source.

Activation of Fire Protection Systems

The fire protection systems available in the plant should be used to control ignition sources in event of vapor release or to remove heat in event of fire. Whenever a vapor release occurs, deluge systems or fire monitors should be put into operation immediately to disperse vapors and reduce ignition sources, depending upon the conditions.

In the vinyl reactor modules, vapor sensors detect the presence of flammable gases and at preset concentrations, these sensor units will "trip" or activate the unit deluge valves automatically. Other methods of fire water activation for the deluge systems include:

- A. Operation from the control panel in the vinyl control room;
- B. Manual release at the deluge valves; and
- C. Thermostatic release sensors. (High heat or rapid rate of temperature rise such as fire or direct steam impingement will cause a trip condition.)

The above tripping methods simply release control air from the top chamber of the deluge control valve. Loss of control air causes the valve to open and allows fire water to flow through the deluge valve into field piping.

The conditions that would reasonably dictate the need to use either the deluge system, fire monitor nozzles, or other equipment are:

Deluge System

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- ° Serious leaks from rotating equipment seals.
- ° Abnormal discharges of flammable material from process piping, valves, and relief systems.
- ° Serious leaks in the VCM compressor shed or storage vessel areas at the VCM tank farm.

(NOTE: Cold Water On A Hot Corken Compressor Could Cause A Rupture Of The Compressor. Use Caution And Sound Judgment In This Area.)

- ° Fires resulting from any of the above.

Fires Monitors - Permanently installed fire monitors in the various areas provide supplemental fire water to locations which may need additional water for equipment protection due to direct flame impingement, high concentrations of flammable vapor, or during periods when maintenance is being done on the deluge system. During hazardous vapor releases which involve the reactor relief systems, the Supervisor may decide to utilize only the fire monitors since the point of discharge is above the deluge system nozzles and all other operating equipment. If supplemental fire water is needed or in cases where there is no permanently installed fire protection system, the Supervisor can utilize the portable fire monitors and hose reel stored in the Emergency Equipment Station.

Lead Operators should make sure the fire pumps are operating when major leaks occur and only the fire monitors are in use. If the pumps are not operating and there is flow through the monitors from the process water system, the pumps can be started by briefly opening and closing the deluge water valve to the sphere from the old module control panel.

Other Equipment - In the event that stationary fire fighting equipment is inadequate to control or reduce the impact of an emergency condition, additional fire fighting equipment is available in hose houses a (+) sign, or in the Emergency Equipment Station. The equipment available includes fire turnout gear, extra hose, portable fire monitor, firehose nozzles and water wall nozzles (used to protect adjacent exposures from fire damage or to provide a vapor shield barrier - water is supplied with 2½ or 3 inch fire hose).

Emergency Crew Utilization

Nearly all of the fire hose stations in the areas handling flammable materials have been connected to the fire water supply loop. After all six fire pumps are on the line and flow from the system is minimal, supply pressure as high as 170 psig can be expected. The consistent use of adequate Manpower on hose teams is essential if this high pressure is to be safely handled in an emergency. Hose crew size is best if seven personnel are used (Two 3-person crews and a Chief). The Emergency Organization is shown as Attachment A.

The utilization of the emergency personnel must be directed to controlling fires and vapor releases, and treating injured personnel. The following assumes the emergency alarm has been turned in and an initial survey has been conducted.

- A. In the event of any serious emergency, the Emergency Crew Chief is to alert the plant emergency resource personnel as follows:

Activation of Emergency Organization - Whenever the acting Emergency Officer (Operations Superintendent of affected area - alternate - on duty supervisor) determines that the Emergency Organization must be activated, it shall be done in the following manner.

1. Normal Office Hours - Announce "ACTIVATE EMERGENCY ORGANIZATION" three (3) times over the paging systems (P.A. and Gaitronics).
2. Back Shifts - Instruct the plant guard to initiate call out of the Emergency Organization using the current Emergency Organization Call List (Attachment B.)

The on-duty Supervisor can instruct a lead operator to initiate either action.

In the event of a vapor release alarm, Emergency Crews will assemble only if requested by general plant announcement. In the event of a fire alarm, Emergency Crews and the dispatched first aid personnel are to assemble upwind of the fire and await further instructions. An assembly point must also be announced as directed by the Emergency Officer.

- B. Use stationary fire protection systems to our greatest advantage. Use deluge systems and fire monitors to remove heat from a fire, reduce ignition sources, disperse flammable vapors, and protect nearby equipment and structures. Supplement stationary equipment with portable fire protection equipment such as monitors, fire hose and nozzles using a ground loop as necessary to protect personnel or equipment.
- C. Obtain fire turnout equipment (helmets, coats, boots, and cotton gloves) from the Emergency Equipment Station as needed to protect personnel from potentially hazardous exposures in vapor releases and fires. Scott air packs must always be used to protect personnel from toxic or otherwise harmful vapors and smoke.
- D. Emergency Crew personnel should provide help to operating unit supervisors and unit personnel to block in fuel sources away from the fire or vapor release as directed by the Emergency Officer. Personnel performing this work should put on fire turnout gear and Scott Air Paks before attempting to enter an area near a fire or serious vapor release. (See note p. ,VIII Emergency Condition Control-Vapor Releases).
- E. The Emergency Crew Chief shall guide emergency personnel into fire areas to block in fuel sources only after all other reasonable methods of fire control have been tried and found unsuccessful. Prior to doing this however, the Emergency Officer must determine if the task can reasonably be done without a significant risk to emergency personnel. The preferred hose crew size is seven personnel (Chief and two 3-man hose crews for handlines). All personnel must understand that each move must be controlled by the Crew Chief and is commanded verbally by him.
- F. If a person is down near a fire or serious vapor release, the Emergency Officer must quickly assess the risks his crew must face to rescue the downed person. He must take into account such things as the injured person's location, the location of the fire or vapor release, climbing requirements, obstructions, available manpower, hose availability, and other similar considerations. The specific question that must be answered by this analysis is: Can the injured person be removed under the conditions at the time without seriously endangering the lives or safety of the rescuers? Extra personnel will be required to attend the needs of the injured in this case.

- G. In the event of a serious acid spill or ammonia leak in the waste treatment area, the Utility Technician shall immediately report to the waste treatment area. He will be assisted by other emergency personnel as necessary.

IX. Utilize Outside Assistance As Required

- A. Aberdeen Fire Department 369-9551
- B. Ambulance 369-2455
or 369-9393
- C. Aberdeen-Monroe County
Hospital Emergency Room 369-2455
- D. Dr. R. E. Coghlan (Office) 369-2411
(Home) 369-4418
- E. Dr. J. N. Turnage (Office) 369-2413
(Home) 369-6311
- F. Aberdeen Police Department 369-6454

In the event that an emergency condition necessitates the assistance of the Aberdeen Fire Department, the following guidelines must be understood.

1. The Aberdeen Fire Department has agreed to provide assistance in the areas of manpower and fire water pressure boosting for handlines.
2. The Emergency Officer is responsible to determine if Fire Department assistance is necessary to control a fire. If he determines that they are needed, he must initiate the call by notifying the guard to make the call. (This can be done by radio to the control room and a lead calls the guard.) He must also assign someone to meet the fire truck at the guardhouse. The guard should be informed as to who has been assigned to meet the fire truck so he can tell the fire truck driver who to follow. The guard will hold the fire truck until the escort arrives. Specific instructions should be given to the employee assigned to meet the fire truck so the route of travel and destination are understood. A reactor Lead Operator can give these instructions to the fire truck driver on entrance road east of the Control Room. After the instructions have been given to the fire department personnel, one of their initial respondents will return to the gate to guide additional fire personnel to the scene as a group.
3. The Emergency Officer shall retain control of all fire fighting operations.

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4. Additional manpower from the fire department may arrive at the plant in personal vehicles. They should be allowed to pass through any roadblock. They are to park in the employee parking lot. Any fire department personnel who do not have protective equipment should be stopped at the gate. Fire department personnel are to assemble at the gate and will be escorted to the fire location by a Vista employee, designated by the Emergency Officer. Aberdeen Fire Department personnel must be equipped with fire turnout equipment. The Emergency Officer must judge the needs and send firemen back if the turnout equipment is inadequate.

X. Community Notification

Vista Polymers Inc. will act as a responsible citizen of Aberdeen and notify the community of any toxic or flammable gas release or fire that could pose an immediate life threatening hazard outside the plant boundaries.

Supervisory personnel must exercise sound judgment early in any emergency situation. Initial assessment of the situation is of critical importance. There are two major decisions that must be made at the outset:

- A. Can the emergency be controlled with personnel currently in the plant. If not, notify the guard to initiate call out of the Emergency Organization as noted on Attachment B of this plan.
- B. Can the gases or smoke and vapors enter other populated areas in sufficient concentration to be harmful? If other unit areas or the community can be harmed by the emergency, the following items must be considered.
 1. Wind direction and speed;
 2. The size of the leak, release or fire;
 3. Is the gas/smoke cloud dispersing or is it staying together and headed for nearby unit areas or neighborhoods.

Sound judgment is of utmost importance. If the Emergency Officer or Emergency Crew Chief believes the decision to evacuate plant areas and/or notify community officials can safely wait until the Plant Manager or his designees arrive, he should do so. If however there is a clear risk of serious injury if the decision is delayed, paragraph B below should be implemented. The actions which follow any decision to evacuate down wind areas are:

- A. Instruct the Vinyl Lead Operator to sound the evacuation alarms (Gaitronics alarm for evacuation local to the plant, Gaitronics and siren for conditions when harm can come to nearby neighbors.)

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- B. Instruct the guard to notify the Police Department.
The guard should repeat the following message to the Police Department dispatcher.

"THIS IS _____ (NAME) _____, SECURITY GUARD AT VISTA POLYMERS. THERE HAS BEEN A SERIOUS (FIRE, TOXIC GAS FLAMMABLE GAS RELEASE) AT THE PLANT. YOU SHOULD INITIATE EVACUATION PROCEDURES (DIRECTION FROM PLANT) OF THE PLANT.

INSTRUCT RESIDENTS TO ESCAPE (ON FOOT, BY VEHICLE) AND TRAVEL (DIRECTION RIGHT ANGLE TO WIND).

- C. If paragraph B must be implemented, other areas of control must also be considered by the Management Group (alt. Emergency Officer).

*Roadblocks
used to keep
CARS FROM
GOING THROUGH
TOXIC GASES*

1. Roadblocks-Plant personnel may be required initially to block the Highway 25 entrances or Highway 25 depending on the extent of the emergency. In all cases, control of roadblocks should be given to law enforcement personnel upon their arrival.
2. Emergency Employee Identification-Only those personnel authorized by the Company can be allowed to cross roadblocks. In order to aid law enforcement officers in the identification of personnel who are responding to emergency conditions in the plant, ID cards will be issued to all employees.

- XI. Locate the boundaries of contaminated areas during vapor releases. This will normally be done by the Safety Supervisor during weekdays. The Vinyl Shift Supervisor will perform this duty during off-shift hours only after he has successfully contained the emergency condition and completed the work assignments necessary to clear the emergency. (See Re-Entry to work areas below)

Readers of the plan must understand that the items discussed in this plan have not been placed in any order of priority. In fact, most of the items will have to occur almost simultaneously.

Responsible personnel must exercise sound judgment in their decision making and obtain help whenever they think they may need it. It is far better to call out the Emergency Organization in a time of potential need and the help arrive only to find out that the problem has been taken care of, than to find out after people have been hurt that help was needed.

EMERGENCY ORGANIZATION

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Please refer to the attached EMERGENCY ORGANIZATION chart (Attachment A) for the following discussion. When activated, this organization shall be directed by the Management Group, which bears overall responsibility for meeting the objectives of the plan.

I. Activation

The shift supervisor responsible for the area where the emergency occurs will become the Emergency Chief. He is then responsible for all initial immediate actions which can include activation of the Emergency Organization to obtain help. If the Emergency Organization is needed, it is activated as follows:

Normal Office Hours - The Emergency Officer or Emergency Chief will have an announcement made over the public address and Gaitronics systems to "ACTIVATE EMERGENCY ORGANIZATION." The announcement and the specific assembly instructions will be given three times.

Back Shifts - The announcement and assembly instructions will be given as noted above and the guard will be instructed to make the initial call out of the area involved. Once the personnel from this call out arrive, they may request the guard to call out additional specific personnel. All personnel contacted for emergency duties should immediately report to the plant to assume their emergency duties.

The Acting Emergency Officer can request all announcements and call outs be accomplished through control room operators.

II. Emergency Organization Specific Duties

The following is a discussion of the specific duties assigned to each position in the Plant Emergency Organization.

Management Group

A. The Management Group will consist of the Plant Manager, the Plant Superintendent and the Employee Relations Director. The duties of the Management Group are:

1. Provide leadership for the Emergency Organization and coordinate all activities connected with control of the situation.
2. Promptly release factual information to the news media in order to prevent erroneous reports.

3. Notify Corporate Management and keep them up to date on the situation.
4. Notify next of kin in cases of serious or fatal injuries.
5. Maintain close communication with the Emergency Officer.

B. Emergency Officer

The Operations Superintendent of the area affected will serve as the Emergency Officer. He will report directly to the Management Group and will be in overall charge of emergency control activities. He will be assisted in this duty by the Safety Director and the Chief Process Engineer. The alternate to the Operations Superintendent is the Operations Supervisor of the area involved. When the Operations Supervisor and Superintendent are both present, the Operations Supervisor will act as an Assistant Emergency Officer. The duties of this function are:

1. Work closely with the Emergency Crew Chief in determining the most effective manner of establishing control of the situation.
2. Keep the Management Group informed of the situation and the action being taken to bring it under control.
3. Rely on the advice and help of the Assistant Emergency Officers and the Safety Director.
4. Issue instructions for the "Call-Out" of off-duty employees and advise the Security Officer of who is authorized to enter the plant.

C. Assistant Emergency Officers

The Chief Process Engineer and Operations Supervisor will serve as the Assistant Emergency Officers. They will assist the Emergency Officer in the evaluation of the situation and the planning of action necessary to establish control of the emergency. They will also provide any technical information regarding the equipment or process that might be necessary. They will keep the Emergency Officer informed of their whereabouts at all times. The Senior Process Engineer will serve as an alternate to the Assistant Emergency Officers.

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D. Security Officer

The Security Officer position will be filled by the Safety Supervisor and he will report directly to the Management Group. His specific duties are:

1. Provide security protection for all plant property and material. This will include procurement and assignment of Guards, if needed.
2. Dispatch personnel to the road blocks so that authorized personnel may be identified and allowed into the area. Unauthorized personnel must be turned back in a firm, tactful manner.
3. Media representatives will be directed to the management group in the front office area as directed by the Plant Manager.
4. Provide emergency supplies that might be needed during the emergency. This includes emergency arrangements to obtain diesel fuel for the fire pumps and emergency generators.
5. Monitor VCM concentrations in the area of the secondary evacuation area southwest of the guardhouse. In the event of high VCM concentrations he shall direct personnel to a safe area along the highway.

E. Safety Director

The Safety Director will assist the Emergency Officer in any way necessary in bringing the situation under control. His primary responsibility is in helping with fire fighting and rescue efforts. He will work closely with the Emergency Crew Chief.

Following an emergency, the Safety Director will assist Department Heads in restoring safe conditions throughout the Plant. He will also see that emergency equipment is serviced and placed in the proper locations. He will act as a team leader to make a detailed study of the causes of the emergency, action taken, and any recommendations made to prevent similar emergencies.

The Safety Director will also be responsible for the following areas of emergency readiness:

1. Review the Fire Prevention and Emergency Plan on an annual basis and issue revisions in accordance with the work calendar.
2. Organize training programs as necessary to insure prompt and adequate response to emergencies in the following areas.

a. Basic Fire Training -

All personnel who work in the plant operating areas will be given basic fire fighting training pertaining to the use of portable fire extinguishers, emergency alarm systems and evacuation procedures. This will normally occur on an annual basis. New employees will receive basic fire training within 120 days of employment.

b. Advanced Fire Training -

All Operating and Mechanical department personnel will be trained more extensively in automatic fire control systems, operation of the plant fire water system, fire fighting methods and basic fire theory.

c. First Aid -

Organize annual refresher first aid training of off-shift first aid personnel and basic first aid for all personnel who work in the plant operating areas.

d. Mock Drills -

Organize semiannual mock drills in which serious plant emergency conditions are staged. The drills may include notification of community officials. A critique will be conducted immediately following the drill. All drills and critique results will be documented.

3. Insure that fire fighting and emergency equipment is maintained in operable condition at all times.

F. Emergency Crew Chief

The Vinyl Shift Supervisor will fill the position of the Emergency Crew Chief during emergencies in the Vinyl unit areas, Boilerhouse, Waste Treatment and VCM Tank Farm areas. The Compound Shift Supervisor will act as the Emergency Crew Chief in the Compound, Plasticizer, Laboratory, Office and Warehouse areas. The appropriate Chief will direct the Emergency Crew and others involved in fire control or other emergency action. He will work closely with the Safety Director in the effective use of manpower and equipment necessary to bring the situation under control.

The Emergency Chief will usually be the first individual in authority to recognize the existence of an emergency situation. He must make the immediate decisions regarding the emergency action and continue in this capacity until the Emergency Organization can assemble, if it is required. The Emergency Chief will initiate the necessary action to put this plan into effect.

Once the Emergency Officer arrives, the Emergency Chief will report to him.

G. Assistant Emergency Crew Chief

The Compound Shift Supervisor will serve as the Assistant Emergency Chief during emergencies in all areas of the plant, except Compound, Plasticizer, Laboratory, Office and Warehouse. In those areas, the Vinyl Shift Supervisor will act as Assistant Emergency Chief. The Assistant Chief's duties will be as follows:

1. Make sure that all of the Emergency Crew members in his area leave for the scene of the emergency.
2. Report to the Emergency Chief for instructions.

H. Mechanical Chief

The Mechanical Superintendent will act as the Mechanical Chief during the time of the emergency. The alternate is the Maintenance Superintendent. In this capacity, the Mechanical Chief will report to the Emergency Officer. He will carry out the following duties:

1. Organize and direct damage control work as directed.
2. He will be in charge of all personnel reporting to the Shop Area.
3. Assist the Emergency Officer in any way necessary to bring the situation under control.
4. Establish relations with outside utility companies and work closely with them, maintaining or restoring service as soon as possible.
5. Notify the Security Officer of the names of those people in the plant under his direction and of any who have been called out.
6. Keep the Emergency Officer informed of his whereabouts at all times.

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7. Organize and direct clean-up and repair crews for the purpose of getting the plant safely back into operation as soon as possible.

I. First Aid Chief And Assistants

The Nurse will act as the First Aid Chief and will report to the Emergency Officer. Laboratory "A" Technicians will act as Assistants. The alternate for the Nurse will be the Laboratory Lead Technician. The laboratory personnel will assist the Emergency Officer and/or the Nurse. The duties of this function are:

1. The First Aid Chief will dispatch some personnel to the emergency scene whenever the Emergency Organization is activated or there is a call for First Aid help. The remaining first aid personnel will report to the First Aid Station.
2. Give First Aid to the injured.
3. Advise the Communications Chief if ambulances are needed. (Note: An ambulance may be requested to stand by as noted in the Medical Treatment Section below.)
4. Keep the Management Group and the Security Officer informed of injuries, including the names and estimates of severity.
5. Transport injured personnel by ambulance.

J. Messengers

The Messengers will report to the Emergency Organization member to whom they are assigned. The Mechanical Superintendent will assign Mechanical Engineers to the messenger positions as appropriate. Process Engineers not assigned duties shall report to the Management group.

K. Fire Pump Operators

Serious plant emergencies can require extended operation of fire pumps. In order to meet this need, the fire pumps will be staffed using Mechanical Department personnel. During normal day operation, the tool room mechanic will report to the Number 1 (north) pump house, and the Shift Mechanic will report to the Number 2 (south) fire pump house. Whenever the Shift Mechanic is the only employee available, he will move back and forth between the two pump house buildings.

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Coverage is necessary at both pump houses anytime the Emergency Organization is called out. The Guard is to call-out mechanics to fill the positions as rapidly as possible.

The duties of the fire pump operator are:

1. Monitor engine temperatures and oil pressure;
2. Be alert for abnormal sounds and conditions;
3. Monitor fuel levels and alert the security officer (Alternate: Safety Director) when fuel levels fall below 50 percent. The Security Officer will then initiate procurement of the fuel;
4. Monitor and report any abnormal conditions to the Security Officer (Alternate: Safety Director).

Whenever there is no coverage by any of the above, the Plant Guard shall insure that the north fire pumps are operating. The Vinyl Shift Supervisor shall be responsible for the shutdown of the fire pumps when any emergency condition has been corrected.

L. Emergency Crews

There are two Emergency Crews. The objectives of these are to insure that, through quick action, we will be able to protect employees and minimize any damage due to fire. Both crews are to report to the announced location of the emergency immediately when summoned by alarms, the Shift Supervisor, or when the Emergency Organization is activated. The crews will consist of the following, based on a Vinyl area emergency:

Number 1 Emergency Crew

Emergency Crew Chief - Vinyl Shift Supervisor and personnel noted on Attachment A "Emergency Organization."

Number 2 Emergency Crew

Assistant Crew Chief - Compound Shift Supervisor and personnel noted on Attachment A "Emergency Organization."

The specific duties and responsibilities are discussed at length in the section entitled "Emergency Crew Utilization" beginning on page 8 of this plan.

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M. Maintenance Support Group

The Support Group will consist of all Maintenance Personnel (Supervisors and Hourly). They will report to the Maintenance Shop and be under the orders of the Mechanical Chief. The Maintenance Superintendent will stay in the shop with the personnel. The Mechanical Chief will contact him to assign emergency duties to this group as needed.

N. Guards

The specific duties of the Security Guard are:

1. Direct ambulance and other vehicles to the emergency scene as noted in this plan using plant personnel as guides.
2. Stop all other vehicle traffic into the plant anytime an alarm is sounded. Have the driver park without blocking the gate. Do not permit any unauthorized personnel to enter the plant (see media response below).
3. Phone the Emergency Organization when instructed to do so by the Vinyl Shift Supervisor, the Compound Supervisor, or their designees (see Attachment B).
4. Monitor fire pump operation as noted in K above.
5. Record wind direction and speed, barometric pressure, time and outside temperature at time of occurrence if a gas release or fire has occurred.
6. Announce the wind speed and direction (i.e. from _____, to _____) over the plant public address system if a gas release or fire has occurred.
7. Receive all calls regarding the head count status. This information shall be reported to the Management Group. (Alternate: Emergency Officer, Emergency Crew Chief.)

- A 1
8. Media Response - In a serious plant emergency, media personnel will either be calling in or presenting themselves at the gate. Calls by the media on the telephone shall be handled by requesting the caller's name, who he/she represents, a phone number where they can be reached and a promise that the message will be given to the Manager or his designee. The statement should also include the fact that either the Plant Manager or his designee will call them with a statement. Media personnel who arrive at the gate will be escorted by Vista personnel from the gate area to a predetermined location where the Manager or his designee will make a statement.
 9. In the event the main gate area becomes unsafe because of smoke or high vapor concentrations, the guard shall open the east gate (Transportation Warehouse) for an evacuation exit.

0. Communications Chief

The Director of Administrative Services will act as the Communications Chief. His alternate will be the Plant Accountant. The Security Officer will act as Communications Chief until he can be contacted and arrives. In this capacity, he will:

1. Establish the gatehouse switchboard as an emergency and communications headquarters. An off-duty Security Guard shall be called in to assist the Communications Officer.
2. Handle all incoming and outgoing calls.

REPORTING REQUIREMENTS

All emergencies will be reported by the Plant Manager to the Vice-President of Manufacturing within 24 hours. For this reason, the Plant Manager must be informed in a timely fashion of any emergency incident. The guidelines for reporting emergency conditions are shown below:

I. Fires

- A. Any fire which causes damage should be reported to the Plant Manager.
- B. All other fire incidents should be reported to the Plant Manager by the next workday after the fire.

All significant fires will be thoroughly investigated by a team appointed by the Plant Manager. A FIRE REPORT (Attachment C) must be completed as rapidly as possible for use by the investigating team.

II. Vapor Releases and Other Emergencies

- A. The Operations Superintendent will issue a written report on each VCM emergency as soon as possible, not to exceed 24 hours.
- B. The Plant Safety Director or the Plant Superintendent will report VCM emergencies and the facts obtainable to the OSHA Area Director as required by OSHA Regulations.
- C. The Director of Environmental Control or the Chief Process Engineer will report VCM emergencies and the facts obtainable to the Mississippi Bureau of Pollution Control and to the Regional Administrator of the Environmental Protection Agency as required by NESHAP and State regulations.
- D. The Director of Environmental Control or the Chief Process Engineer must be notified regarding any spill of a potentially hazardous material as soon as the spill is discovered. He will promptly report the spill to the Superfund National Response Center if required by regulation.

RE-ENTRY TO WORK AREAS

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Areas that have been involved in plant emergencies shall not be re-entered for normal work until emergency personnel have corrected the problem and the entire area has been verified free of hazardous conditions. Following a VCM vapor release, the Shift Supervisor shall conduct an area survey using a Scott air pack and HNU photoionizer to insure no high levels of VCM exist. Honeywell readings can also be used to determine if unit conditions have returned to normal.

As was noted above, the boundaries of the contaminated area will be located by the Safety Supervisor during normal office hours and by the Shift Supervisor during all other times except during partial or complete activation of the Emergency Organization. Scott air packs and HNU photoionizers will be used during all surveys. Honeywell readings may be used to satisfy the survey requirements in those areas where sample points exist.

MEDICAL TREATMENT

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Anyone who is injured during any emergency is to be immediately treated as appropriate to circumstances.

Anyone who loses consciousness because of inhalation of any substance is to be taken to the Aberdeen-Monroe County Emergency Room as soon as possible. In all cases, the treating physician must be given the chemical name of the agent (material) which is suspected of causing the injured person to be overcome. Whenever reasonable and possible, a Material Safety Data Sheet will also be provided.

If it is deemed appropriate to the circumstances, the Aberdeen-Monroe County Ambulance Service may be requested to stand by at the plant to treat/transport injured or overcome personnel.

EMERGENCY TELEPHONE NUMBERS

Medical

Ambulance, Monroe County Hospital.....369-2455
Dr. Coghlan, Office.....369-2411
 Home.....369-4418
Dr. Turnage, Office.....369-2413
 Home.....369-6311

Police

Aberdeen Police Department.....369-6454
Sheriff's Office.....369-2468
Mississippi State Police.....(Contact
 Police Department)

Fire Department

Aberdeen Fire Department.....369-9551

Light and Water Department

Aberdeen Light & Water Department.....369-4731
 or.....369-2159
 or.....369-6454

Headquarters Personnel

R. E. Lehmkuhl, Office.....713-531-3580
 Home.....713-780-1270

R. D. Gamblin, Office.....713-531-3460
 Home.....713-531-1219

M. S. Reynolds, Office.....713-531-3210
 Home.....713-726-0936

EMERGENCY NUMBERS - continued

A

D. A. Kuhn, Office.....713-531-3584
Home.....713-467-9935

T. G. Grumbles, Office.....713-531-3445
Home.....713-445-4053

J. C. Ledvina, Office.....713-531-3446
Home.....713-879-8732

J. R. Drumwright, Office.....713-531-3444
Home.....713-492-8449

ATTACHMENT A

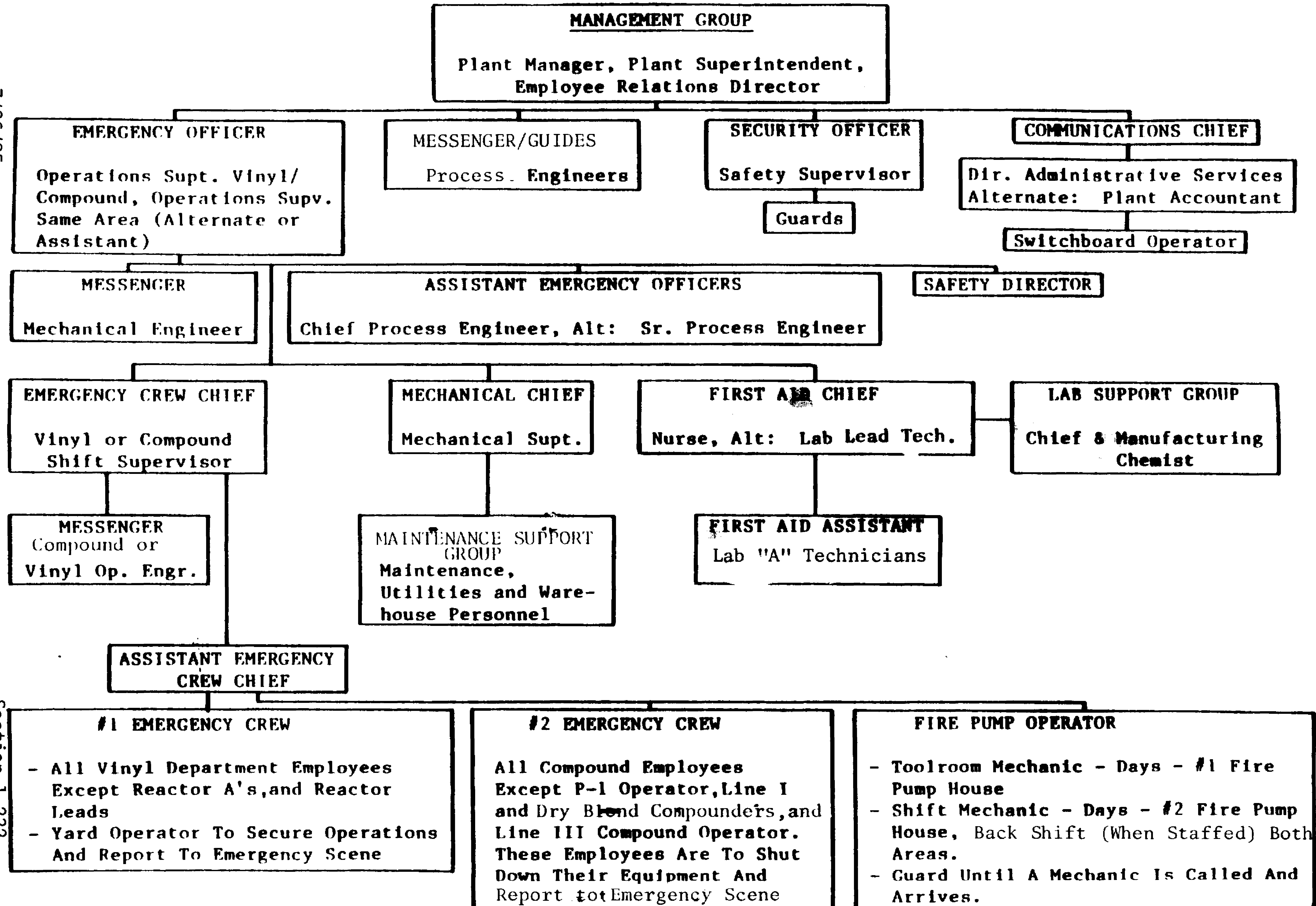
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EMERGENCY ORGANIZATION

7/26/85
Replaces 3/18/83

Section 1, 232
Page 28 VAB.0001205005

**ATTACHMENT A
EMERGENCY ORGANIZATION**



7/26/85
Replaces 3/18/83

Section 1.232
Page 29

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ATTACHMENT B

EMERGENCY ORGANIZATION CALL LIST

A 1

ATTACHMENT B

EMERGENCY ORGANIZATION CALL LIST

When advised by the Shift Supervisor, or his designee, the guard will start calling the names listed below in numerical sequence (rank order) from the appropriate list.

<u>Vinyl</u>	<u>Compound</u>	<u>Utilities</u>
1. C. W. Turner 369-7381	1. R. G. Gilreath 369-7745	1. J. L. Horstman 369-6005
2. D. W. Hollis 369-6422	2. P. J. Kober 369-7096	2. F. W. Frantz 369-8508
3. J. W. Ware 1-327-5018	3. J. W. Ware 1-327-5018	3. G. A. Morgan 369-6522
4. A. H. Sather 369-9271	4. A. H. Sather 369-9271	4. C. R. Snowden 1-327-7382
5. J. Friend 369-7377	5. J. Friend 369-7377	5. J. W. Ware 1-327-5018
6. J. V. Uptain 369-8109	6. J. V. Uptain 369-8109	6. A. H. Sather 369-9271
7. J. G. Roberts 369-8059	7. J. G. Roberts 369-8059	7. J. Friend 369-7377
8. Mike Nathan 369-8613	8. J. E. Nickerson 369-9235	8. J. V. Uptain 369-8109
9. Dean Honeycutt 343-5595	9. T. F. Lyon 1-329-2721	9. Jerry Roberts 369-8059

Attachment B-1 is a Secondary Call List. The personnel to be called by the Guard will be identified by any of the above noted Emergency Organization respondents after they arrive on the scene.

ATTACHMENT B-1

<u>Mechanical</u>	<u>Process Engineering/Environmental</u>	<u>Lab/Safety</u>
M. H. Williams 1-963-2796	V. E. Messick 1-327-0741	V. A. Belk 369-4416
R. E. Polk 1-327-6766	R. A. Frohreich 1-328-3628	W. H. McNeese 369-7055
D. A. Miller 1-356-6274	V. L. Thornhill 369-8952	J. R. Williams 256-3810
J. L. White 369-2991	S. C. Hillman 369-7892	B. P. Sizemore 369-7323
Satish Gianchandani 1-328-0142	J. C. Greene 369-9288	D. S. Cox 369-8752
R. W. Rye 369-4730	F. G. Jeansen 1-324-2329	
K. S. Allen 369-9210		
C.A. Clark 369-6255		
 <u>Administrative</u>	 <u>Vinyl</u>	 <u>Compound</u>
W. F. Higginbotham 1-327-4064	R. A. Collins 369-6184	A. L. Barr 369-8232
M. G. Smith 1-844-4180	B. F. Hawkins 343-8832	T. L. Noland 1-(205)698-9962
M. A. Swierc 1-327-8229	R. E. McGhee 369-6674	C. L. Worlow 369-8862
R. E. Shackelford 1-(205)698-8459	A. L. Reeves 369-6919	C. L. Smith 369-8398
R. A. Miller 1-327-0951	D. F. Johnson 256-8279	R. L. Bristol 369-7303
	L. D. Honeycutt 343-5595	

ATTACHMENT C

FIRE REPORT

FIRE REPORTPART I (To be filled in by Supervisor of area or activity involved)

Date of Fire: _____ Time: _____ A.M.
P.M.

Exact location of fire: _____

Equipment involved (tank no., pump no., name of bldg., etc.) _____

How did the fire start? _____

How was the fire put out? _____

Description of personnel injuries: _____

Description of property damage: _____

What immediate action have you taken to prevent a recurrence? _____

Was fire protection adequate? _____

Estimate of damage: (A) 0 - \$1000 (B) \$1000-\$15,000 (C) \$15,000 +

Production delays: _____

Signed _____ Date _____ Signed _____ Date _____
(Supervisor) (Department Head)

PART II (Safety Department Review)

Remarks: _____

Signed _____ Date _____ Signed _____ Date _____

RETURN TO SAFETY DEPARTMENT

ATTACHMENT D

DEPARTMENTAL HEADCOUNT PLANS

COMPOUND, DRY BLEND, PLASTICIZER EVACUATION PLAN

Non-Fire Emergency

The shift supervisor will be responsible for the head count during a non-fire related emergency evacuation. All personnel except the following will evacuate to the Primary Evacuation Area (warehouse at northwest corner of the staging area directly south of the auditorium):

Line I Compounder
Dry Blend Compounder
Line I Mill Operator
Plasticizer Operator
Shift Supervisor

The shift supervisor will take a head count at the Primary Evacuation Area and direct those personnel to evacuate as appropriate. After he has reported his headcount results to the guard, he will return to the operating area to assist the above personnel in the shut down of the process equipment. When shutdown is complete will he lead the evacuation of the above personnel and report headcount results to the guard.

In the event that the primary evacuation area is contaminated the alternate evacuation site will be used. The alternate evacuation area is the fence line east of the parking lot and south of the guardhouse. If the alternate site is contaminated the personnel will move to a safe location along the property line north of the plant.

Fire Emergency

The Line I Compounder will be responsible for the head count during a fire emergency. The fire team from the Compound Department will consist of:

Shift Supervisor - Team Leader
Line III Compounder
Line III/Dry Blend Utility Operator
Line I Mill Operator
Line I Utility Operator
Automatic Bagger Operator

Upon notification of a fire each member of the fire team will report to the emergency location. Each fire team member will report to the Line I Compounder for headcount as he departs for the emergency location. The Line I Compounder will report the results of the headcount to the guard.

The following personnel will remain in the department to shut down the process equipment:

Line I Compounder - Headcounter
Dry Blend Compounder
Line III Mill Operator
Plasticizer Operator

The Line I Compounder will lead the evacuation of the above personnel after all equipment has been shut down. Normal procedure will be to evacuate to the Primary Evacuation Area, take a headcount and report as a group to the emergency scene. Again, the headcount results must be reported to the guard.

MECHANICAL DEPARTMENT

MAINTENANCE

MONDAY THROUGH FRIDAY 7:00 A.M. TO 3:30 P.M.

All Maintenance Supervisors, the Maintenance Engineer, and all hourly personnel will report to the Primary Evacuation Area (Maintenance Shop). The Maintenance Superintendent will be responsible for performing the headcount and will report the names of those individuals not accounted for to the guard.

Headcount Backup - The Maintenance Engineer will be responsible for headcount should the Maintenance Superintendent not be available. If both the Maintenance Superintendent and Maintenance Engineer are absent, the I & E Supervisor will be responsible for headcount.

Evacuation Backup- The secondary evacuation point is the guardhouse and will be used in the event conditions make the maintenance shop unusable. Should both the shop and the guardhouse become inaccessible, the East Gate (by the drum storage area) will be used for evacuation.

ALL OTHER SHIFTS

During all other shifts, maintenance personnel (excepting the Shift Mechanic) will report to the guardhouse for head count purposes, after reporting to the guard, the personnel will go to the Primary or Secondary Evacuation Points (described previously) until released. When arriving at the plant, the Mechanical Chief will check the time cards to confirm the accounting of all personnel.

UTILITIES

In all cases, the Utility Technicians will evacuate to the Boiler House and notify the guard as to their location.

CONTRACT PERSONNEL

Contract personnel will go the Primary Evacuation Point and report to their supervisor. After reporting at his evacuation area, the Senior Draftsman will consolidate the contractors reports and report to the guard. The Senior Mechanical Engineer will be the backup for these duties.

Evacuation Areas

Primary - Visitor parking area north of guardhouse

Secondary - East Gate (by drum storage area).

LABORATORY

The Primary Evacuation Area for laboratory personnel is the First Aid Station. If the Primary Evacuation Area cannot be used (e.g. due to the presence of hazardous vapors), laboratory personnel shall proceed to the Secondary Evacuation Area at the guardhouse and assemble as a group for head counting purposes. If the guard gate area cannot be used (e.g. due to the presence of hazardous vapors), laboratory personnel shall proceed to the East Transportation Warehouse gate and assemble as a group for head counting purposes.

In the event of an evacuation due to a vapor release, the following procedures will be used:

Weekdays All lab personnel shall immediately proceed to the appropriate evacuation area. The Laboratory Supervisor or his alternate shall be responsible for the head count of laboratory personnel. He shall report the status of the laboratory personnel to the guard. The Quality Control Supervisor shall be the Laboratory Supervisor's alternate. Take any visitors to the appropriate evacuation area and report them as extra by name to clear them from the visitor logs.

Off-Shifts All lab personnel working a normal shift shall immediately proceed to the appropriate evacuation area. The Laboratory Lead Technician shall be responsible for the head count of laboratory personnel. He shall report the status of the laboratory personnel to the guard. Any lab personnel who signed in on the off hours entry log shall proceed to the guard house.

In the event of an evacuation due to fire, the following procedures will be used:

Weekdays The First Aid Chief will dispatch some first-aid personnel to the emergency scene. The remaining First Aid personnel will evacuate to the First Aid Station. The Laboratory Supervisor or his alternate shall be responsible for the head count of laboratory personnel. He shall report the status of laboratory personnel to the guard. The Quality Control Supervisor shall be the Laboratory Supervisor's alternate. Once the headcount requirements have been met, the Laboratory and Quality Control Supervisors will report to the emergency scene. Visitors will be taken to the point of entry and reported as extra by name to clear them from the visitor logs.

Off-Shift The Laboratory Lead Technician and the 'A' Shift Technicians shall proceed immediately to the emergency scene. The Laboratory Lead Technician shall notify the guard that they are proceeding to the emergency scene. Any lab personnel who signed in on the off-hours entry log shall proceed to the guard house.

1st Aid
Station
some
people

VINYL

Non-Vinyl Emergency

All personnel are to report to the Primary Evacuation Area at the concrete pad north of the Vinyl control room. The Old Module Lead Operator will be responsible to account for all personnel. A status of all personnel will be given to the Vinyl Shift Supervisor as soon as possible with missing personnel reported to the guard.

The people that are to report to this area are:

- Chief Operator
- Old Unit "A" Operator
- New Unit "A" Operator
- Dryer "A" Operators (2)
- Yard Operator
- General Helpers assigned to Vinyl
- Shift Mechanic (off-hours)

An alternative to reporting to the area would be to contact the lead operators by radio with the operator giving his position. All operators must report either in person or by radio. The Old Module Lead Operator will report the headcount results to the guard.

After the head count has been done, the Vinyl Emergency Crew will assemble to respond to the emergency.

Vinyl Emergency

During an emergency in Vinyl, the Emergency Crew will assemble at the scene of the problem with the Vinyl Shift Supervisor reporting personnel status of the Crew to the Old Module Lead Operator. The Reactor "A" Operators are to report in person to the Supervisor, if the problem is in their unit, or in person or by radio to the Lead Operator if the problem is not in their unit.

The Old Module Lead Operator will be responsible to account for all personnel. All personnel not on the Emergency Crew are to report to the Primary Evacuation Area. The only exception will be the reactor "A" operators as previously discussed. The remaining personnel include:

- 1) Yard Operators
- 2) General Helpers assigned to Vinyl
- 3) Shift Mechanic (off-hours)

The Yard Operator will escort outside truck drivers to the guard to clear their name from the entry log after all engines have been shut down for all non-yard related emergencies.

In the case of an emergency in the VCM tank farm, the Yard Operator is to report to the Primary Evacuation Area to be counted and will then proceed to the tank farm.

If the Primary Evacuation Area is declared unsafe, proceed to the Secondary Evacuation area near the guard gate. If the guard gate cannot be used (due to hazardous vapors) the east gate will be open for an evacuation exit.

Tornadoes

Tornado Alert or Watch

A tornado watch issued by the Weather Bureau warns that conditions exist for tornadoes to develop. The weather radio should be monitored closely if Monroe County is included in the watch area.

Tornado Warning

A tornado warning is issued by the Weather Bureau after a tornado has been sighted. Once a tornado warning has been issued that includes Monroe County, all reactors are to be killed using normal kill procedures. The possibility of a power failure will be large so preparation according to the Power Failure Procedures should be followed. No reactor will be charged back until the tornado warning has been lifted.

If a tornado is within sight of the plant with reactors not killed, use the emergency AMS system in the automatic mode. Monitoring levels of AMS added will be of little concern. Secure the recovery systems and all fired equipment (dryers and incinerator). Evacuate personnel to a safe area away from the reactor areas.

ADMINISTRATIVE SERVICES DEPARTMENT

This plan is intended to provide the guidelines necessary to:

1. Assemble department personnel in the designated evacuation area;
2. Designate an individual responsible for performing and reporting the results of the personnel headcount;
3. Provide guidance to department employees on actions to take in response to emergency situations.

An emergency situation is defined as, but not limited to, the following:

1. Fire;
2. A release of toxic, flammable or corrosive materials; or,
3. Explosion.

Emergency Action

In the event of an emergency situation, department personnel should take no action other than reporting the situation to the vinyl control room and clearing the area. When clearing the area, care should be taken not to take any action which would impede the action(s) of emergency crews responding to the situation or which would endanger the health and safety of the employee or emergency crews. Such action would include, but are not limited to;

1. Failure to shutdown internal combustion engines or electrically powered operating equipment, or
2. Entering or passing through contaminated areas.

Assembly: When notified that an emergency situation exists, department personnel are to assemble in the department evacuation area which is located;

1. During normal working hours: Beneath the canopied entrance to the main warehouse adjacent to the administrative offices.
2. Outside normal working hours (after 4:15 p.m., on weekends and holidays): At the main gate guardhouse.
3. If primary evacuation area (1 or 2 above) is contaminated: Along the fence east of the parking lot and south of the guardhouse. If the guardhouse area is contaminated, the alternate secondary evacuation area is the east transportation warehouse gate.
4. The Receiving and Warehouse leads are to escort outside truck drivers to the guard to clear their name from the entry log after all engines have been shut down.

Assembly(Continued)

If further evacuation is necessary, personnel will be instructed to move to a safe location along the property line north of the plant.

Personnel movement to an evacuation area should be orderly and by the most direct route available. Care should be taken when approaching a contaminated area. The rule of thumb is to move around the contaminated area at right angles to the prevailing wind keeping yourself between the wind and the source of contamination. Wind direction may be determined by observation of the wind socks located atop silos 417 and 281 or slurry blend tank 502.

Headcount and Reporting:

Immediately upon reporting to the appropriate evacuation area the Purchasing/Warehousing Supervisor must commence a headcount of all assigned personnel. After completion and reconciliation of the headcount, a report of all missing personnel by name(s) and last known location(s) must be made to the security guard. In the absence of the Purchasing/Warehouse Supervisor, responsibility for the headcount shall pass to the following personnel in numerical order.

1. Plant Accountant
2. Stores/Warehouse Supervisor
3. Buyer

Personnel working outside normal working hours, on weekends or holidays will be counted by the lead warehouse person. A report of missing personnel, of those reporting to work, will be made to the security guard as stated above.

LABORATORY

The Primary Evacuation Area for laboratory personnel is the First Aid Station. If the Primary Evacuation Area cannot be used (e.g. due to the presence of hazardous vapors), laboratory personnel shall proceed to the Secondary Evacuation Area at the guardhouse and assemble as a group for head counting purposes. If the guard gate area cannot be used (e.g. due to the presence of hazardous vapors), laboratory personnel shall proceed to the East Transportation Warehouse gate and assemble as a group for head counting purposes.

In the event of an evacuation due to a vapor release, the following procedures will be used:

Weekdays All lab personnel shall immediately proceed to the appropriate evacuation area. The Laboratory Supervisor or his alternate shall be responsible for the head count of laboratory personnel. He shall report the status of the laboratory personnel to the guard. The Quality Control Supervisor shall be the Laboratory Supervisor's alternate. Take any visitors to the appropriate evacuation area and report them as extra by name to clear them from the visitor logs.

Off-Shift All lab personnel working a normal shift shall immediately proceed to the appropriate evacuation area. The Laboratory Lead Technician shall be responsible for the head count of laboratory personnel. He shall report the status of the laboratory personnel to the guard. Any lab personnel who signed in on the off hours entry log shall proceed to the guard house.

In the event of an evacuation due to fire, the following procedures will be used:

Weekdays The First Aid Chief will dispatch some first-aid personnel to the emergency scene. The remaining First Aid personnel will evacuate to the First Aid Station. The Laboratory Supervisor or his alternate shall be responsible for the head count of laboratory personnel. He shall report the status of laboratory personnel to the guard. The Quality Control Supervisor shall be the Laboratory Supervisor's alternate. Once the headcount requirements have been met, the Laboratory and Quality Control Supervisors will report to the emergency scene. Visitors will be taken to the point of entry and reported as extra by name to clear them from the visitor logs.

Off-Shift The Laboratory Lead Technician and the 'A' Shift Technicians shall proceed immediately to the emergency scene. The Laboratory Lead Technician shall notify the guard that they are proceeding to the emergency scene. Any lab personnel who signed in on the off-hours entry log shall proceed to the guard house.

A

MAIN OFFICE PERSONNEL(1)

DURING REGULAR WORKING HOURS

Primary Evacuation Area: Main Office Lobby
Secondary Evacuation Area: Guard House

HEADCOUNT

Responsibility:

Primary: Senior Mechanical Engineer
Alternate: Senior Process Engineer

The following will be accounted for:

Production Schedulers
Mechanical Engineers
Process Engineers
Drafters
Director of Environmental Control
Employee Relations Clerk
Secretaries
Visitors as noted in Main Office Log Book

The following other main office personnel have other responsibilities to attend to and the headcount will be made as part of the emergency organization.

Plant Manager
Plant Superintendent
Employee Relations Director
Vinyl Operations Superintendent
Compound Operations Superintendent
Mechanical Superintendent
Chief Process Engineer

The Operations Engineers will report to their Departments' Evacuation Area.

OFFSHIFT

All main office personnel and visitors must log in and out at the guard house. The primary evacuation area for offshift is the guard house. The Guard is responsible to check the log book and account for personnel during an emergency evacuation.

- (1) Includes visitors for which main office personnel are responsible. All visitors must sign in and out. If during normal working hours at log book in lobby. If off hours at guard house. Personnel on test runs will be informed of evacuation responsibilities by the individual responsible for the test run.

To: Distribution

From: M. L. Nathan
Date: April 30, 1985

Subject: POWER FAILURE PROCEDURES

VISTA

Attached is the revised copy of the Vinyl Power Failure Procedures. These procedures combine the outdated power failure manual and the thunderstorm preparation and procedures.

Mike Nathan

M. L. Nathan
Vinyl Operations Engineer

bls

Attachments

c: JF, JWW, DWH, CWT, VINYL SHIFT SUPERVISOR(S)

I. INTRODUCTION

When a power failure occurs, the first consideration is the in-plant personnel and secondly, to secure the plant. When power is lost, the reactor agitators stop and cooling tower pumps and fans are lost. This makes each reactor in the polymerization mode a potential runaway reactor, where the pressure and temperature may rise significantly and uncontrollably. Most power failures are of short duration (just a few seconds) but occasionally an extended power outage will occur. All shift personnel must know what action to take in either situation. These procedures will be outlined in this manual along with steps to take once power is regained.

II. UNEXPECTED AND EXPECTED POWER FAILURE PREPARATIONS

Unexpected power outages are hard to plan for. Preparations can be made for expected power outages that could result from the presence of threatening weather such as thunderstorms.

- A. Weather Awareness - All operating personnel should be appraised of upcoming weather conditions. There are two ways to do this; the first is just looking at cloud patterns and current weather conditions. The second is the weather alert radio monitor in the Vinyl Shift Supervisor's office which will sound an alarm as severe weather approaches our area. The chance of a power outage increases during thunderstorms, and we should prepare ourselves accordingly.
- B. Dress For The Occasion - If thunderstorms are approaching, operations personnel should be prepared by getting rainsuits on in advance of rain downpour. All shift supervisors, chief operators, and reactor "A" operators should always carry a radio when outside the control room, regardless of the weather. All field personnel should have a flashlight and a pair of channel locks.
- C. Double Check Emergency AMS Systems - Prior to thunderstorms, all Emergency AMS Kill Systems are to be double checked. It is important that these systems work when needed.
- D. Preload Catalyst Bombs - Preload catalyst bombs of each reactor in polymerization mode with kill solution. This will allow these reactors to be killed on a timely basis if the decision is made to kill reactors early.
- E. Panel Operator Precautions - In the event of imminent severe weather, the panel operator in each module should take the following precautionary measures:
 - Normally kill any reactors which have been running at least four hours (three for D-700 and 745). These reactors will have a fair amount of resin conversion and will be one less reactor to worry about should a power failure occur.

II. UNEXPECTED AND EXPECTED POWER FAILURE PREPARATIONS (Cont.)

E. Panel Operator Precautions - (Cont.)

- Do not charge any reactors back until the weather front has passed and charging is approved by the shift supervisor.
- If possible, hold an empty reactor in each module down and under a vacuum. This will allow you to vent a reactor to another reactor if necessary.
- Keep a mental track of which reactors would need to be killed first and keep your shift supervisor, chief operator, and reactor "A" operator advised of which reactors he will have to kill and in what order if the power does go out.

F. Reactor "A" Operator Stationing - As severe weather approaches, the "A" operator for each module is to be stationed in that module and be prepared to manually kill reactors as necessary.

G. Shift Supervisor and Chief Operator Stationing - Shift supervisors and chief operators should be in the control room or in their assigned module.

Shift Supervisor - Old Module

Chief Operator - New Module

H. Panel Operator Stationing - All panel operators should be at their respective panel station.

I. Yard Operator - As severe weather approaches, the Yard Operator should shutdown all VCM unloading compressors and block in each liquid and vapor line. Contact Shift Supervisor or chief lead after this is done.

III. WHEN THE POWER GOES OUT

A. Short Duration Outage - Most of the power outages at the plant are of short duration (a few seconds). Actions during this time period mainly involve restarting equipment (reactor agitators, cooling tower pumps and fans, incinerator, etc.) but do not normally require use of the emergency systems. Panel operators should closely monitor each reactor during the time frame of the power outage and when power is restored to ensure that the agitator restarts, cooling water flow is re-established, and the polymerization reaction is under control. Reactors can be bumped/killed with AMS using the normal injection system if needed.

III. WHEN THE POWER GOES OUT (Cont.)

B. Extended Power Outage (Cont.)

a) Panel Operator Response (Cont.)

- Reset all panel alarms.
- The dryer panel operator is to turn on the emergency power systems by turning on the toggle switch in the supply room for the emergency lighting generator and place the battery pack in emergency by throwing the switch into the "emergency" position.
- The dryer panel operator is to be the timekeeper on how long the power has been out, and communicate this information with the reactor panel operators.
- The reactor panel operators should relay the status and pressure of each reactor to the affected field personnel.
- Reactor kill guidelines during a power failure:
 - Bump 5265/5305 batches using manual mode of AUTO system within thirty seconds after the power is lost. These products run at higher pressures and an increase in pressure in these reactors is more critical. Have shift supervisor or chief lead check outage in AMS pots to verify addition to reactor.
 - You will have between one and two minutes to kill the remaining reactors. All reactors must be killed within two minutes.
 - Reactors which have run the longest and those just reaching heat-up will tend to run away first.
 - Once a reactor starts to run away, it will become increasingly difficult to kill. The reactor contents stop swirling after three to four minutes and AMS injection is much less effective at this time.
 - The automatic kill system can be used in the "manual" mode to add short AMS injections to a reactor if the manual system is inoperable or if the weather is severe enough that it is not safe for the reactor "A" operator to climb to the top of the reactor structure. The shift supervisor will make the decision on the severity of the weather.

III. WHEN THE POWER GOES OUT (Cont.)

B. Extended Power Outage (Cont.)

a) Panel Operator Response (Cont.)

- The "auto" mode of the automatic system should be used as a last resort. If repeated short AMS injections are not successful in controlling the polymerization reaction (in conjunction with use of the Emergency Cooling Water System), the "auto" mode should be used which will inject the entire AMS pot contents into a reactor.
- After approximately five minutes (time necessary to activate the Emergency Instrument Air System), the Emergency Cooling Water System can also be used for reactor control. The Emergency Cooling Water System supplies enough cooling capacity for one reactor in each module. Do not use the Emergency Cooling Water System if there is inadequate firewater available to fight an existing fire since the diesel pumps supplying emergency cooling water also supply water to the plant's firewater system. Operating procedures for each reactor module are as follows:

New Module

1. Close CV-104 (New Module Recovery Cooling Water Supply Valve) by using the switch located on the new module recovery panel.
2. Open CV-102 (New Module Emergency Cooling Water Supply Valve).
3. Open the cooling water control valve on the reactor condenser that is to be supplied with emergency cooling water. Close off other cooling water control valves in the new module by placing the individual reactor cooling water flow controller in manual and setting the output at 0%.
4. Emergency cooling water flow can be switched from one reactor condenser to another by opening and closing appropriate cooling water control valves.

III. WHEN THE POWER GOES OUT (Cont.)

B. Extended Power Outage (Cont.)

a) Panel Operator Response (Cont.)

Old Module

1. Open CV-101 (Old Module Emergency Cooling Water Supply Valve) by using the switch located on the new module recovery panel.
2. Open the cooling water control valve on the condenser that is to be supplied with emergency cooling water. (Close all other cooling water control valves in the old module by placing the individual reactor cooling water flow controller in manual and setting the output at 0%.
3. If cooling water is needed for D-300 and D-400, open CV-103 (Emergency Cooling Water Supply Valve for D-300/D-400).
4. Emergency cooling water flow can be switched from one reactor condenser to another by opening and closing the appropriate cooling water control valves.
 - Switches for major equipment such as recovery vacuum pumps and compressors, charge pumps, etc. should be switched off to minimize a potential power surge when power is regained.
 - If power is lost during a charge, take all pumps out of AUTO position or charge will restart when power is restored.

C. Reactor "A" Operator Response

- If you are not on top of the reactors when the power goes out, you should go there immediately. The only exception is if the shift supervisor determines that the weather is too severe for the reactor "A" operator to safely climb to the top of the reactor structure. In this case, the reactors will be killed using the "manual" mode of the automatic AMS Kill System. This mode allows for short AMS injection through the automatic kill line.
- Bump any 5265 or 5305 batches running with AMS during the first thirty seconds of the power failure by opening the manual AMS injection valves for ten seconds or until the shift supervisor or chief operator instructs you to close the valves.

III. WHEN THE POWER GOES OUT (Cont.)

C. Reactor "A" Operator Response (Cont.)

- The shift supervisor or chief operator will be stationed at the base of the reactor and will check that the AMS pot level has changed.
- The panel operator will instruct you when to kill reactors and in what order. If you lose communication with the panel operator, the next step is visual communication with the shift supervisor or chief operator below. If this fails or is unclear, the reactor "A" should kill each reactor at that time.
- The reactor should be manually killed by opening the manual AMS injection valves for ten seconds or until the shift supervisor or chief operator instructs you to close the valves.
- If a ten-second injection does not kill a reactor, repeat ten second injections with pot and cross-over connections. The manual valves should be shut when the low level red flashing light comes on to prevent blanking the reactor condenser with nitrogen.
- When all reactors have been killed and are under control, assist the shift supervisor or chief operator in putting the duraseal systems on nitrogen, blocking in the catalyst injection systems, blocking in the mechanical seals on the recovery vacuum pumps and compressors, blocking in the VCM charge pumps, block in stripping steam supply to each reactor and to batch water strippers, and block in steam supply to blowdown tank. Monitor the nitrogen pressure on the duraseal systems. If the pressure does not hold, it will be necessary to block in the reactor seals.

D. Shift Supervisor and Chief Operator Responsibility:

- If you are not at the base of the reactors when the power goes out, go there immediately.

Shift Supervisor - Old Module

Chief Operator - New Module

- You will be responsible for monitoring the pots and making sure AMS gets in when the reactor "A" panel operator kills a reactor.

III. WHEN THE POWER GOES OUT (Cont.)

D. Shift Supervisor and Chief Operator Responsibility:

- The panel operator directs reactor killing from the control room. The shift supervisor may elect to kill reactors earlier at his discretion if in his judgment the situation is serious enough to do so.
- When all reactors have been killed and are under control, assist the reactor "A" operator in putting the duraseal systems on nitrogen, blocking in the catalyst injection systems, blocking in the mechanical seals on the recovery vacuum pumps and compressors, blocking in VCM charge pumps, block in stripping stream supply to each reactor and to the batch water strippers and block in steam supply to blowdown tank. Monitor the nitrogen pressure on the duraseal systems. If the pressure does not hold, it will be necessary to block in the reactor seals.
- The first responsibility of the "A" operators assigned to drier room is to start-up the Emergency Instrument Air System as soon as possible. The reactor panel operators cannot use the Emergency Cooling Water System until instrument air pressure is established. Cooling water is essential to reactor control. Start-up procedures for the Emergency Instrument Air System are as follows:
 1. Check to see if the generator is operating. The generator should start automatically on power failure. If the generator is not running, make sure the starting mode switch on the generator's control panel is in the "auto" position. If the generator still will not start, check the trouble indicating lights on the generator's control panel to determine the problem.
 2. Close the chain operated 3" cooling water valve located under walkway west of the Deltech building.
 3. Start the sump pump supplying cooling water to the Joy reciprocating air compressors and Deltech air dryer. This pump is the east - most pump on the north side of the chiller building.

III. WHEN THE POWER GOES OUT (Cont.)

D. Shift Supervisor and Chief Operator Responsibility:

4. Start the Deltech air dryer by pressing the local "start" button on the dryer's instrument panel. If the dryer does not start, press the "RESET" button on instrument panel and then the "START" button. If the dryer does not start, start air compressors.
 5. Start either no. 8 or no. 9 air compressor, located northwest of the Deltech building, by pressing the local "START" button.
 6. After the compressor has started and the air system pressure has risen to at least 40 psig, notify the vinyl control room that the Emergency Instrument Air System is operating and that the Emergency Cooling Water System can now be used.
- After the Emergency Instrument Air System has been started up and instrument air pressure has been established, the dryer "A" operators should then block in all blend tank aeration lines. This will prevent slurry from backing into the air lines. Also close slurry supply valves from each blend tank.

E. Yard Operator

- Lock out silo unloading valves to prevent valves from operating.

IV. WHEN THE POWER COMES ON

A. Panel Operator

- Check with shift supervisor, chief or "A" operator to see if duraseal units and mechanical seal purge water pumps have been restarted and that duraseal and lip seal flow to each reactor seal has been established. If so, restart agitators.
- The dryer panel operator should turn off emergency lighting generator and reset battery pack power to normal mode.
- Set up cooling water system to normal operating position by opening/closing Emergency Cooling Water valves.

IV. WHEN THE POWER COMES ON (Cont.)

B. Reactor "A" Operator

- Set up reactor agitator seals to normal operating position. Restart duraseal units and check reactor seals.
- Set up the VCM charge pumps to normal operating problems.
- Set up mechanical seals on the recovery vacuum pumps and compressors to normal operating positions.
- Check all catalyst ram valves to be sure all are closed and then set up injection systems to normal operating positions. The RESET switch must be depressed before the ram valve will operate.
- Measure and record outage in each of the AMS kill pots. Relay this information to shift supervisor or chief operator. Refill each pot to proper level.

C. Shift Supervisor and Chief Operator

- Restart cooling tower pumps and fans.
- Restart the on-line incinerator.
- Contact reactor "A" operators for outages in each AMS kill pot.
- Reset deluge diesel fire pumps.
- Once the threat of power outage has passed, instruct utility operator to return instrument air system to normal operating. The utility operator should also be told that the cooling water system has been returned to normal so that he can start chemical treatment of the water to prevent possible scaling in heat exchangers and condensers.

D. Dryer "A" Operator

- Once air pressure has been re-established, set up blend tank aeration.
- Flush slurry lines.
- Restart all equipment, one dryer line at a time.
- Empty cones on fluid bed.

Once the power outage has passed and all systems have been returned to normal, the decision must be made as how to process the emergency killed batches. Accurate outages from all AMS kill pots are essential in determining what steps to take. The Vinyl Operations Supervisor or Superintendent will make the decision as to how each batch is to be handled.