

Int office

PITTSBURGH PLATE GLASS COMPANY

CHEMICAL DIVISION

Correspondence

P. O. BOX 1000

LAKE CHARLES, LOUISIANA

Date June 15, 1967 Subject Area B Fire Protection Manual
T Distribution Revision
From J. Boyd Alleman Reference

Please make these additions and substitutions to your copy(ies) of the production Area "B" Fire Protection Manual. The Manual was revised to include the vinyl facilities.

JBA/cd\

Distribution:

D. L. Duncan
D. D. Dupre
W. B. Graybill
J. M. Jackson
L. L. Atwell
T. G. Taylor
A. B. McRae
Shift Engineer
Shift Supervisor

SL 050045

PITTSBURGH PLATE GLASS COMPANY
CHEMICAL DIVISION

Lake Charles, Louisiana

PRODUCTION AREA "B" FIRE PROTECTION MANUAL

by

JOHN C. YOUTS
MARION C. CLARY

Revised June 14, 1967
by Boyd Alleman

Distribution:

D. L. Duncan
D. D. Dupre
W. B. Graybill
J. M. Jackson (2)
L. L. Atwell (2)
T. G. Taylor (2)
A. B. McRae (6)
Shift Engineer (4)
Shift Supervisor

SL 050046

T A B L E O F C O N T E N T S

	<u>Page</u>
Introduction	1
Area "B" General Layout	2
Area "B" Fire Mains Schematic	3
EDC Manual Tripping Stations	4
EDC Hose House Locations	5
EDC Foam Buggy Locations	5
EDC Monitor Nozzle Locations	5
MC Manual Tripping Stations	6
Per-Tri Manual Tripping Stations	7
Per-Tri Hose House Locations	7
Per-Tri Ansul Buggy Locations	7
EC Manual Tripping Stations	8
EC Hose House Locations	8
EC Ansul Buggy Locations	9
EC Monitor Nozzle Locations	9
V.C. Monitor Nozzle Locations	9A-9B
General Fire and Explosion Rules	10
General Area Fire Protection System Rules	12
Responsibilities of Automatic Sprinkler Company	14
Plant Fire Pumps	15
Instructions for Care and Maintenance	16
Area Fire Extinguishers	26
General Description - EDC Facilities	28
General Description - MC Facilities	34
General Description - Per-Tri Facilities	38
General Description - EC Facilities	42
General Description - V.C. Facilities	46
Glossary	49

PRODUCTION AREA "B" FIRE PROTECTION

This manual presents a general description of the fire protection facilities within the confines of Production Area "B". This information is to be used for general indoctrination of operating personnel and supervisors. For specific or detailed information concerning any part of the area fire protection facilities, the manufacturer's instruction booklets and drawings should be consulted.

The fire protection facilities for Production Area "B" will be considered in a number of smaller areas. Thus, each production unit will make up an area. Following is a breakdown of Area "B" into smaller areas:

EDC Plant - - - - - Area I

MC Plant - - - - - Area II

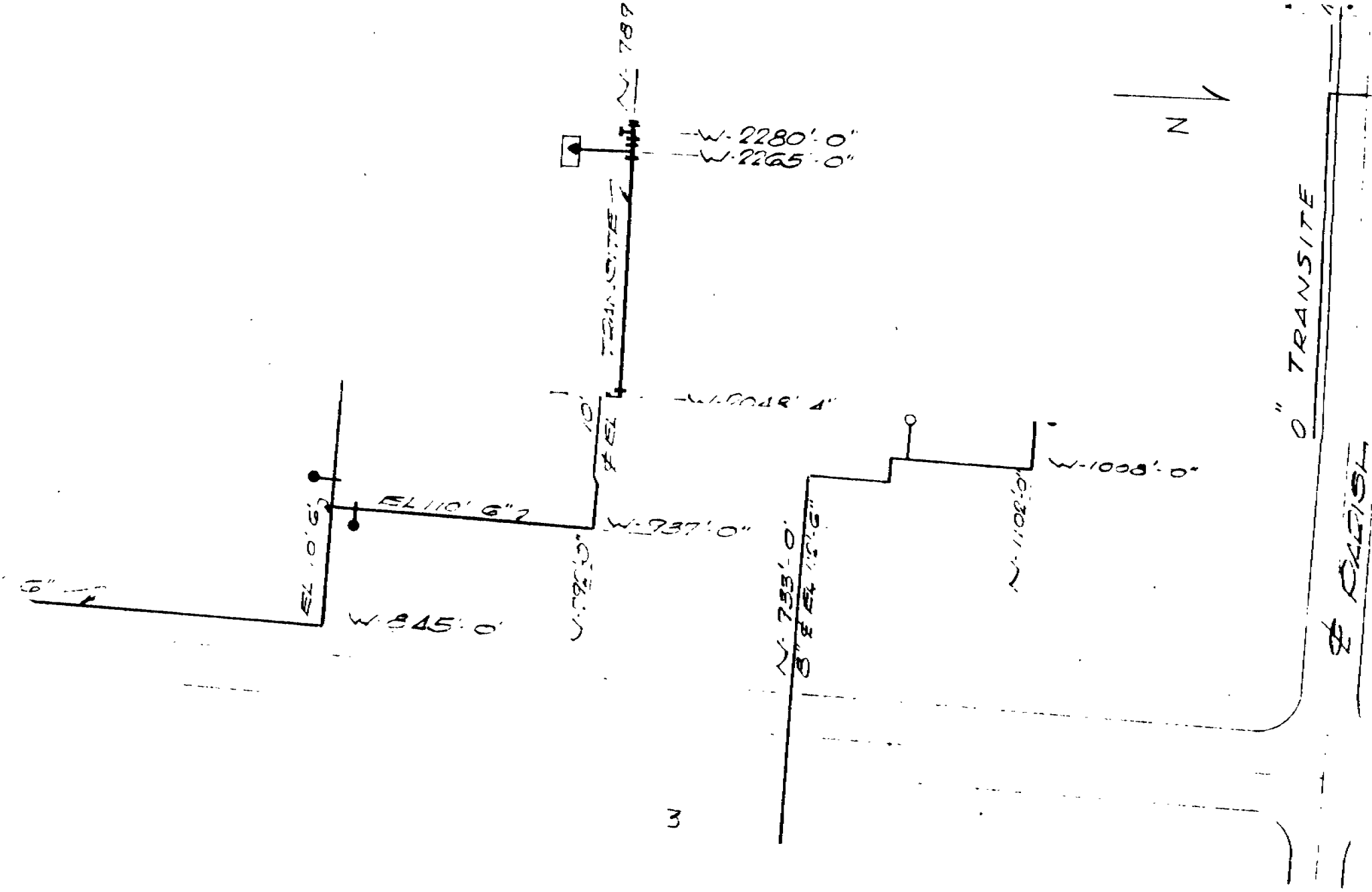
Per-Tri Plant - - - - - Area III

EC Plant - - - - - Area IV

VC Plant - - - - - Area V

All future production units will be numbered according to addition to the area.

SL 050049



V.C. SPRINKLER SYSTEMS MANUAL TRIPPING STATIONS

V.C. Process Area:

1. One manual tripping station is located on each of the two Suprotex valves in the sprinkler house west of the process area.
2. One remote tripping station is located on the panel board inside the control building.

V.C. Cooling Tower Area:

1. One manual tripping station is located inside the sprinkler house north-east of the cooling tower. This is the same trip as for the E.C. cooling tower.

V.C. Day Tank Area:

1. One manual trip is located in the sprinkler house north of the day tanks.
2. One remote trip is located at the pipe rack intersection of ground level south-west of the HCl compressor building.

V.C. Sphere Area:

1. One manual tripping station is located inside the sprinkler house north of the #1 V.C. sphere.

V.C. Loading Rack Area:

1. One manual tripping station is located inside the sprinkler house north-east of the loading rack.
2. Two remote tripping stations on the loading rack (one each at the two east loading stations).

V.C. Hose House Locations:

1. A hose house is located southwest of the control building.
2. Fire hose is available in the sprinkler house north of the tanks.
3. Fire hose is available in the sprinkler house north of the sphere.
4. Fire hose is available in the sprinkler house northeast of the V.C. loading rack.

Monitor Nozzle Locations:

1. One nozzle is located north of the day tanks.
2. One nozzle is located north of the V.C. storage spheres.
3. One nozzle is located northeast of the loading rack.

Hydro-Shield Location:

1. There is a P.I. valve south of the hose house southwest of the control building which controls flow to the four Hydro-Shield nozzles between the process area and the furnace area.

GENERAL DESCRIPTION OF FIRE PROTECTION
FACILITIES IN THE VINYL CHLORIDE PLANT - AREA V

FIRE PROTECTION

Fire protection in the V.C. area is provided by dry chemical extinguishers and a sprinkler system.

There are small dry chemical extinguishers located throughout the V.C. process area. There is also a large buggy-type dry chemical extinguisher which is shared by V.C. and E.C. areas which is kept north of the control building. Also available for larger fires in a truck mounted dry chemical unit.

Water protection for the V.C. facilities is provided by six (6) separate sprinkler systems as provided by Automatic Sprinkler Corp. of America. (1-2) There are two sprinkler systems in the process area. These are interlocked such that if one is tripped the other also trips. The Suprotex valves for these systems are located in the valve house west of the process area. These systems may be tripped manually in the valve house or remotely by the manually operated switch on the lower south corner of the V.C. control board. They are also tripped automatically by Heat Activated Devices (H.A.D.'s) which are located throughout the protected area.

These systems when tripped provide .25 GPM/ft² of water protection. (3) The V.C. cooling towers are protected by the same system as the E.C.-HCl cooling tower which provides .5 GPM/ft² water protection in the V.C. cooling towers. (4) The V.C. day tanks are protected by a sprinkler system which may be activated by a manual trip in the valve house north of the tanks or by a remote trip located on the pipe rack corner southwest of the HCl compressor building. This system may also be activated by H.A.D.'s located in the day tank area. This system provides .25 GPM/ft² water coverage in the area. The day tanks are also protected by a monitor nozzle mounted just west of the sprinkler valve house. (5) The V.C. storage spheres are protected by a sprinkler system which provides .15 GPM/ft². This system is activated by a manual trip in the sprinkler valve house or by the H.A.D.'s located in the sphere area. The spheres are also protected by "Albi" which is a fire retardant insulating material which has been sprayed on the legs of the spheres and the bottom half of the spheres. This material swells up and retards the burn through of the metal in case of fire. The spheres are also protected by a monitor nozzle which is located west of the sprinkler valve house. (6) The V.C. loading rack is protected by a sprinkler system which provides .15 GPM/ft² coverage in the loading rack area. This system may be activated by a manual trip located in the sprinkler valve house or by either of two remote tripping devices located at each of the two loading stations on the east side of the rack. The loading rack is also protected by a monitor nozzle located just west of the sprinkler valve house.

There is also located in the vinyl area a Hydro shield header which is used to provide a water shield between the V.C. process area and the V.C. furnace area. This shield is a curtain of water about 25 feet high and 100 feet wide. The shield is used to isolate the process and furnace areas in case of a leak in the process area or in case of fire in either area. This system is put into service manually by opening the valve just south of the hose house which is located southwest of the control building.

All of these sprinkler systems are of the Suprotex valve type which is discussed in other areas of this manual. A procedure for flushing the firewater mains system is written which helps to ensure the workability of our systems in the event of emergency.

GLOSSARY

Buggy - Wheeled extinguisher.

Controlling Gate Valve - Fire main block valve immediately preceding suprotex deluge valve.

H.A.D. - Heat activated device.

Jockey Pump - Auxiliary fire pump.

Manual Tripping Station - Lever connected to suprotex deluge valve for manually opening deluge valve.

Nozzle - Monitor nozzle, hand operated.

Plug - Fire hydrant.

Post Indicating Valve - Block valve in fire main system, with indicated "Open - Close" position, used for fire main isolation.

Remote Station - Manual tripping station for deluge valve located away from sprinkler house.

Supervisory Air - Compressed air which keeps foam and sprinkler systems operative. A sudden rise in supervisory air pressure trips the deluge valve.

Suprotex Deluge Valve - Automatic valve which admits water and/or foam into the sprinkler system.

Thermo-Pneumatic Fire Detection System - System used to detect an abnormal rate-of-temperature rise and by mechanical linkage trip the deluge valve.