

Monsanto Chemical Company

Texas City, Texas

December 9, 1959

To: Plant Manager's Safety Board

J. E. Fox	G. D. Rucker
E. H. Jones	W. H. Slager
H. M. Keating	A. E. Withrow
J. G. McQuarrie	N. F. Wood
W. R. Nisbet	W. F. Zimmermann
J. S. Putnam	

Subject: Plant Nitrogen System Survey

At the October meeting of the Plant Manager's Safety Board, a special sub-committee consisting of R. L. Browning, C. L. Gilmore, and R. W. Rotzler was formed to review the recommendations of the Plant Engineering Department for improving safety of the plant nitrogen system. After reviewing the recommendations with J. B. Cook, they were essentially retained, with some modification of details.

The major safety problem with the nitrogen system is the possibility of cross-contamination. A secondary problem is that demand and/or use at times exceeds the supply, depleting system pressure. The second problem aggravates the first.

The philosophy behind these recommendations is:

- 1) to provide a first line of defense against cross-contamination within each area, at each point of use,
- 2) to provide a second line of defense against contamination of the plant system, at each area boundary, and
- 3) to improve general control on the use of nitrogen.

The recommendations -

Control within each area

- 1) Set up installation standards, applicable to all new work, for each of 3 categories:

- a. Hose stations. Each to be equipped with check valve, shutoff valve, bleeder, standard hose connection, and identifying sign or tape.
- b. Permanent connections to process, normally in use. Each point of use to be equipped with check valve and block valve.
- c. Permanent connections to process, not normally in use. Each point of use to be equipped with check valve and double block and bleed.

Responsibility: Division Engineering

- 2) Review existing installations, bringing them up to the standards or intent of the standards, dismantling unused or abandoned nitrogen piping, and correcting nitrogen line color coding, as necessary. Target, July 1, 1960.

Responsibility: each superintendent

Battery limit control

- 3) Revise connections into the plant system as follows (refer to dwg E-ST-143):

- a. At VCM, tie line 166-1½" into 166-3" instead of 166-4". In effect, VCM will be supplied by one branch from the plant system instead of two.
- b. For VCM storage area supply, tie line 166-2" into 173-4" instead of 2" G-FE2-59 (area system).
- c. At AN, tie line 173-2" (south side of area) into 19-4" Gn 4-9 instead of 173-4". Then AN will be supplied by one branch from the plant system instead of two.
- d. For AN storage area supply, tie line 173-1" into 166-2" (on south center street) instead of 20-1" Gn 4-8 (area system).
- e. In the south storage area, eliminate the 1" line to the pilot plant, no longer in service, and 2 hose connections off the 2" line to 20T46-3.

Responsibility: superintendent of area "owning" line involved

- 4) Provide battery limit control where the following areas connect into the plant system:

- a. Department 18
- b. Department 31 (except rundown tanks and 31T17-2)
- c. Department 19-20
- d. Department 21-22-23
- e. Pilot plant
- f. VCM storage
- g. AN storage

Estimated cost is about \$20,000.

Responsibility: superintendent (or equivalent) of using area

- 5) Battery limit control to be essentially as shown on attached sketch.

General Control

- 6) Replace 3 FI's in Department 17 on lines 166, 170, and 173 with FR-PR's.

Responsibility: superintendent for Department 17

- 7) Reestablish the practice of informing Department 17 chief operator of any substantial change in N₂ usage.

Responsibility: all superintendents

- 8) Require that no changes in the nitrogen system (including changes within areas) be made without the knowledge and prior approval of the Plant Engineering Department (through the Superintendent of Plant Engineering Design). This is necessary as a control on installation standards and as a means of keeping drawings up-to-date.

Responsibility: all superintendents

R. L. Browning /rak
R. L. Browning

C. L. Gilmore /rak
C. L. Gilmore

R. W. Rotzler
R. W. Rotzler

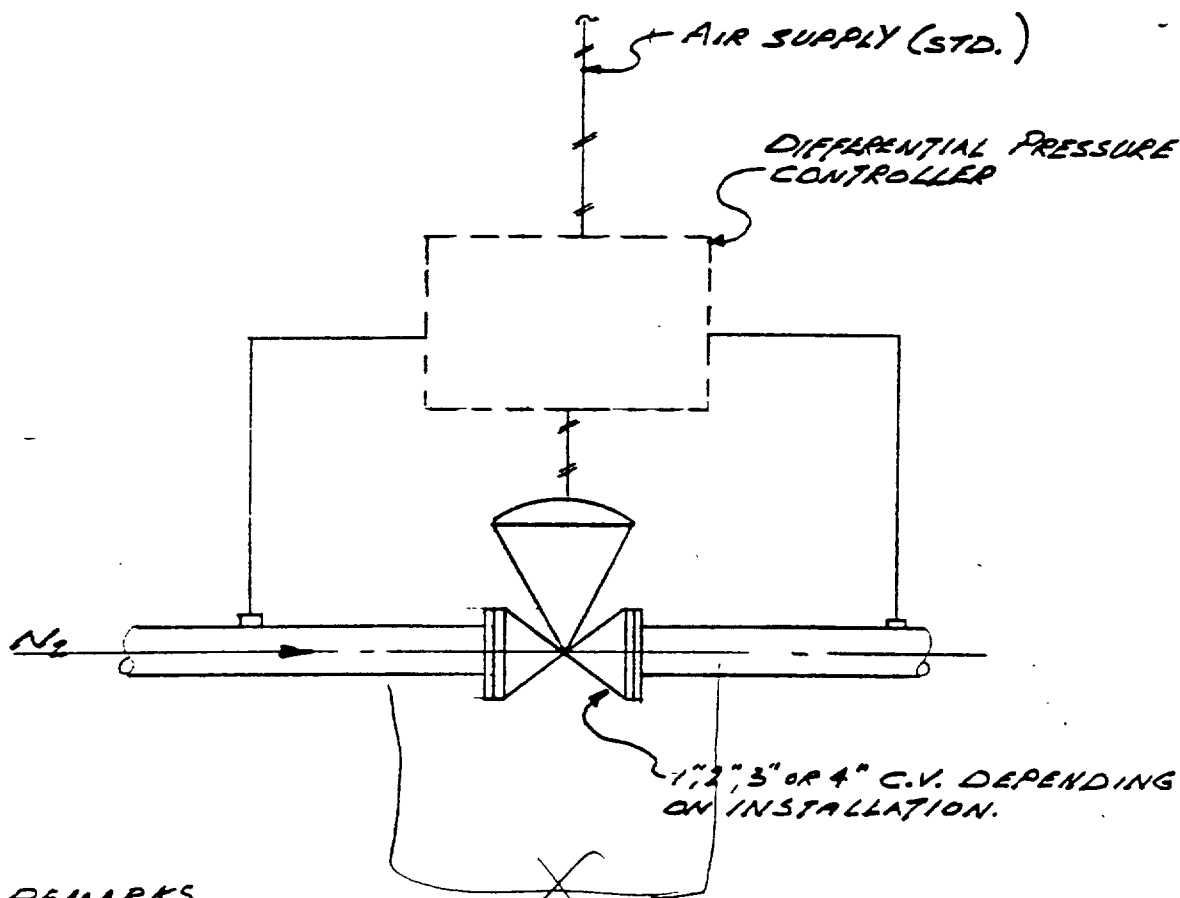
/njm
Attach.

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REMARKS

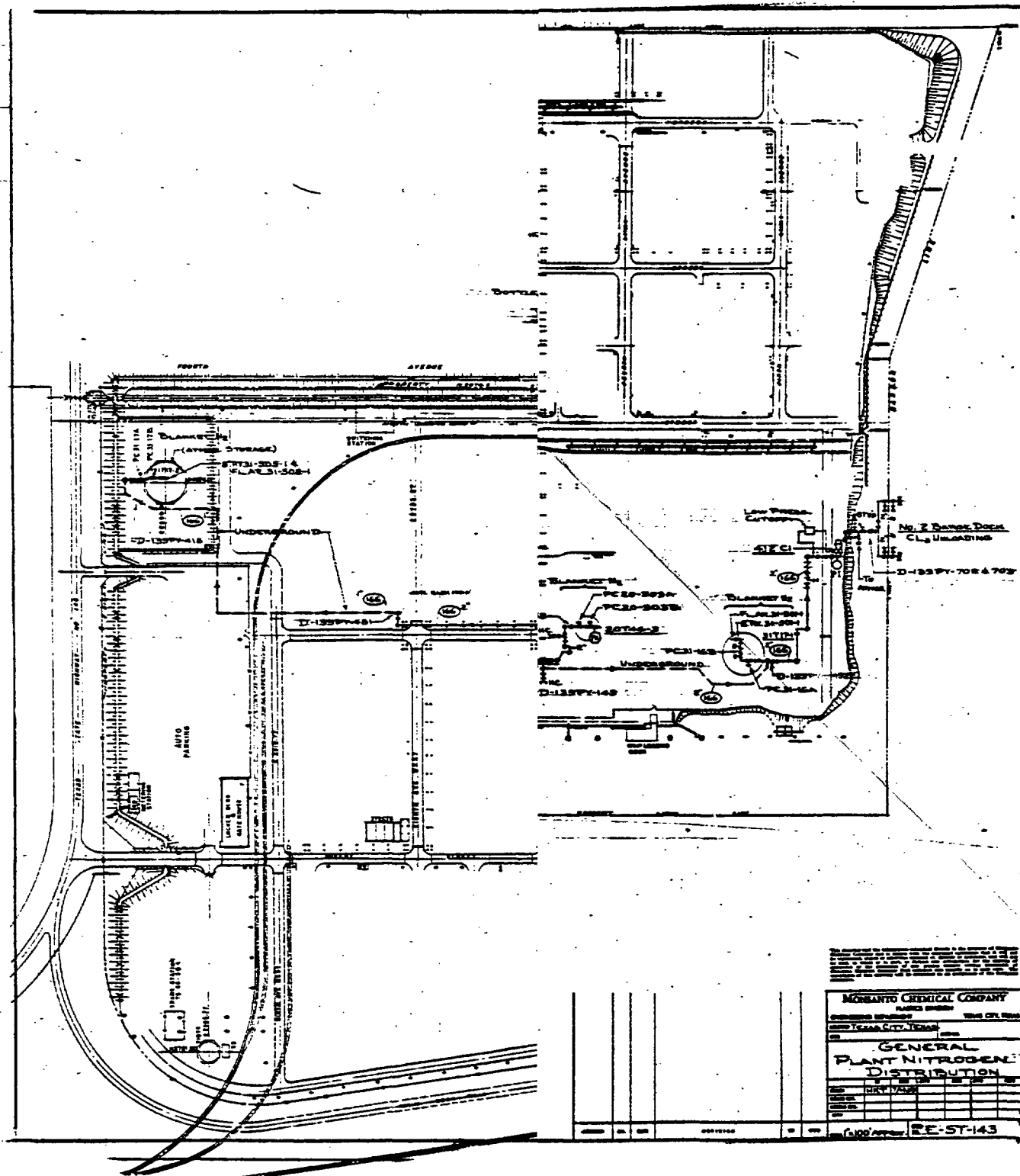
1. VALVE HAS THROTTLING ACTION - NOT ON-OFF,
2. VALVE CLOSURES AT 0 DIFFERENTIAL; VALVE IS DIFFERENTIAL CREATING DEVICE.
3. EACH INSTALLATION WILL HAVE BLOCK VALVES AND BY-PASS ARRANGEMENT - STD. C.V. ARRANGEMENT.

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APPROVAL	NO.	DATE	REVISION	C'D
DRAWN JBC			MONSANTO CHEMICAL COMPANY	
CHECKED			PLASTICS DIVISION	
APPD			ENGINEERING DEPARTMENT TEXAS CITY, TEXAS	
SCALE NONE			SCHEMATIC OF ISOLATION VALVE FOR N ₂ DISTRIBUTION SYSTEM	
			LOCATION	
			AREA	
			ASTM NO.	
			DWG NO.	



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