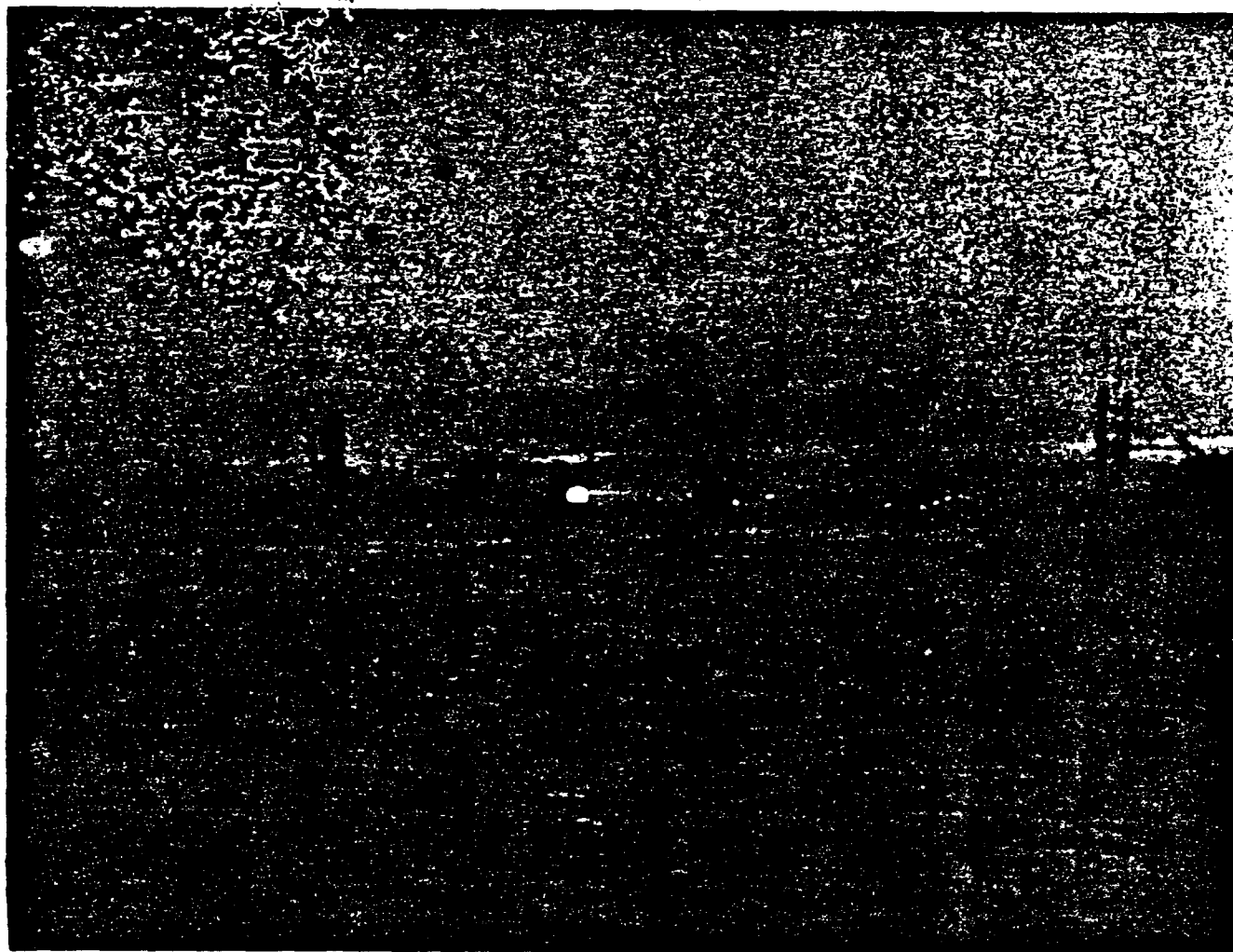


**SAFETY & HOUSEKEEPING
PLANT INSPECTION**

1981

PLAINTIFF'S EXHIBIT

MON-908



MONSANTO CHEMICAL INTERMEDIATES COMPANY

TEXAS CITY

SC 17687

STG 1083988

COMPANY CONFIDENTIAL

LAM025942

TO: THE 1981 PLANT INSPECTION COMMITTEE

Welcome to the Texas City plant. We look forward to sharing with you our experiences, philosophies, and approach to safety. These inspections provide us an opportunity to obtain an unbiased assessment of our effectiveness in managing safety.

Our emphasis in Texas City is not on statistics, but on incidents. We have continued to focus on ALL incidents to try to determine root cause and take corrective action. We strongly believe that if we are responsive in taking corrective action to prevent recurrence of these, the statistics will take care of themselves. We also encourage safety suggestions through our unit and craft safety suggestion log books. We are committed to responding to and providing feedback on each of these. We are finding that more and more of these suggestions are being taken care of at the unit level as they should be.

You will hear more about our safety programs during our presentations; however, there are a few points I would like to make. Based on a detailed analysis of our safety organization, training, and emphasis, we feel that the key elements are in place. Our current thrust is on emphasizing basic safety principles and attitudes with the objective of improving the quality and followup on safety programs plantwide. We are concerned by an increase in both the number and seriousness of our incidents in 1981 and are trying to find the right combination that will turn this around.

As a special emphasis of this inspection, we would very much appreciate it if, during your tour of our facilities, you talk to as many of our wage and first-line supervision as possible. This is "where it all happens" and we would like your help in assessing how this group perceives our safety procedures, programs and, most importantly, our commitment. Also, please test the level of knowledge and understanding of our safety related procedures. During the feedback session, we encourage you to be candid with us and "tell it like it is" in this as well as all other areas.

We hope your visit with us will be helpful, informative, and enjoyable. We are proud of our people and our facilities and look forward to introducing them to you.

Sincerely,



G. L. Tromblee
Plant Manager

SC 17688

STG 1083989

LAM025943

1981 INSPECTION TEAM



NEEDHAM COPPEDGE, Chairman

**Plant Manager
Columbia, Tennessee Plant**



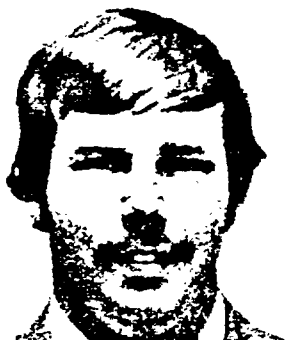
J. R. "JIM" LOVE

**Project Engineering Superintendent
J. F. Queeny Plant, St. Louis**



MICHAEL E. WHELAN

**Plantwide E & I Supervisor
W. G. Krummrich Plant, St. Louis**



JOHN R. ZELLE

**Manufacturing Supervisor
W. G. Krummrich Plant, St. Louis**

SC 17689

STG 1083990

LAM025944

PLANT MANAGER'S SAFETY BOARD



W. G. Juhl
PT Director



G. T. Ryan
Supt. Mfg.



G. A. Danner
Supt. Plant Serv.



S. G. Pappas
Energy Coordinator



J. G. Trafton
Supt. Mfg.



G. L. Tromblee
Plant Manager



D. W. Metten
Supt. Acctg.



B. C. Lancaster
CED Site Supt.



G. W. Daues
Supt. Mfg.



D. E. Kaldenberg
Supt. Personnel



C. F. Navarrete
Supt. Mfg.



G. E. Small
Mgr. Proc. Engr. CED



C. M. McCullough
Plant Engineer

SC 17690

LAM025945

STC 1083991

**SAFETY & HOUSEKEEPING ACTION COMMITTEE
(SHAC)**



K. E. Bretz
Mfg. Supv.



J. L. Carothers
Engr. Spec.



J. A. Glass
Supt., LP&S



J. J. McClellan
Chairman
Mfg. Supt.



J. M. Gatewood
Maint. Supt.



K. D. Oden
Group Supv.



John Stone
Safety Engr.—CED

SAFETY ADVISORY ACTION COMMITTEE
(SAC)



G.W. Daues
Chairman
Supt. Mfg.



D. E. Kaldenberg
Supt. Personnel



C. F. Navarrete
Supt. Mfg.



S. G. Pappas
Energy Coordinator

SC 17692

STG 1083993

LAM025947

PROCESS TECHNOLOGY SAFETY COMMITTEE



Lynell Cale



H. B. Irvine



P. D. Johnson



Linda Lewis



David Truitt
Chairman



Wen-Chin Liao



R. L. Long



W. H. Temple

SC 17693

STG 1083994

LAM025948

HOURLY SAFETY COMMITTEE



W. E. Bean
Chairman July-Dec.
Insulator



J. M. Burkhalter
Pipefitter



Jessie Butler
Chairman Jan.-May
Prod. Foreman



L. E. Derrick III
Pumper-Gauger



E. L. Doty
Operator



Lawrence Elbert
Operator



Austin Gates
Chairman May & June
Laborer



Vivian Hargrove
Operator



C. O. Jackson
Operator



J. H. Martin
Operator



A. E. Mofley
Operator



Ruby Mosley
Janitor



C. R. Richardson
Operator



M. A. Riddle
Safety Engineer



R. L. Sartain
Boilermaker

OFFICE SAFETY COMMITTEE



Dorothy Bibby
PT-AN



Ernestine Chuoke
ESTERS-MICC



Marilyn Decker
PT-MEOH/HOAC



Quirino Escamilla
PT-STYRENE



R. T. Hammann
Safety



Fay Hogg
Material Handling



Sue Lessa
Chairman July-Dec
Maintenance



L. K. Salles
MISD



P. H. Siems
Maintenance



A. R. Sorensen
PT-AN



Loretta Thomas
Engineering



T. W. Triplett
Accounting



Peggy Wansbrough
Chairman Jan-July
Prod. Control



Betty White
ESTERS-MICC



J. E. Williamson
Plant Security



Kathryn Woodard
Stores

ACCOUNTING SAFETY COMMITTEE



Margarete Wiggins



Lee Mathews



H. C. Hughes
Chairman

SC 17696

STG 1083997

LAM025951

GENERAL
INFORMATION

SC 17697

STG 1083998

LAM025952

Monsanto

Texas City

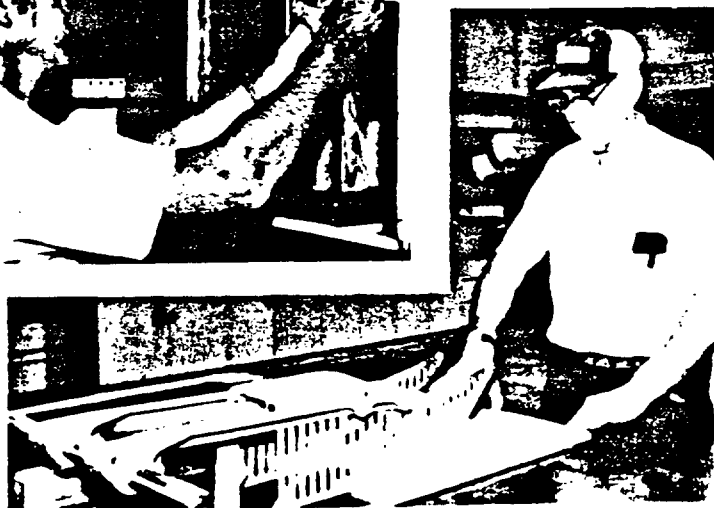
*A SAFER PLACE TO
WORK BECAUSE OF ME*



STG 1083999



SC 17698



LAM025953

GENERAL INFORMATION

PLANT LOCATION

The plant is located at the southeast corner of Texas City. Total plant area is 358 acres of which 243 are in use for manufacturing. This total acreage includes 80 acres northeast of Texas City in the Amburn Tract, 18 acres south of the plant at Swan Lake, and 18 acres of peripheral property adjacent to the plant. The Amburn Tract property is the site of our fire training area and a lagoon used to decant river mud from the plant water treating clarifier. The Swan Lake property is used for non-hazardous waste disposal.

ORGANIZATION

Manufacturing Operations at Texas City are administered by the Chemical Intermediates Company, which operates seven manufacturing units plus site utilities and environmental control operations. The Industrial Chemicals Company is guest operator of six manufacturing units.

Other Manufacturing functions at Texas City include MISD, Accounting, Personnel, Plant Engineering and Plant Services. The Personnel department includes a medical dispensary and industrial hygiene laboratory. Plant Engineering includes instrument, electrical, and mechanical maintenance and project construction groups with a large central shop facility, as well as plant security and off-shift supervisory personnel. Plant Services includes purchasing, stores, production planning and scheduling, and material handling functions, an engineering design group for plant projects, and a materials/mechanical technology group responsible for fabrication and rotating equipment specification as well as inspection of existing equipment. The plant also operates a Control Laboratory for process and product analyses.

Process Technology at Texas City includes a major laboratory and engineering center which supports product line operations and capital projects and provides process and analytical technology development as well as business planning guidance. Styrene and acetic acid licensing are also administered through the Process Technology department.

Corporate Engineering at Texas City includes a process engineering group which supports Chemical Intermediates capital project development and a construction group which executes CED projects at the plant.

Other staff functions at Texas City include Marketing and Patent offices.

SC 17699

STG 1084000

LAM025954

EMPLOYMENT

The plant employs 1697 people in the following classifications:

Wage	969
Salaried:	
Manufacturing, Exempt	372
Non-exempt	136
Process Technology, Exempt	126
Non-exempt	61
Corporate Engineering, Exempt	21
Non-exempt	2
Marketing/Patent, Exempt	5
Non-exempt	<u>5</u>
Total	1697

Plant operating and craft wage personnel are represented by the Texas City, Texas, Metal Trades Council, an association of thirteen craft and operating unions. Cafeteria workers are represented by Local 347, International Union of Operating Engineers, AFL-CIO. Security guards are represented by the Associated Guards of the United States.

MAJOR PRODUCTS

The major finished products of the plant are as follows:

CHEMICAL INTERMEDIATES COMPANY

Styrene Monomer used for plastics, synthetic rubber, and surface coating materials.

High Density Polyethylene used in the plastics industry as film, wire coating and molding material. This unit is expected to operate until 1983 under contract to Cities Service.

Methanol used in the production of anti-freeze, formaldehyde and acetic acid.

Acetic Acid used in making cellulose acetate and vinyl acetate monomer, and for fiber and agricultural production.

Acetone Cyanohydrin used for manufacturing polymethyl methacrylate plastic.

Acrylonitrile used for fibers, nylon and structural plastics.

INDUSTRIAL CHEMICALS COMPANY

Synthetic Lactic Acid used in the food industry as a preservative.

Phthalic Anhydride used in plasticizers, polyesters, alkyd resins, dyes and pharmaceuticals.

Phthalate Esters used in food-grade plastics, floor tile, film, fabrics, and adhesives.

Oxo-Alcohol used in manufacture of phthalate esters.

Tertiary Butylamine (TBA) used as intermediate for the rubber and tire industry.

TEXAS CITY PLANT HISTORY

- 1941 ... Thirty-acre tract purchased under auspices of Defense Plant Corporation.
- 1942 ... Construction started on Styrene monomer unit and supporting Ethylene units.
- 1946 ... Plant purchased by Monsanto from United States Government.
- 1947 ... Ship explosions in harbor completely destroyed plant; reconstruction of Styrene and Ethylene units started immediately.
- 1951 ... Construction begun on Acrylonitrile, Hydrogen Cyanide, and Vinyl Chloride monomer units plus supporting Oxygen and Acetylene units.
- 1952 ... Started up Oxygen, Acetylene, Hydrogen Cyanide, Acrylonitrile and Vinyl Chloride monomer units.
- 1954 ... Construction begun on Methanol and low density Polyethylene units plus high-purity Ethylene units.
- 1955 ... Started up TBA unit.
- 1956 ... Construction begun on new Ethylene units.
- 1957 ... Started up new Ethylene unit.
- 1959 ... Tract of 68 acres adjacent to plant acquired and filled by dredging for future plant expansion.
- 1962 ... Construction begun on high density Polyethylene unit.
- 1963 ... Started up Lactic Acid unit.

SC 17701

STG 1084002

LAM025956

- 1969 ... 22 acres adjacent to south side of plant acquired for new deep-water docking facility and product storage area.
- Construction started on new Methanol and Acetic Acid units.
- Construction begun on Phthalic Anhydride and Esters units.
- 1970 ... Started up new Methanol, Acetic Acid, and Esters units.
- Acetylene, Acrylonitrile, Vinyl Acetate and old Methanol units shut down and dismantled.
- Construction begun on Oxo-alcohol and new Styrene units.
- 1971 ... Started up EVCL unit.
- Started up Phthalic Anhydride and Oxo-alcohol units.
- 1972 ... Part of low density Polyethylene shut down.
- Started up new Styrene unit.
- Started up new primary waste water treatment.
- 1973 ... Signed contract for secondary waste water treatment at Gulf Coast Waste Disposal Authority (GCWDA) regional treatment facility.
- 1974 ... Started up new Ethylbenzene unit.
- Construction begun on new Acrylonitrile unit.
- EVCL unit shut down.
- 1975 ... Construction started on Acetone Cyanohydrin unit.
- Low density Polyethylene unit shut down and dismantling started.
- Started up GCWDA secondary treatment facility.
- 1976 ... Acetone Cyanohydrin started up.
- Low density Polyethylene dismantling complete.
- 1977 ... Started up new Acrylonitrile unit.
- Hydrogen Cyanide unit shut down.
- 1978 ... Chrome-Zinc removal project completed.
- Storm water diversion project completed.

1979 ... Major energy conservation project completed.

Boiler fuel conversion project completed.

1980 ... Acrylonitrile Exposure Reduction project completed.

Ethylene plant shut down, dismantling.

Started up GCWDA regional disposal facility for hazardous solid waste.

1981 ... Evaluation of coal utilization.

Benzene Exposure Reduction project completed.

Benzene pipeline from Shell and Exxon put on line.

8.7 acres south of plant leased.

CO₂ line from Air Products to Methanol completed.

1982 MAJOR PROJECTS

AN conversion to Nitto catalyst.

Demonstration of phthalic anhydride energy conservation and debottlenecking projects.

Install packing in EB/SM splitter column.

Start-up of IDA II.

SC 17703

STG 1084004

LAM025958

.....
 • W.H. STANTON •
 • DISTINGUISHED •
 • FELLOW •

.....
 • W.C. JUMI •
 • PROCESS TECHNOLOGY •
 • DIRECTOR •

L.S. FURANKS (SF) — E.R. DUPUIS (AA)

A.C. MACFARLANE (SF)

.....
 • W.M. MAYNES •
 • MANAGER, PT •
 • SUPPORTING FUNCTIONS •

.....
 • W.H. JOHNSON •
 • MANAGER, PT •
 • STYRENE •

.....
 • L.C. MCCUNE •
 • MANAGER, PT •
 • OTHER MONOMERS •

.....
 • A.M. PATTERSON •
 • MANAGER, PT •
 • AN-ACY-HCN •

FILLIOWS

R.M. GUNSON

.....
 • P.M. ELLIZ •
 • PT MANAGER •
 • ANALYTICAL •

A.N. URIARTE (GS)

.....
 • W.L. O-EN-SU •
 • PT MANAGER •
 • SUPPORT •

.....
 • F.F. GORE •
 • PT MANAGER •
 • IDSC •

J.A. JAMES (GS)

R.P. PURKASON (GS)

.....
 • M.D. RUMMS •
 • PT MANAGER •
 • ARMS DEVELOPMENT •

J.L. PRICE (TC)

M.R. POLINGSON (GS)

L.F. CALF (GS)

.....
 • R.V. PARKER •
 • PT MANAGER •
 • CONVENTIONAL TECH •

K.D. ODEN (GS)

J.C. PARKS (GS)

.....
 • H.J. MORRIS •
 • PT MANAGER •
 • RADNS EVAL PROJECS •

.....
 • G.L. SLACY •
 • WFG SUPT •

.....
 • P.T. ELY •
 • PT MANAGER •
 • ACOH LICENSING •

.....
 • P.W. EVANS •
 • PT MANAGER •
 • MECH/ACOH •

H.L. KIRKPATRICK (GS)

P.S. GLASPIE (GS)

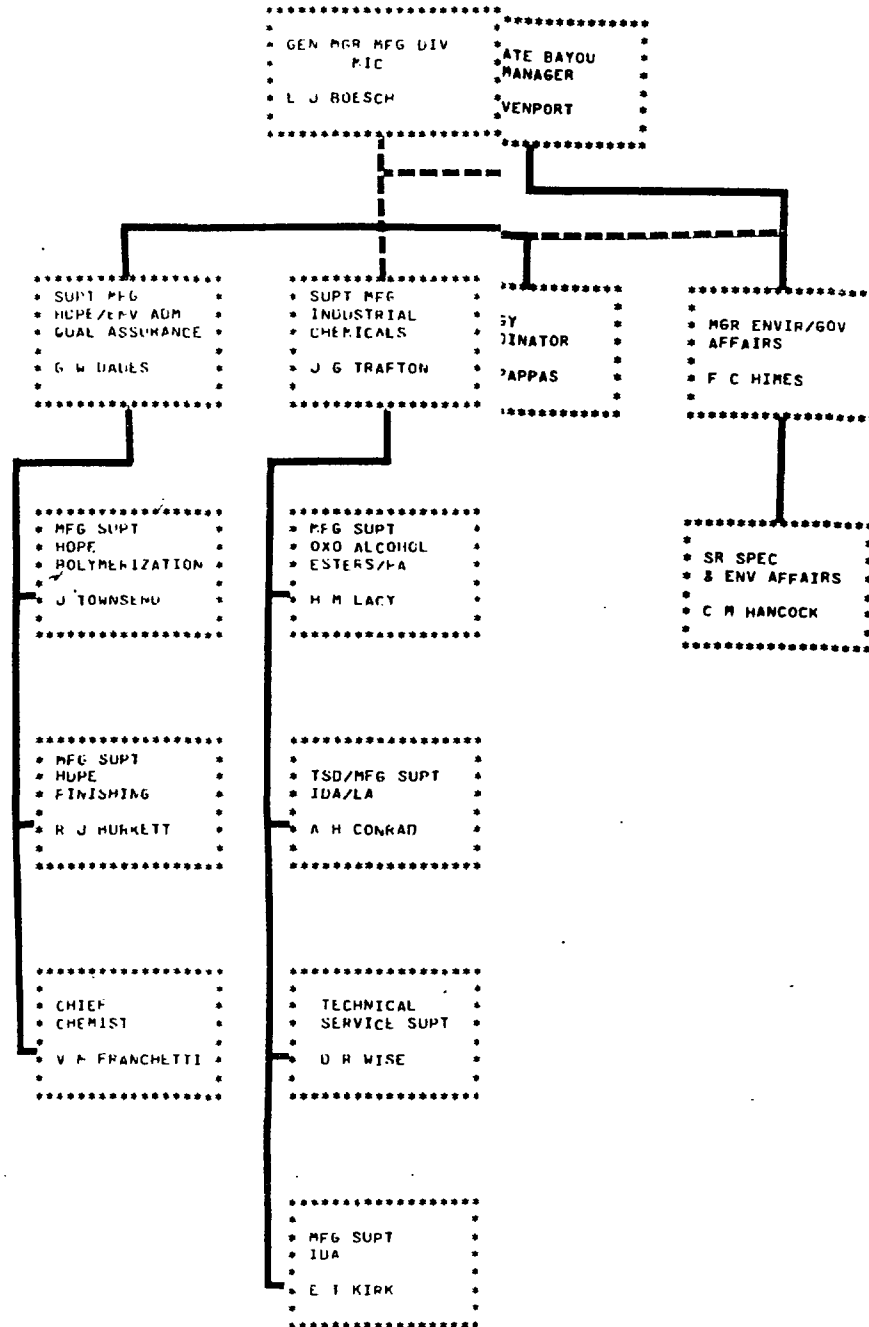
.....
 • W.G. BAUER •
 • PT MANAGER •
 • OPS, PROJ, SUPPORT •

J.E. SILVER (GS)

P.C. SAUNDERS (GS)

.....
 • S.K. YERETSKY •
 • PT MANAGER •
 • AN/HCN TECH •

H.P. CURTIS (GS)



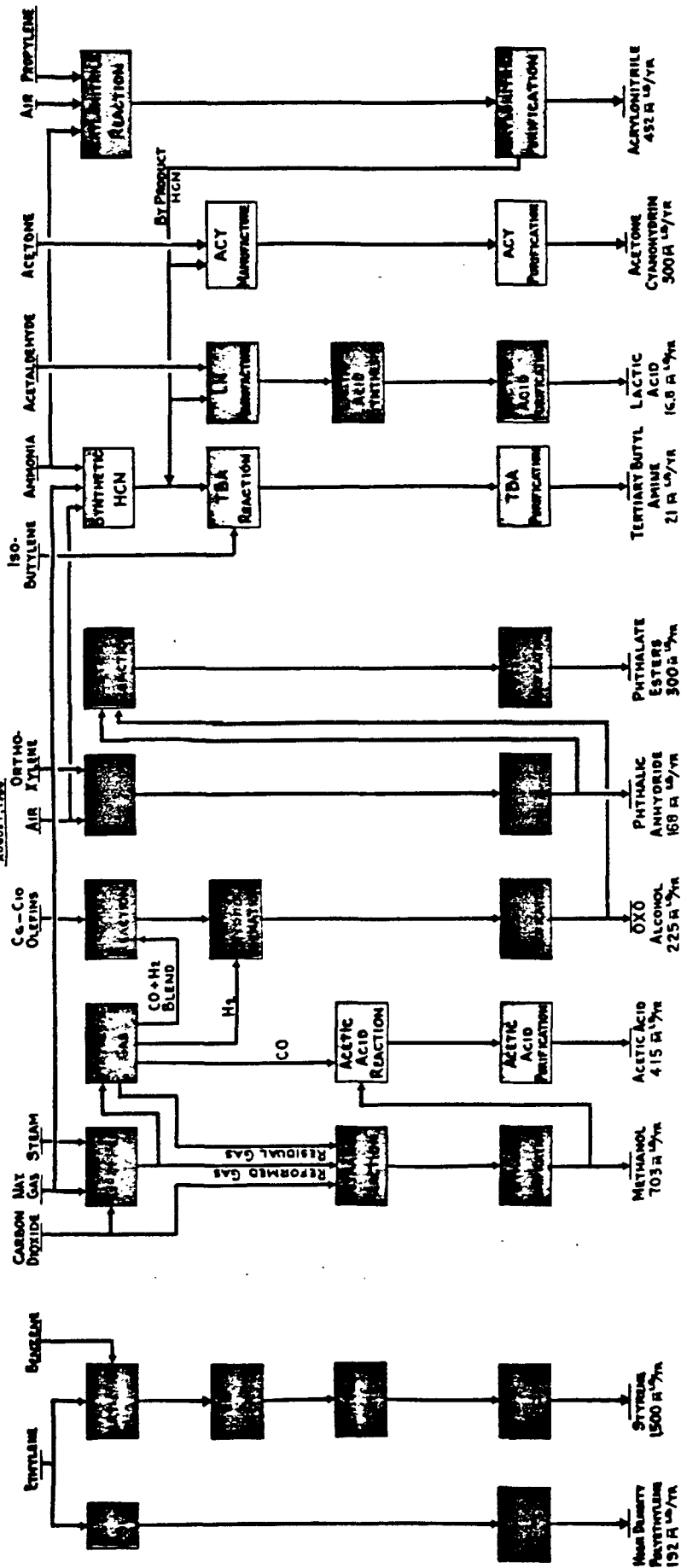
LAM025960

SC 17705

MONSANTO CHEMICAL
INTERMEDIATES COMPANY
MANUFACTURING DEPARTMENT
TEXAS CITY TEXAS
JULY 15, 1981

STG 1084006

BLOCK FLOW DIAGRAM - TEXAS CITY
AUGUST, 1982



NO. 148

SC 17706

STG 1084007

LAM025961

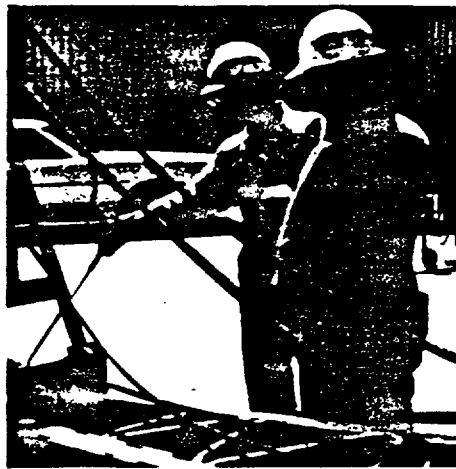
**SAFETY
INFORMATION**

SC 17707

STG 1084008

LAM025962

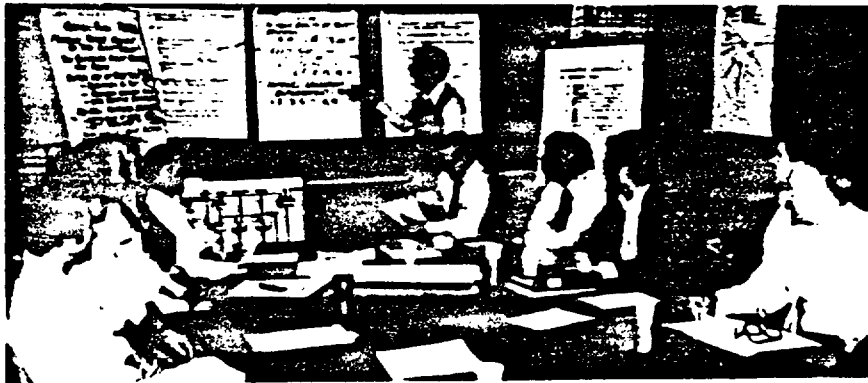
Safety Training and Accident Reduction Techniques



Correction



Motivation



Commitment

STG 1084009



Prevention



Training



Identification



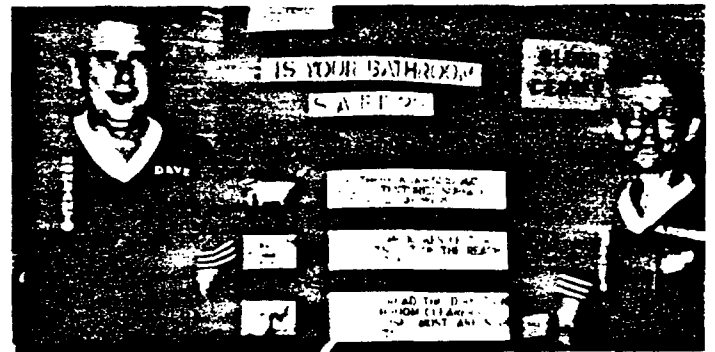
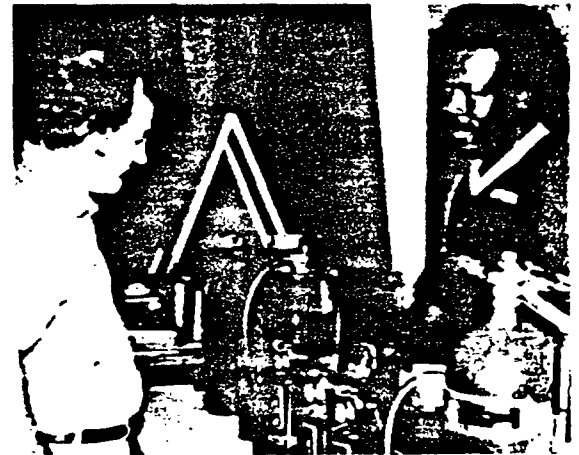
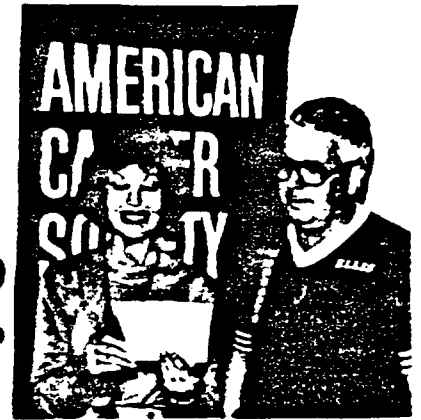
Communication

SC 17708

LAM025963

Monsanto Expo for Safety and Health

April 1981



STG 1084010

SC 17709

LAM025964

C U P S A F E

COMMUNICATION
UPGRADES
PLANT
SAFETY
AWARENESS
FOR
EMPLOYEES

FACE-TO-FACE COMMUNICATION:

- IN ONE-ON-ONE SAFETY MEETINGS
- BETWEEN ALL EMPLOYEES AND THEIR IMMEDIATE SUPERVISOR



EMPLOYEES WILL RECEIVE:

- MONSANTO SAFETY POLICY CERTIFICATE
- COFFEE CUP
- OPPORTUNITY TO DISCUSS SAFETY IN PRIVATE WITH THEIR SUPERVISOR

OVERALL THEME:

- COMMUNICATION OF INDIVIDUAL, SUPERVISOR AND TEAM RESPONSIBILITY FOR SAFETY

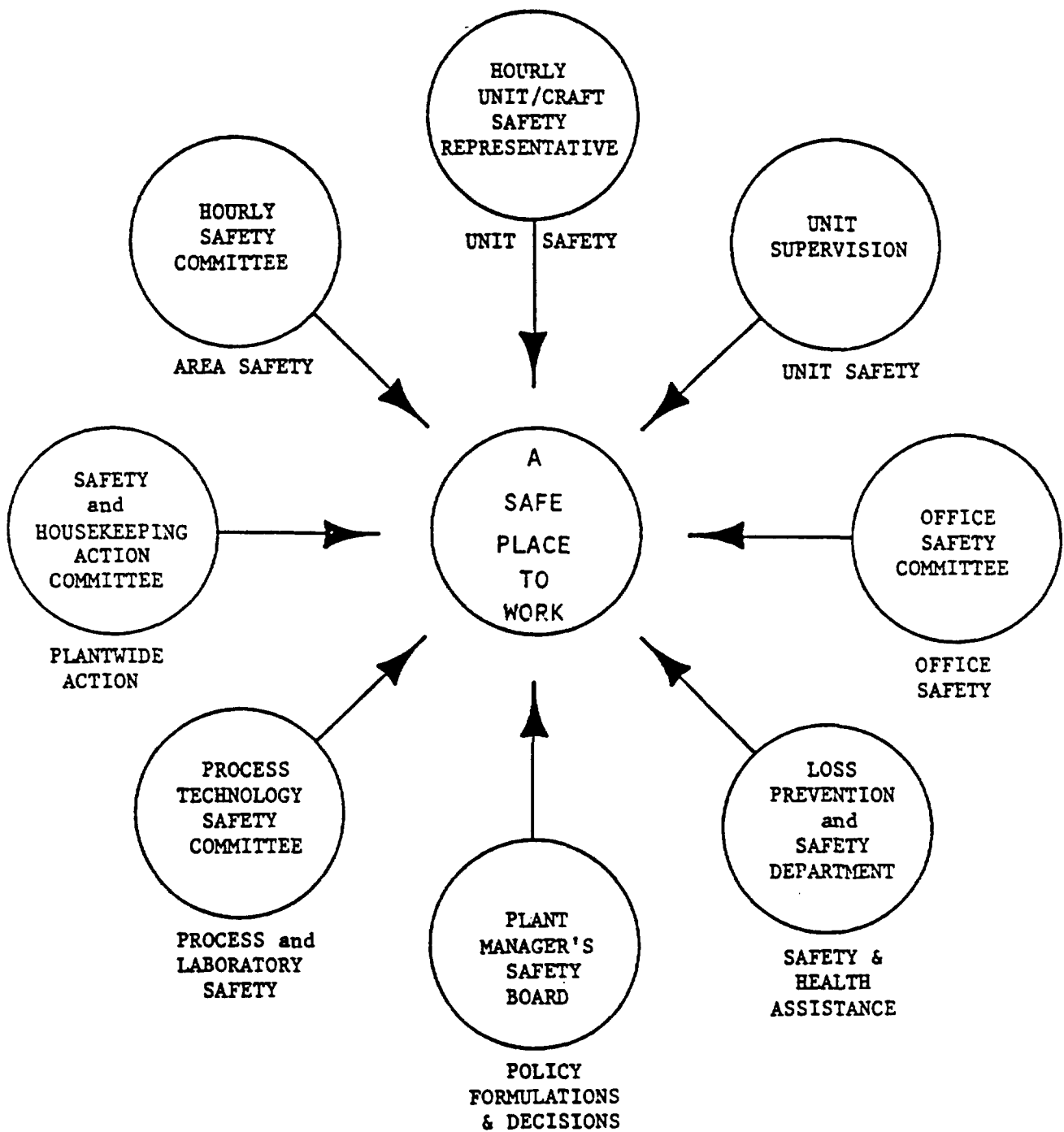
STG 1084011

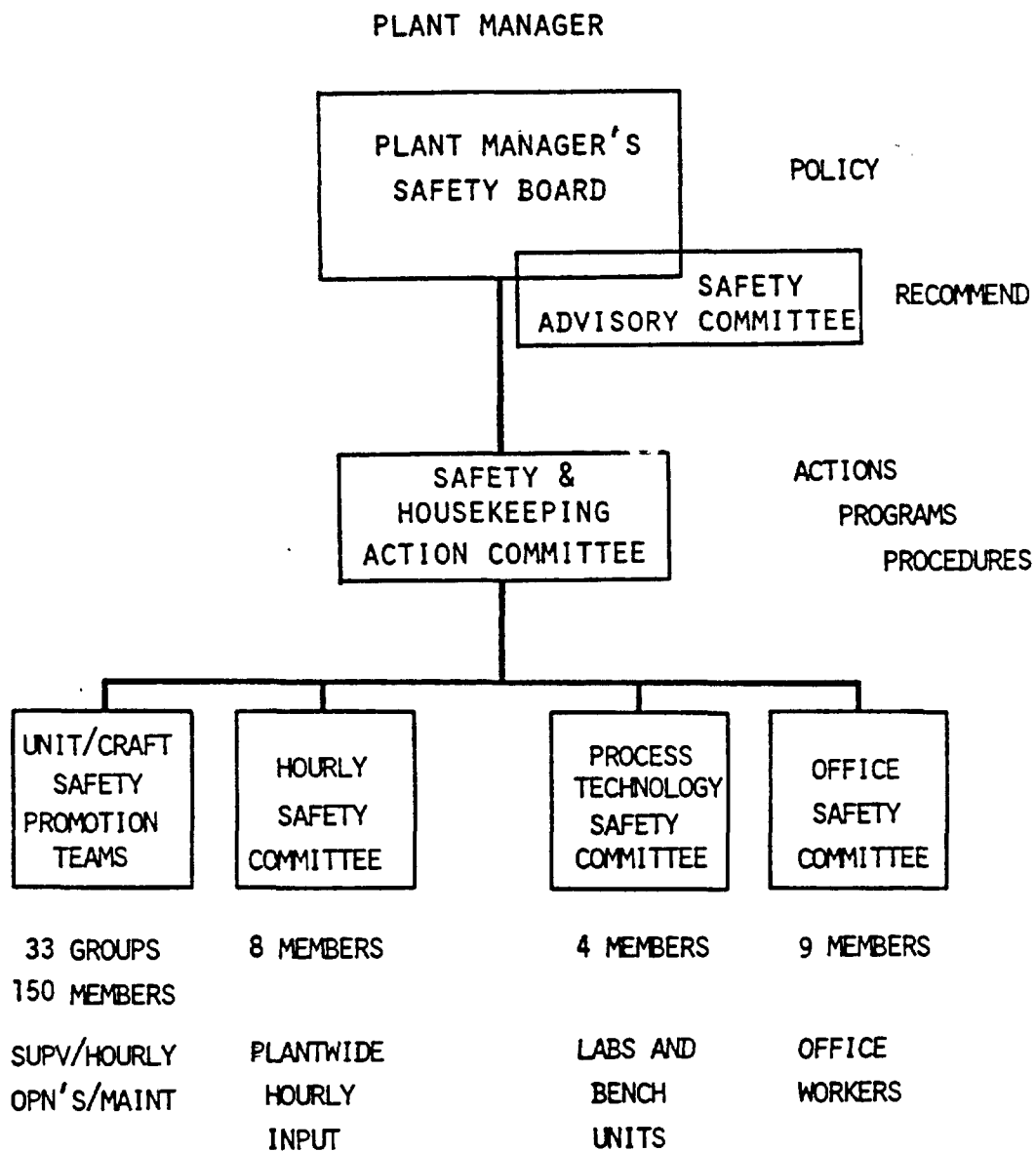
SC 17710

LAM025965

Monsanto, Texas City

Safety Organization





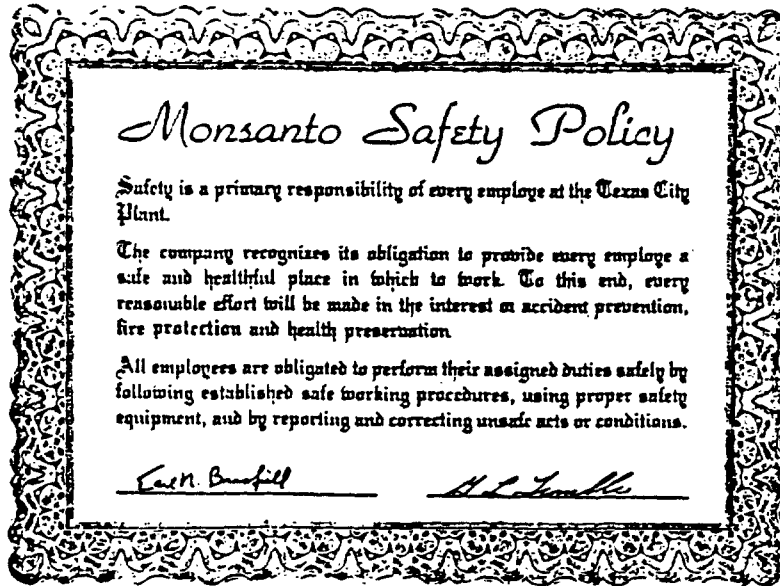
SC 17712

STG 1084013

LAM025967

TEXAS CITY SAFETY PHILOSOPHY

WHERE SAFETY STARTS



TEXAS CITY SAFETY POLICY

This policy covers all employees at the Texas City plant. All of the plant organizations--line, staff and formal safety-oriented organizations--are designed to fulfill the spirit and the letter of this policy.

ROLE OF MANAGEMENT AND THE INDIVIDUAL - Management is fully responsible for initiating and administering an effective safety program. Each employee must fully accept the responsibility for his safety and that of his co-workers by conscientiously observing safe work practices and cultivating safe working habits in himself and his fellow workers. Thus, the management and the individual workers are mutually involved in a continuing effort to eliminate acts and conditions which could lead to accidents, fires, or to be injurious to the health of anyone. The Plant Manager, although responsible for the entire safety program, assigns responsibilities for the administration of program details.

SAFETY TRAINING

A KEY ELEMENT IN ALL JOB TRAINING - Safety training is an integral part of job training, and as such, is the responsibility of the supervisory staff. Job training is incomplete unless it considers and properly addresses the hazards of the job. Unless a way has been developed to do a job and do it safely, the plans for the job and the training of the employees to perform the job is incomplete. In addition to the on-the-job safety training, plantwide safety training programs are conducted. They are the responsibility of the Safety and Housekeeping Action Committee (SHAC); however, joint accountability for the effective plant training program is shared by the Loss Prevention and Safety Department.

SAFETY PERFORMANCE

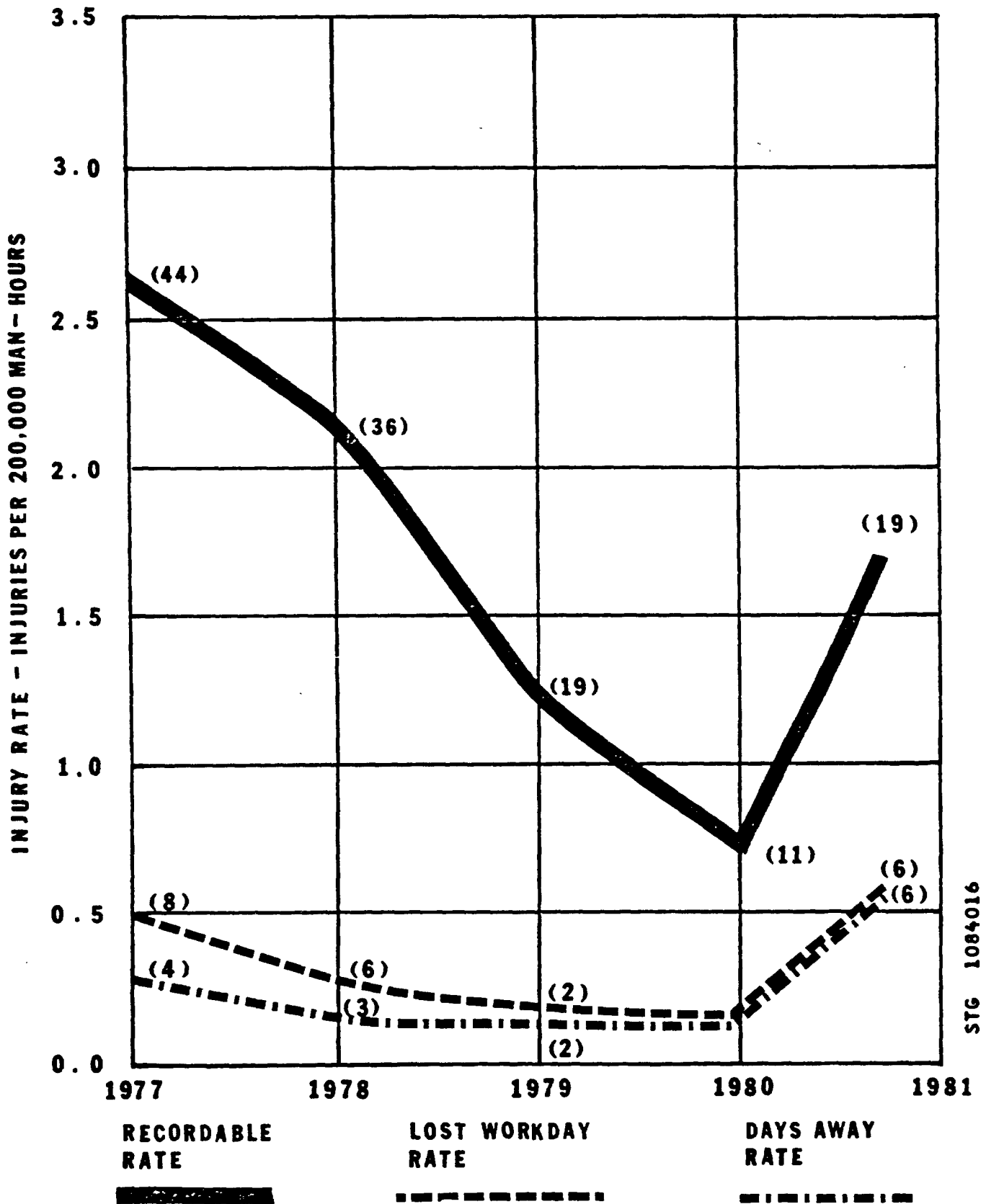
INJURY STATISTICS - Injury and illness rates in specific categories are developed on a plantwide basis and are broken down by department, crafts or operating areas to provide indicators of safety performance in large and small work groups throughout the plant. These safety statistics are developed and plotted on a weekly, monthly and annual basis to show the responsible supervisors where their area performance stands in relation to their own history and to plantwide performance goals. Plant safety goals are established by general management for the plant as a whole.

SAFETY PERFORMANCE REVIEW AND CONTROL - Injury and illness records are reviewed weekly, monthly, quarterly and annually in every review of overall plant performance at every level. Significant deviations require explanation as to cause and appropriate corrective or preventive actions. The greater the deviation from expected performance, the higher in the organization the deviation will be reviewed.

SUMMARY

At Texas City, safety is an integral part of our everyday work. Job training is not complete until the person performing the work knows how to do the job safely. Work planning is not complete until the safety considerations are satisfied. Work execution requires prior review of the possible hazards and necessary actions required to meet them safely. Safety performance is a primary consideration in the evaluation by supervisors of employee job performance. Safety performance is reviewed at regular intervals along with all other aspects of the job or work in progress. All employees are involved in safety considerations in the work place. Safety performance is reviewed by management at every level and is a key element in judging managerial performance and control. Safety is not a thing apart. It is an integral part of our way of doing business.

INJURY RATES/(CASES)
RECORDABLE, LOST WORKDAY, AND DAYS AWAY
5 - YEAR COMPARISON
AUGUST 1981



STG 1084016

SC 17715

LAM025970

1980 INSPECTION
STATUS

SC 17716

STG 1084017

LAM025971

1980 MCI SAFETY AND HOUSEKEEPING INSPECTION
TEXAS CITY PLANT
SEPTEMBER 23 THRU 25, 1980

RECOMMENDED FOR FURTHER CONSIDERATION

1. Two departments, 35P, 954, had 30-40% of their relief valve tests overdue.

STATUS: Dept. 35P--All relief valves which were on the delinquent list of 1/81 were checked during the major shutdown in 2/81. This department is currently in good shape in relief valve testing.

Dept. 954--Relief valve program was updated and all valve inspections are up-to-date. A problem exists with the reporting system that is currently used for this department. Many relief valves are spares and are not checked until prior to being put in service. These show up as delinquent on the status report. Work is under way to correct this situation.

2. Although the "breaking into" procedure is being followed, we do have a concern relative to the optional use of a special work permit in the plant. For example, the HCN, phthalic anhydride, AN and PE polymerization units required special work permits and other departments did not. This can lead to confusion among the mechanics relative to whether a permit is required for work in a given department.

STATUS: PMSB decision on 7/23/80 that work permits be used on a unit or job option basis. This was reconsidered by SAC and discussed with operating and maintenance supervisors. On 11/11/80, SAC reaffirmed that the 7/23/80 PMSB decision should not be changed.

3. The fire protection systems for Docks 3,4 and 5 did not include "monitor coverage" or a readily available fire water supply. We understand that an evaluation is under way to improve the protection.

STATUS: Meetings were held with Safety and the final report with recommendations will be issued by R.T. Hammann by October 1, 1981.

4. In our discussion with contractors, they had an apparent healthy attitude relative to their safety responsibility but had trouble recalling what action they should take if they heard a fire alarm or an evacuation signal.

STG 1084018

SC 17717

LAM025972

STATUS: Extra effort in communications has been under way. Heavy emphasis on this is included in safety training. Contractors were issued plant fire code stickers which attach to safety hats. A video tape is being prepared by Capital Projects for use with contract personnel in learning plant safety practices.

5. Some of our conversations, particularly in the Maintenance Department, indicated that personnel may not be getting full value out of your safety meetings. Most of the mechanics that we talked to were confused about the content of the last meeting.

STATUS: In order to provide for more informal craft safety meetings that promote better participation and interest, we have changed our system to alternate each month between the regular total craft safety meeting and the decentralized zone/area meetings.

6. We endorse the program under way for respiratory protection and the individual respirator quantitative fit program that will be implemented shortly.

STATUS: Extensive quantitative respirator fit testing was completed early this year. Measurements were made on a total of 719 people within the last year.

7. We do have a concern about the reliability of the breathing air system and what appears to be the lack of an automated alarming device to alert personnel of the problem. Otherwise, this system is an excellent one.

STATUS: The breathing air system is presently monitored utilizing a continuous analyzer. All units are notified directly from personnel in the Utility Department if an alarm sounds indicating contamination in the breathing air system.

Work is now under way on a project that will result in a completely new and isolated system for the breathing air system. This project is expected to be completed in October. The new system will be one of the best in the industry.

8. The Monsanto Industrial Emergency Care Attendants are an important well-trained group. Better identification of the personnel in the group and publication of their availability on shifts could provide more prompt response and care until the ambulance arrives.

STATUS: Signs have been installed at appropriate locations throughout the plant. These signs not only designate that Emergency Care Attendants are in the area but also list the names of those attendants.

STATUS OF FOLLOW-UP ON RECOMMENDATIONS OF THE 1980 INSPECTION TEAM

1. Where oxygen cylinders are stored with acetylene or other flammable gas cylinders, install approved barriers to isolate the oxygen.

STATUS: These cylinders are stored in the same dock at Stores but not together. A safety rule we follow for oxygen cylinders and other oxidizers is as follows:

Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials a minimum distance of 20 feet or by a non-combustible barrier of at least 5 feet high having a fire resistance rating of at least one-half hour.

Since there isn't enough room at the present cylinder dock to build a barrier and the oxygen cylinders are stored 20 feet away from the flammable gas cylinders, no action has been taken. This conforms to OSHA Standards.

2. Audit the storage of flammables in the control laboratory to insure the use of proper containers and storage areas.

STATUS: Flammable storage cabinet was installed. Retained samples, some of which are flammable, are stored in refrigerator and wooden shelves at ambient temperature. A new refrigerator has been installed for storage of these retained samples.

3. Consider instituting a procedure that requires the installation of a fire extinguisher on all mobile equipment.

SC 17719

STG 1084020

LAM025974

STATUS: This is standard procedure and mobile equipment is now equipped with extinguishers.

4. Fully communicate the hose inspection and testing procedure to ensure compliance.

STATUS: Action Plan--SHAC prepared a bulletin board announcement. Objective: Plantwide compliance to be confirmed by First Quarter 1981 Guest Housekeeping Inspections.

This was done. Publicity being repeated in third quarter 1981.

5. Consider expanding the training for hourly personnel (particularly mechanics) to improve their knowledge of the hazards and handling precautions for the toxic materials that they work with.

STATUS: Plantwide craft safety training has been conducted on AN burn hazards and NSI hazards. In addition, the new MICS system has process hazards information as a part of work data on the CRT. This is available for all craftsmen.

6. Reemphasize the lockout procedure to insure full compliance.

STATUS: Action Plan--All departments reviewed lockout procedure for compliance. In addition, we identified some conditions that require special attention (i.e., when maintenance removes lock before work is completed--shift change).

/br

TOUR GUIDE

SC 17721

STG 1084022

LAM025976

TOUR GUIDES

Chairman
N.Coppedge

J.Love

M.Whalen

J.Zelle

First Day:

TUESDAY A.M. - October 13

McClellan

Stone

Oden

Bretz

Methanol; Acetic Acid;
Acrylonitrile

TUESDAY P.M. - October 13

Gatewood

McClellan

Carothers

Oden

Zone 1 Office; Ethylbenzene-
Styrene; Control Lab; Material
Handling Office; Docks; Primary
Treatment - North 68 Storage;
Electric Shop; Stores

Second Day:

WEDNESDAY A.M. - October 14

Carothers

Gatewood

McClellan

Stone

Shops; Garage; Water
Treating; Power 2; Hydrogen
Cyanide Complex

WEDNESDAY P.M. - October 14

Bretz

Oden

Stone

McClellan

AN Loading Rack; Warehouses;
Zone 2 Office; CED Office &
Shops; Capital Projects Area
Lactic Acid; Oxo-Alcohol-
Esters; Phthalic Anhydride;
Polyethylene facilities;
West Gate; South 22 Storage

Third Day:

THURSDAY A.M. - October 15

McClellan

Carothers

Bretz

Gatewood

Personnel Building; Lockers-
Safety Supply; Main Gate;
Cafeteria; Dispensary; Fire
Station; Office Annex; Main
Office; Research Buildings

SC 17722

STG 1084023

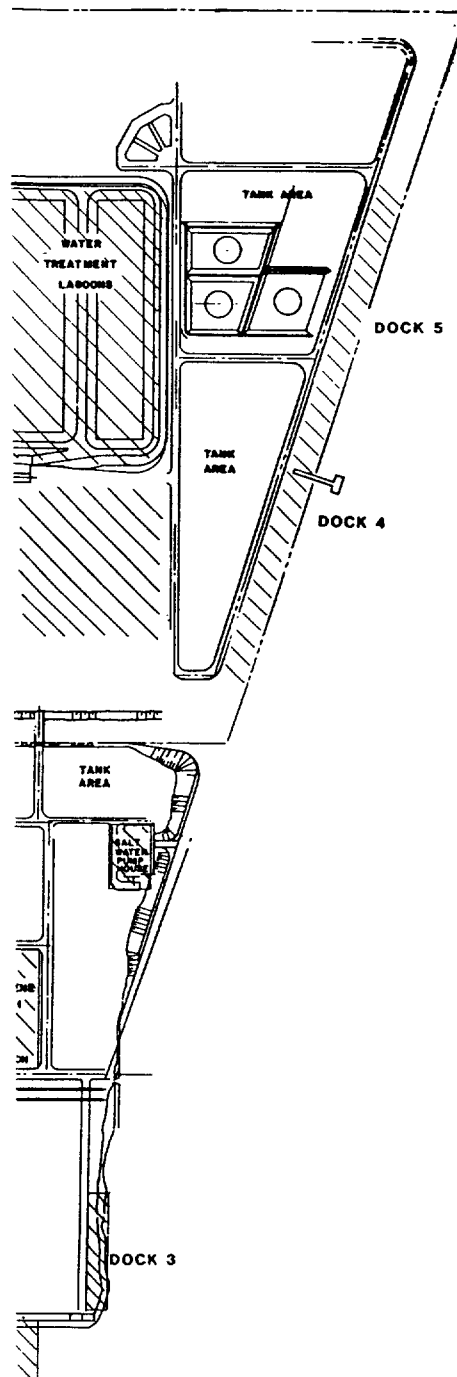
LAM025977

SITE MAP

STG 1084024

SC 17723

LAM025978



SC 17724

STG 1084025

LAM025979

1st DAY
INSPECTION

SC 17725

STG 1084026

LAM025980

INSPECTION TOUR SCHEDULE

FIRST DAY:
TUESDAY, OCTOBER 13

Arrive Texas City (Personnel Building Training Room) 8:00 a.m.
Coffee and Rolls
Inspectors Meet Staff

PRESENTATIONS

8:25 a.m.

Minutes

- | | | |
|--|---|----|
| 1. Overall Texas City
Safety Program | J. A. Glass (Arnold)
Loss Prevention
& Safety Supt. | 10 |
| 2. Plant Manager's Safety
Board (PMSB) and Safety
Advisory Committee (SAC) | G. W. Daues (Greg)
Supt. of Mfg.,
Polyethylene | 10 |
| 3. Safety and Housekeeping
Action Committee (SHAC) | J. J. McClellan (Joe)
Mfg. Supt.,
HCN Complex | 10 |
| 4. Plant Manager's Comments | G. L. Tromblee (Gene)
Plant Manager | 5 |
| 5. Inspection Kickoff | K. D. Oden (Ken)
Group Supv., Process
Technology | 5 |
| 6. Discussion | | 10 |

Distribution of Safety Equipment

Coffee Break 15

BEGIN INSPECTION 9:30 a.m.

SC 17726

STG 1084027

LAM025981

DEPTS. 44-45-56 METHANOL

9:30 a.m.

Methanol, CO, and H₂ are produced by steam reforming of natural gas and CO₂. CO and H₂ are used in the production of oxy-alcohol and acetic acid.

Val Bolton	(Coppedge, McClellan)
Irvin Cole	(Love, Stone)
Don Carter	(Whalen, Oden)
Craig Johnson	(Zelle, Bretz)

COFFEE BREAK (Acetic Acid)

10:00 a.m.

DEPT. 50 ACETIC ACID

10:15 a.m.

Acetic acid is produced from carbonylation of methanol. This area includes catalyst preparation and product distillation facilities.

Byron Johnson	(Coppedge, McClellan)
Frank Weis	(Love, Stone)
Bobby Moore	(Whalen, Oden)
Yankee Wilson	(Zelle, Bretz)

SC 17727

STG 1084028

LAM025982

DEPT. 51 ACRYLONITRILE

10:45 a.m.

Two reactor trains and a single purification train are used to produce acrylonitrile and hydrogen cyanide as a by-product. Ammonia and propylene are used as raw materials.

M. T. Devore	(Coppedge, McClellan)
Don Rosson	(Love, Stone)
Loyd Archer	(Whalen, Oden)
Hap Ferguson	(Zelle, Bretz)

CARS to MAIN OFFICE	11:45 a.m.
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CAFETERIA CONFERENCE ROOM (Tray Lunch)	12:00 p.m.
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CARS to ZONE I OFFICE	12:30 p.m.
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ZONE I OFFICE	12:35 p.m.
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Offices and conference room used by maintenance personnel for styrene process.

Sam West	(Coppedge, Gatewood)
Rodie Santarelli	(Love, McClellan)
Jimmy Gibbs	(Whalen, Carothers)
J. W. Paschal	(Zelle, Oden)

SC 17728

STG 1084029

I AM025983

DEPT. 15 DEHYDROGENATION

12:45 p.m.

Synthesis area for dehydrogenation of ethylbenzene to crude styrene.

Allen Lamb	(Coppedge, Gatewood)
Hugo Darden	(Love, McClellan)
Earl Moore	(Whalen, Carothers)
George Bryan	(Zelle, Oden)

DEPTS. 14-16 STYRENE - EB DISTILLATION

1:05 p.m.

Dept. 14 - Ethylbenzene purification facilities

Dept. 16 - Styrene purification facilities

Louis Rooks	(Cappedge, Gatewood)
Larry Young	(Love, McClellan)
Allen Lamb	(Whalen, Carothers)
Jim Gore	(Zelle, Oden)

SC 17729

Tuesday, October 13, cont'd

Page 5

DEPT. 13 ALKYLATION

1:35 pm

Ethylbenzene is produced by the reaction of benzene with ethylene in the presence of an aluminum chloride-organic catalyst complex.

Morgan Holder	(Coppedge, Gatewood)
Roger Lubojasky	(Love, McClellan)
Carroll Smith	(Whalen, Carothers)
Rudy Willis	(Zelle, Oden)

CONTROL LABORATORY

1:55 p.m.

Laboratory facilities needed to conduct required analyses for production and shipment of petrochemicals from Texas City plant.

John Kilfoy	(Coppedge, Gatewood)
Myrna White	(Love, McClellan)
Fay Johnson	(Whalen, Carothers)
Wilma Elgama	(Zelle, Oden)

SC 17730

COFFEE BREAK (Material Handling Office)

2:15 p.m.

STG 1084031

LAM025985

MATERIAL HANDLING OFFICE BUILDING

2:35 p.m.

Offices for supervision of distribution operation, materials handling foreman and clerk.

Grace Warren	(Coppedge, Gatewood)
Joe Cantrell	(Love, McClellan)
Glen Vogtman	(Whalen, Carothers)
Frank Bales	(Zelle, Oden)

BARGE & SHIP DOCKS (1,2,3,4,5)

2:45 p.m.

Barge and ship loading/unloading facilities for raw materials, products, used at and produced by Texas City plant.

(Pick up Cars)	Tom Hartnett	(Coppedge, Gatewood)
	Mike Westmoreland	(Love, McClellan)
	Dave Glass	(Whalen, Carothers)
	Dante Paganucci	(Zelle, Oden)

PRIMARY TREATMENT, AMMONIA TANK, NORTH 68

3:25 p.m.

Facilities for primary treatment of all plant aqueous waste streams. Ammonia storage tank provides raw material for AN manufacturing facilities at Texas City and Chocolate Bayou.

Gene Sprock	(Coppedge, Gatewood)
Dan Moore	(Love, McClellan)
Bill Wooley	(Whalen, Carothers)
Jack Hutchison	(Zelle, Oden)

SC 17731

STG 1084032

LAM025986

ELECTRIC SHOP

3:50 p.m.

Consists of central shop facilities and offices for power distribution, electrical maintenance and maintenance engineering personnel.

Mat Mathison	(Coppedge, Gatewood)
	(Love, McClellan)
	(Whalen, Carothers)
	(Zelle, Oden)

STORES

4:00 p.m.

Stores include the shipping and receiving docks, storage bins of inventory items, and offices.

Tom Crump	(Coppedge, Gatewood)
Terry Grubbs	(Love, McClellan)
John Catching	(Whalen, Carothers)
Kathryn Woodard	(Zelle, Oden)

END of FIRST DAY of INSPECTION

2nd DAY
INSPECTION

SC 17733

STG 1084034

LAM025988

SECOND DAY:
WEDNESDAY, OCTOBER 14

SHOPS BUILDING

8:10 a.m.

Central Shops consists of facilities for pipe fabrication and plate and exchanger, machine, and paint shops. Building also includes training rooms and various maintenance office.

Howard Jackson	(Coppedge, Carothers)
Bill Recknor	(Love, Gatewood)
Joe Haskovec	(Whalen, McClellan)
Andy Devris	(Zelle, Stone)

HOURLY SAFETY COMMITTEE PRESENTATION

9:10 a.m.

COFFEE BREAK (Shops Building, 2nd Floor)

SOUTH MAINTENANCE BUILDINGS, INSTRUMENT SHOP & GARAGE

9:25 a.m.

Building includes carpenter-insulator shop, instrument department shop, field maintenance offices, and garage facilities.

Art Rich	(Coppedge, Carothers)
Jack Goodson	(Love, Gatewood)
Raymond Guidry	(Whalen, McClellan)
Sherman Jones	(Zelle, Stone)

Sam Scarcella - Instrument Shop

SC 17734

STG 1084035

LAM025989

WATER TREATING - PLANT AIR

10:05 a.m.

Treatment of raw Brazos River water for plant use and generation facilities for breathing, instrument, and general plant air.

Dan Bowers	(Coppedge, Carothers)
Jim Uptmor	(Love, Gatewood)
Harry Mercantel	(Whalen, McClellan)
George Orum	(Zelle, Stone)

POWER 2

10:20 a.m.

Facilities for steam generation and boiler feed water treatment.

Nick Monroe	(Coppedge, Carothers)
Donis Shotwell	(Love, Gatewood)
George Orum	(Whalen, McClellan)
Harry Mercantel	(Zelle, Stone)

SC 17735

STG 1084036

LAM025990

DEPTS. 19-25-27-29 (HCN-TBA-LN-ACY)

10:30 a.m.

Manufacturing facilities for tertiary butylamine, lactic acid, and acetone cyanohydrin.

Jasper Jennings	(Coppedge, Carothers)
Bill Taylor	(Love, Gatewood)
Mike Sweeny	(Whalen, McClellan)
Janet Townsend	(Zelle, Stone)

CAFETERIA CONFERENCE ROOM (Tray Lunch)

11:15 a.m.

AN LOADING RACK

11:45 a.m.

Rail car handling facilities for acetic acid, methanol, TBA, sulfuric acid, IBY, and ACH.

Conrad Berg	(Coppedge, Bretz)
Jerry Hudspeth	(Love, Oden)
Rusty Wilson	(Whalen, Stone)
Charlie Loney	(Zelle, McClellan)

SC 17736

STG 1084037

LAM025991

Wednesday, October 14, Cont'd

Page 4

WAREHOUSE A-B-C

12:05 p.m.

Three warehouses containing spare parts, valves, hoses, electrical cable, flammable liquids, paints, insulation supplies, sample bottles, etc.

Tom Crump	(Coppedge, Bretz)
Terry Grubbs	(Love, Oden)
John Catching	(Whalen, Stone)
Kathryn Woodard	(Zelle, McClellan)

ZONE 2 OFFICE

12:20 p.m.

Offices for west plant maintenance personnel.

Jack Richards	(Coppedge, Bretz)
Charles McClanahan	(Love, Oden)
Alvin Berry	(Whalen, Stone)
Andy Kuehl	(Zelle, McClellan)

SC 17737

STG 1084038

LAM025992

Wednesday, October 14, Cont'd

Page 5

CED OFFICES & SHOPS

12:35 p.m.

Offices, warehouses, and shops for Central Engineering Department.

Bill Nappier	(Coppedge, Bretz)
George Lavayen	(Love, Oden)
Jeff Peterson	(Whalen, Stone)
	(Zelle, McClellan)

CAPITAL PROJECTS AREA

12:55 p.m.

Area includes offices, a shop and fabrication area, and tool room.

Ben Arnold	(Coppedge, Bretz)
Calvin Wills	(Love, Oden)
Gino Inman	(Whalen, Stone)
David Spence	(Zelle, McClellan)

SC 17738

LAM025993

STG 1084039

DEPT. 33 LACTIC ACID

1:15 p.m.

Manufacturing facilities for pharmaceutical grade lactic acid from lactonitrile.

George Williamson	(Coppedge, Bretz)
Rodger Roulette	(Love, Oden)
George Chesnut	(Whalen, Stone)
Lester Congor	(Zelle, McClellan)

DEPT. 48-56 OXO-ALCOHOL - PHTHALATE ESTERS

1:35 p.m.

Oxo-alcohol area uses CO + H₂ blend gas and olefins as raw materials. Phthalic anhydride and oxo-alcohol are used to manufacture phthalate ester.

Jose Gaviria	(Coppedge, Bretz)
J. T. Shipley	(Love, Oden)
Norbert Novak	(Whalen, Stone)
Vernon Fields	(Zelle, McClellan)

SC 17739

STG 1084040

LAM025994

DEPT. 53 PHTHALIC ANHYDRIDE

2:10 p.m.

Manufacturing process which uses BASF technology to convert air and ortho xylene to phthalic anhydride.

Steve Moncla	(Coppedge, Bretz)
Jeff Soley	(Love, Oden)
Olaf Omenson	(Whalen, Stone)
Carl Richardson	(Zelle, McClellan)

COFFEE BREAK (Polyethylene Conf Rm)

2:30 p.m.

POLYETHYLENE CONTROL LAB

2:55 p.m.

Laboratory facilities for providing analytical data for the production of HDPE.

Roland Williams	(Coppedge, Bretz)
Tommy Stewart	(Love, Oden)
Mary Ann Moore	(Whalen, Stone)
Joe Alessi	(Zelle, McClellan)

SC 17740

STG 1084041

LAM025995

Wednesday, October 14, Cont'd

Page 3

DEPT 35F POLYETHYLENE

3:05 p.m.

Manufacturing area that converts HDPE powder from the polymerization unit into finished product pellets.

Ray Burkett	(Coppedge, Bretz)
Gerald Berry	(Love, Oden)
Ken Gore	(Whalen, Stone)
Judge Hadley	(Zelle, McClellan)

DEPT. 35P POLYETHYLENE

3:25 p.m.

Manufacturing process which converts ethylene to solid high density polyethylene via a Ziegler catalyst polymerization.

Riley Townsend	(Coppedge, Bretz)
John Townsend	(Love, Oden)
Wendell Youngdoff	(Zelle, McClellan)
Leroy Vornkahl	(Whalen, Stone)

SC 17741

STG 1084042

LAM025996

HIGH DENSITY POLYETHYLENE
PACKOUT & WAREHOUSING/BULK LOADING

3:50 p.m.

Packaging, storage, and loading facilities for high density polyethylene product.

Ralph Anderson
Hy Treaccar
Tom Hartnett
Ben Munday

(Coppedge, Bretz)
(Love, Oden)
(Whalen, Stone)
(Zelle, McClellan)

WEST GATE

4:05 p.m.

Major plant entry gate with facilities for producing employee identification cards.

Fred Herzog
Martha Ray

(Coppedge, Bretz)
(Love, Oden)
(Whalen, Stone)
(Zelle, McClellan)

SC 17742

STG 1084043

LAM025997

Wednesday, October 14, Cont'd

Page 10

LOCKER BUILDING

4:15 p.m.

Building contains lockers, showers, and dressing rooms for employees.

Weldon Nonnenmacher	(Coppedge, Bretz)
Louis Decker	(Love, Oden)
Gordon Dillon	(Whalen, Stone)
Steve Lawless	(Zelle, McClellan)

SOUTH 22 (in Cars)

4:25 p.m.

END of SECOND DAY of INSPECTION

SC 17743

STG 1084044

I AM025998

SC 17744

STG 1084045

3rd DAY
INSPECTION

LAM025999

THIRD DAY:
THURSDAY, OCTOBER 15

Group A Inspectors:
Coppedge, Love

PERSONNEL BUILDING

8:00 a.m.

Building contains personnel offices, training facilities and a video tape lab.

Nancy Wilbanks	(Coppedge, McClellan)
Glenda Meisetschlaeger	(Love, Carothers)

LOCKER BUILDING NO. 1
& SAFETY SUPPLY

8:20 a.m.

Building houses separate lockers, showers, and changing rooms as well as the safety supply store.

Ken Milner	(Coppedge, McClellan)
Gordon Dillon	(Love, Carothers)

SC 17745

LAM026000

STG 1084046

RECEPTION OFFICE & GUARD HOUSE

8:40 a.m.

Major plant entry gate with offices for locksmith, supervisors, and plant receptionist.

Glendora Hill
Fred Herzog

(Coppedge, McClellan)
(Love, Carothers)

FIRE STATION

9:00 a.m.

Two buildings which house the Texas City plant's fire fighting facilities.

Jim White
Ham Hamilton

(Coppedge, McClellan)
(Love, Carothers)

SC 17746

STG 1084047

LAM026001

PROCESS TECHNOLOGY SAFETY COMMITTEE PRESENTATION	9:30 a.m.
OFFICE SAFETY COMMITTEE PRESENTATION	
COFFEE BREAK (Cafeteria Conference Room)	

DISPENSARY	10:00 a.m.
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Provides facilities for emergency first aid and for monitoring employee health.

Betty Culbreth, RN	(Coppedge, McClellan)
Tony Ozarchuk	(Love, Carothers)

CAFETERIA	10:10 a.m.
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Main plant cafeteria.

Adele McCoy	(Coppedge, McClellan)
Laverne Chandler	(Love, Carothers)

SC 17747

LAM026002

STG 1084048

MAIN OFFICE (2nd and 3rd floors)

10:20 a.m.

Main office building for manufacturing, distribution, environmental, safety, and marketing personnel.

2nd Floor:	Betty White	(Coppedge, McClellan)
	Evelyn Harrison	(Love, Carothers)
3rd Floor:	Honda Garza	(Coppedge, McClellan)
	Bea Soto	(Love, Carothers)

RESEARCH NO. 1

10:45 a.m.

This building houses analytical labs and bench scale reactor systems.

Dave Truitt	(Coppedge, McClellan)
Ernie Dupuis	(Love, Carothers)

SC 17748

LAM026003

Group B Inspectors:
Whalen, Zelle

OFFICE ANNEX (1st floor)

8:00 a.m.

First floor of this building contains offices, technical library, and computer room.

Jim Sheehan
Mary Caban

(Whalen, Bretz)
(Zelle, Gatewood)

OFFICE ANNEX (2nd floor)

8:30 a.m.

This floor contains office facilities for accounting, mechanical & materials technology, MIS department with computer facilities.

Stella Martinez
Lois Standley

(Whalen, Bretz)
(Zelle, Gatewood)

SC 17749

LAM026004

STG 1084050

Thursday, October 15, Cont'd

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FIRE STATION

9:00 a.m.

Two buildings which house the Texas City plant's fire fighting facilities.

Jim White
Ham Hamilton

(Whalen, Bretz)
(Zelle, Gatewood)

PROCESS TECHNOLOGY SAFETY COMMITTEE PRESENTATION
OFFICE SAFETY COMMITTEE PRESENTATION
COFFEE BREAK (Cafeteria Conference Room)

9:30 a.m.

RESEARCH NO. 2

10:00 a.m.

The AN, styrene, and ARMS bench scale reactor systems are operated in this building. The analytical instrument development department is located upstairs.

John Thorman
Lee Owens

(Whalen, Bretz)
(Zelle, Gatewood)

SC 17750

LAM026005

STG 1084051

RESEARCH NO. 3

10:30 a.m.

This building houses the offices for the ARMS personnel with crafts and maintenance offices and shops located on the first floor.

John Thorman
Lee Owens

(Whalen, Bretz)
(Zelle, Gatewood)

Group A & B Inspectors

CAFETERIA CONFERENCE ROOM	(Committee Caucus)	11:15 p.m.
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CAFETERIA CONFERENCE ROOM	(Seated Lunch)	12:15 p.m.
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RESEARCH 2 CONFERENCE ROOM	Committee Report to Expanded Staff	1:00 p.m.
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END of INSPECTION

2:00 p.m.

SC 17751

STG 1084052

LAM026006

NOTES

SC 17752

LAM026007

STC 1084053

NOTES

SC 17753

STG 1084054

LAM026008