

CHEMICAL PLANT SAFETY & HEALTH MANUAL
ABERDEEN, MISSISSIPPI

SUBJECT: EMERGENCY PLAN

EFFECTIVE DATE: JULY 26, 1985

PREPARED BY: A.H. Sather SAFETY DIRECTOR

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,
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

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

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.

Lab - First Aid Station

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

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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 burn

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

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

Deluge System

- ° 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

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

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- 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

EMERGENCY ORGANIZATION

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

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

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

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.)

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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 pre-determined 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.

RE-ENTRY TO WORK AREAS

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.

EMERGENCY NUMBERS - continued

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

EMERGENCY ORGANIZATION

7/26/85
Replaces 3/18/83

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ATTACHMENT B

EMERGENCY ORGANIZATION CALL LIST

ATTACHMENT C

FIRE REPORT

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ATTACHMENT D

DEPARTMENTAL HEADCOUNT PLANS

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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.

ATTACHMENT E

POWER FAILURE PROCEDURES

To: Distribution

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

Subject: POWER FAILURE PROCEDURES

Interoffice
Communication

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)

