

AIRPOL VERSION 78.2

## AIRPOL INPUT DATA

&lt; 1-10 &gt;&lt; 11-20 &gt;&lt; 21-30 &gt;&lt; 31-40 &gt;&lt; 41-50 &gt;&lt; 51-60 &gt;&lt; 61-70 &gt;&lt; 71-80 &gt;

|                    |       |        |        |      |     |       |        |     |    |     |    |   |
|--------------------|-------|--------|--------|------|-----|-------|--------|-----|----|-----|----|---|
| VCM RELEASE 2-2 79 |       |        |        |      |     |       |        |     |    | 15. | 11 | 1 |
| 44.                | 14.83 | 0023   |        |      |     | 1000. | 10000. | 100 | 2  | 1   |    |   |
| 61.3               | 62.5  | 61200. | 68000. | 163. | .50 | 50.   | 0.     | 0.  | 0. |     |    |   |
| 61.3               | 62.5  |        | 61560. | 163. | .50 | 50.   | 10.    | 0.  |    |     |    |   |
| 4.0                | 9.0   |        |        | 2    |     |       |        |     |    |     |    |   |

&lt; 1-10 &gt;&lt; 11-20 &gt;&lt; 21-30 &gt;&lt; 31-40 &gt;&lt; 41-50 &gt;&lt; 51-60 &gt;&lt; 61-70 &gt;&lt; 71-80 &gt;

TOTAL CARDS PROCESSED = 5

VCM RELEASE 2-2 79

AIR POLLUTION PREDICTION PROGRAM - MULTIPLE STACK VERSION

PROGRAM USED HOLLANDS METHOD TO CALCULATE EFFECTIVE STACK HEIGHT

PROGRAM USE PASQUILL'S METHOD TO CALCULATE CONCENTRATIONS

CONCENTRATION VALUES ARE BASED ON 15. MINUTE TIME INTERVALS

|                      |              |       |
|----------------------|--------------|-------|
| AMBIENT TEMPERATURE, | DEG F        | 44.0  |
| ATMOSPHERIC PRESSURE | PSIA         | 14.83 |
| WIND SPEED           | MILES PER HR | 9.00  |

WIND DIRECTION (FROM)

SOUTH-EAST

STABILITY CLASS

MIXING DEPTH, METERS 2000.

DELTA DOWNWIND, FT 100.

DELTA CROSSWIND, FT 20.

BASE TIME MINUTES 15.0

CONCENTRATION TIME-AVERAGING FACTOR 1.000

|                                 |              |           |         |
|---------------------------------|--------------|-----------|---------|
| STACK NUMBER                    |              | 1         | 2       |
| MOLECULAR WEIGHT OF STACK GASES |              | 61.30     | 61.30   |
| MOLECULAR WEIGHT OF CONTAMINANT |              | 62.50     | 62.50   |
| OUTPUT RATE OF STACK GASES,     | LBS PER HR   | 67999.9   | 61560.0 |
| OUTPUT RATE OF CONTAMINANT,     | LBS PER HR   | 61200.0   | 0.0     |
| STACK CONCENTRATION             | PPM(VOL/VOL) | 862720.00 | 0.0     |
| TEMPERATURE OF STACK GASES,     | DEG F        | 163.0     | 163.0   |
| DIAMETER OF STACK,              | FT           | 0.50      | 0.50    |
| EFFECTIVE STACK HEIGHT,         | FT           | 106.14    | 101.53  |
| HEIGHT OF STACK,                | FT           | 50.0      | 50.0    |
| STACK EXIT VELOCITY,            | FT PER SEC   | 706.77    | 639.83  |
| X COORDINATE OF STACK (ACTUAL), | FT           | 0.0       | 10.0    |
| Y COORDINATE OF STACK (ACTUAL), | FT           | 0.0       | 0.0     |
| DOWNWIND CO-ORDINATE OF STACK   | FT           | 0.0       | -7.1    |
| CROSSWIND CO-ORDINATE OF STACK  | FT           | 0.0       | -7.1    |

MAXIMUM CONCENTRATION AND ITS LOCATION:

86.4 / 701 PPM(VOL/VOL)  
 243293.687 MICROGRAMS/CUBIC METER

|                       |            |
|-----------------------|------------|
| X COORDINATE (ACTUAL) | -506. FEET |
| Y COORDINATE (ACTUAL) | 506. FEET  |
| DOWNWIND COORDINATE   | 800. FEET  |
| CROSSWIND COORDINATE  | 0. FEET    |

## TIME-AVERAGING FACTORS

TIME, MIN. FACTOR

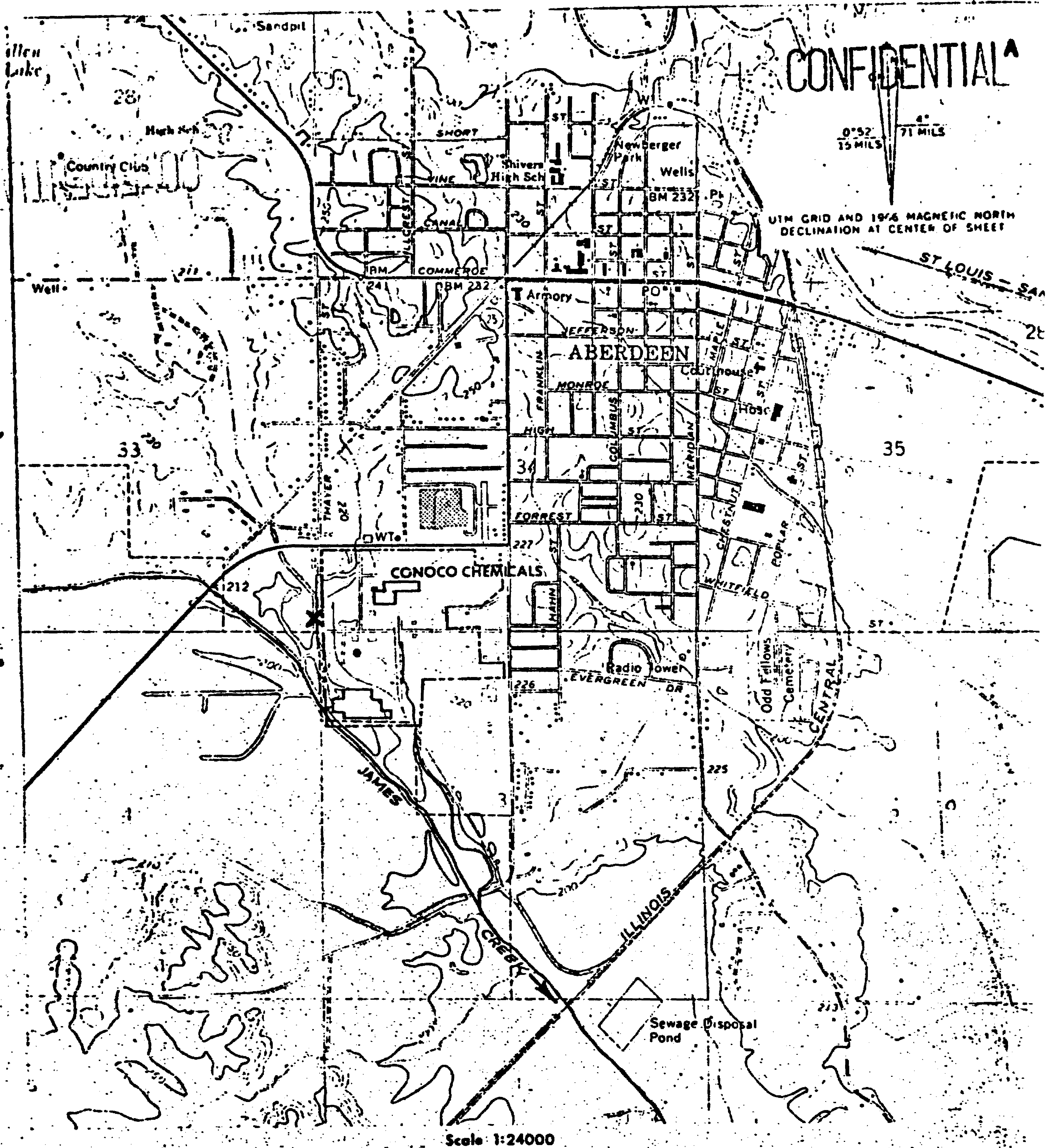
|      |      |
|------|------|
| 3    | 1.22 |
| 15   | 1.00 |
| 60   | 0.74 |
| 180  | 0.59 |
| 480  | 0.49 |
| 1440 | 0.18 |

| * STACK LOCATION |                  |
|------------------|------------------|
| BLANK            | < 9. PPM         |
| 1                | 9. TO < 18. PPM  |
| 2                | 18. TO < 27. PPM |
| 3                | 27. TO < 35. PPM |
| 4                | 35. TO < 44. PPM |
| 5                | 44. TO < 53. PPM |
| 6                | 53. TO < 62. PPM |
| 7                | 62. TO < 71. PPM |
| 8                | 71. TO < 80. PPM |
| 9                | 80. TO < 88. PPM |
| +                | 88. PPM          |

VAB.0001215236

| 1000. | -1000. | 0                                                        |
|-------|--------|----------------------------------------------------------|
|       |        |                                                          |
|       | -100.  |                                                          |
|       | 0.     |                                                          |
|       | 100.   |                                                          |
|       | 200.   |                                                          |
|       | 300.   |                                                          |
|       | 400.   | 1123333211                                               |
|       | 500.   | 1223456666543221                                         |
|       | 600.   | 11223456788988765432211                                  |
|       | 700.   | 11223456788999988765432211                               |
|       | 800.   | 111223456678999999876654322111                           |
|       | 900.   | 11122345677889999988776544322111                         |
|       | 1000.  | 111122334556677888888776655433221111                     |
|       | 1100.  | 11112233445566777788877766554433221111                   |
|       | 1200.  | 1111222334455566677777766655544332221111                 |
|       | 1300.  | 11112223334445556666666665554443332221111                |
|       | 1400.  | 11111222333344455555666665555444333322211111             |
|       | 1500.  | 111111222333444445555555555444443332222111111            |
|       | 1600.  | 111112222333344444445554444444443333222211111            |
|       | 1700.  | 1111112222223333444444444444444333322222111111           |
|       | 1800.  | 1111111222223333334444444443333333222221111111           |
|       | 1900.  | 111111112222223333333333333333333322222211111111         |
|       | 2000.  | 1111111122222223333333333333333333222222211111111        |
|       | 2100.  | 11111111122222222233333333333333222222221111111111       |
|       | 2200.  | 1111111111222222222222223222222222222221111111111        |
|       | 2300.  | 1111111111122222222222222222222222222211111111111        |
|       | 2400.  | 1111111111112222222222222222222222222211111111111        |
|       | 2500.  | 1111111111111222222222222222222222221111111111111        |
|       | 2600.  | 1111111111111112222222222222222222111111111111111        |
|       | 2700.  | 1111111111111111122222222111111111111111111111111        |
|       | 2800.  | 111111111111111111122222222222222222222222222222222      |
|       | 2900.  | 111111111111111111111222222222222222222222222222222      |
|       | 3000.  | 111111111111111111111112222222222222222222222222222      |
|       | 3100.  | 111111111111111111111111122222222222222222222222222      |
|       | 3200.  | 111111111111111111111111111222222222222222222222222      |
|       | 3300.  | 111111111111111111111111111112222222222222222222222      |
|       | 3400.  | 111111111111111111111111111111122222222222222222222      |
|       | 3500.  | 111111111111111111111111111111111222222222222222222      |
|       | 3600.  | 111111111111111111111111111111111112222222222222222      |
|       | 3700.  | 1111111111111111111111111111111111111122222222222222     |
|       | 3800.  | 111111111111111111111111111111111111111122222222222222   |
|       | 3900.  | 11111111111111111111111111111111111111111122222222222222 |
|       | 4000.  |                                                          |
|       | 4100.  |                                                          |
|       | 4200.  |                                                          |

CONFIDENTIAL



CONFIDENTIAL

0°52' 71 MILS

UTM GRID AND 1976 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

ST LOUIS - SAN

Scale 1:24000

VCM RELEASE 2-2-79  
 + MAX. CONCENTRATION: 88 PPM  
 • EMISSION SOURCE

VEM 3-1-79

|                                           |      |          |            |
|-------------------------------------------|------|----------|------------|
| ISSUE                                     | DATE | DRAWN BY | CHECKED BY |
| CONOCO CHEMICALS<br>ABERDEEN, MISSISSIPPI |      |          |            |
| VAB.0001215238                            |      |          |            |
| APPROVED                                  | NO.  |          |            |
| DATE                                      |      |          |            |

CONFIDENTIAL

CONTINUOUS MONITORING LOG SHEET

Location Large Reactor Area

Date

2-2-79

VAB.0001215239

| NAME         |    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| TIME         |    | 0700 | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 |
| Stream No.   | 1  | NS   | 1.4  | ✓    | ✓    | 1.2  | 1.2  | 3.9  | 1.3  | 4.5  | 5.1  | 1.5  | 1.2  | ✓    | 0.8  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 1-2-1        | 2  | 1    | 1.6  | 1.2  | ✓    | ✓    | 1.6  | 1.2  | 1    | 1.2  | 1.0  | 1.2  | ✓    | ✓    | 4    | 3.2  | 2.6  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 1-2-3        | 3  | 1    | ✓    | ✓    | ✓    | ✓    | 1.2  | ✓    | ✓    | 1.2  | 2.6  | 1.3  | 2.8  | 1.8  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 3-1-0        | 4  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | 1.8  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 7-3-4        | 5  | ✓    | ✓    | ✓    | ✓    | ✓    | 1.7  | 1.4  | ✓    | 1.2  | ✓    | 1.5  | 2.8  | 1.6  | 1    | 1    | 0.8  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 3-1-5        | 6  | 1.9  | 1.5  | 1.4  | 1.7  | 9    | 1.9  | 1.8  | ✓    | 1.3  | 15.5 | 1.1  | ✓    | ✓    | 1.3  | 1.8  | 1.8  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 3-1-0        | 7  | ✓    | ✓    | ✓    | ✓    | ✓    | 1.6  | ✓    | ✓    | ✓    | 1.2  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 3-1-0        | 8  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | 1.5  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 1-2-0        | 9  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | 1.4  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 1-2-1        | 10 | ✓    | ✓    | ✓    | 1.7  | 9    | ✓    | ✓    | 11   | ✓    | ✓    | 2    | 1.2  | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| Flame On     |    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| Plant Air On |    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |

VCM Tank Farm

Comments:

- 1

2

3

4

5

6

7

8

9

10
- 1

2

3

4

5

6
- South Unloading Station

Middle Unloading Station

North Unloading Station

Compressor Shed

Process Control Room

VCM Storage Tanks - 201 & 202

Respirator Air Inlet

Dryer Line #6, Blend Tanks, 1st Floor

Dryer Line #6, Activator, 1st Floor

Spare
1.

2.

3.

4.

5.

6.

CONFIDENTIAL

CONFIDENTIAL AND PROPRIETARY INFORMATION

Location Naval Base

Date 2 2 75

NAME

| TIME         | 0700 | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Stream No. 1 | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 23-1-0 2     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 22-2-0 3     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 24-0-0 4     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 24-0-0 5     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 24-0-0 6     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 23-1-0 7     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 22-2-0 8     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 22-2-0 9     | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 21-0-0 10    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| Flame On     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Plant Air On |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

New Reactor Module

- Top of 741
- Top of 742
- Top of 743
- Top of 744
- Seal Water Pumps, 1st Floor
- K. O. Tank Pumps, 1st Floor
- Rec. VCM Charge Pumps
- VCM Charge Pumps
- K.O. Tanks, 2nd Floor
- Seal Water Coolers, 1st Floor

CONTINUOUS MONITORING LOG SHEET

CONFIDENTIAL

Location Large Reactor Area

Date 2/22/79

VAB.0001215241

| NAME         |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| TIME         | Stream No. | 0700 | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 |
| 5-5-4        | 2          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 7-4-3        | 3          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 5-2-4        | 4          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 7-4-1        | 5          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 7-5-6        | 6          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 22-0-1       | 7          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 20-3-1       | 8          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 24-3-2       | 9          | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| 10-3-7       | 10         | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| Flame On     |            | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |
| Plant Air On |            | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    | ✓    |

Old Reactor Module

Comments:

- 1 401 VCN Receiver
- 2 Recovery System, 2nd Floor
- 3 Dump Sweco
- 4 3rd Recovery Compressor
- 5 Incinerator
- 6 Middle Receiver
- 7 Bottom of D-300
- 8 Top of D-400
- 9 Bottom of D-500
- 10 Top of D-600

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

CONFIDENT

TAIRPOL VERSION 78.2

# EAIRPOL INPUT DATA

< 1-10 >< 11-20 >< 21-30 >< 31-40 >< 41-50 >< 51-60 >< 61-70 >< 71-80 >

VCM RELEASE 2-10-79  
10. 14.97 2000. 10000. 100 2 1  
61.3 62.5 85200. 94670. 163. .50 50. 0. 0.  
61.3 62.5 87415. 163. .50 50. 10. 0.  
2.0 3.0 2

< 1-10 >< 11-20 >< 21-30 >< 31-40 >< 41-50 >< 51-60 >< 61-70 >< 71-80 >

TOTAL CARDS PROCESSED = 5

VCM RELEASE 2-10-79

AIR POLLUTION PRE-1CTION PROGRAM - MULTIPLE STACK VERSION

OPROGRAM USE - HOLLANDS METHO- TO CALCULATE EFFECTIVE STACK HEIGHT

OPROGRAM USE - PASQUILL'S METHOD TO CALCULATE CONCENTRATIONS

CONCENTRATION VALUES ARE BASED ON 15. MINUTE TIME INTERVALS

AMBIENT TEMPERATURE, DEG F 16.0  
ATMOSPHERIC PRESSURE PSIA 14.97  
WIND SPEED MILES PER HR 3.00

WIND DIRECTION (FROM)

NORTH-EAST

STABILITY CLASS

B

MIXING DEPTH,

METERS

2000.

DELTA DOWNWIND,

FT

100.

DELTA CROSSWIND,

FT

40.

BASE TIME

MINUTES

15.0

CONCENTRATION TIME-AVERAGING FACTOR

1.000

STACK NUMBER

1

2

MOLECULAR WEIGHT OF STACK GASES

61.30

61.30

MOLECULAR WEIGHT OF CONTAMINANT

62.50

62.50

OUTPUT RATE OF STACK GASES,

LBS PER HR

94669.9

87414.9

OUTPUT RATE OF CONTAMINANT,

LBS PER HR

85199.9

0.0

STACK CONCENTRATION

PPM(VOL/VOL)

882688.94

0.0

TEMPERATURE OF STACK GASES,

DEG F

163.0

163.0

DIAMETER OF STACK,

FT

0.50

0.50

EFFECTIVE STACK HEIGHT,

FT

261.26

245.64

HEIGHT OF STACK,

FT

50.0

50.0

STACK EXIT VELOCITY,

FT PER SEC

974.76

900.06

"X" COORDINATE OF STACK (ACTUAL),

FT

0.0

10.0

"Y" COORDINATE OF STACK (ACTUAL),

FT

0.0

0.0

DOWNDOWN CO-ORDINATE OF STACK

FT

0.0

-7.1

CROSSWIND COORDINATE OF STACK

FT

0.0

7.1

MAXIMUM CONCENTRATION AND ITS LOCATION:

02.50229 PPM(VOL/VOL)

183708.625 MICROGRAMS/CUBIC METER

"X" COORDINATE (ACTUAL) -1343. FEET

"Y" COORDINATE (ACTUAL) -1344. FEET

DOWNDOWN COORDINATE 1900. FEET

CROSSWIND COORDINATE 0. FEET

TIME-AVERAGING FACTORS

TIME, MIN. FACTOR

3 1.22

15 1.00

60 0.74

180 0.59

480 0.49

1440 0.18

\* STACK LOCATION

BLANK < 6. PPM

1 6. TO < 13. PPM

2 13. TO < 19. PPM

3 19. TO < 25. PPM

4 25. TO < 31. PPM

5 31. TO < 38. PPM

6 38. TO < 44. PPM

7 44. TO < 50. PPM

8 50. TO < 56. PPM

9 56. TO < 63. PPM

+ 63. PPM

VAB.0001215242

2000.

2000.

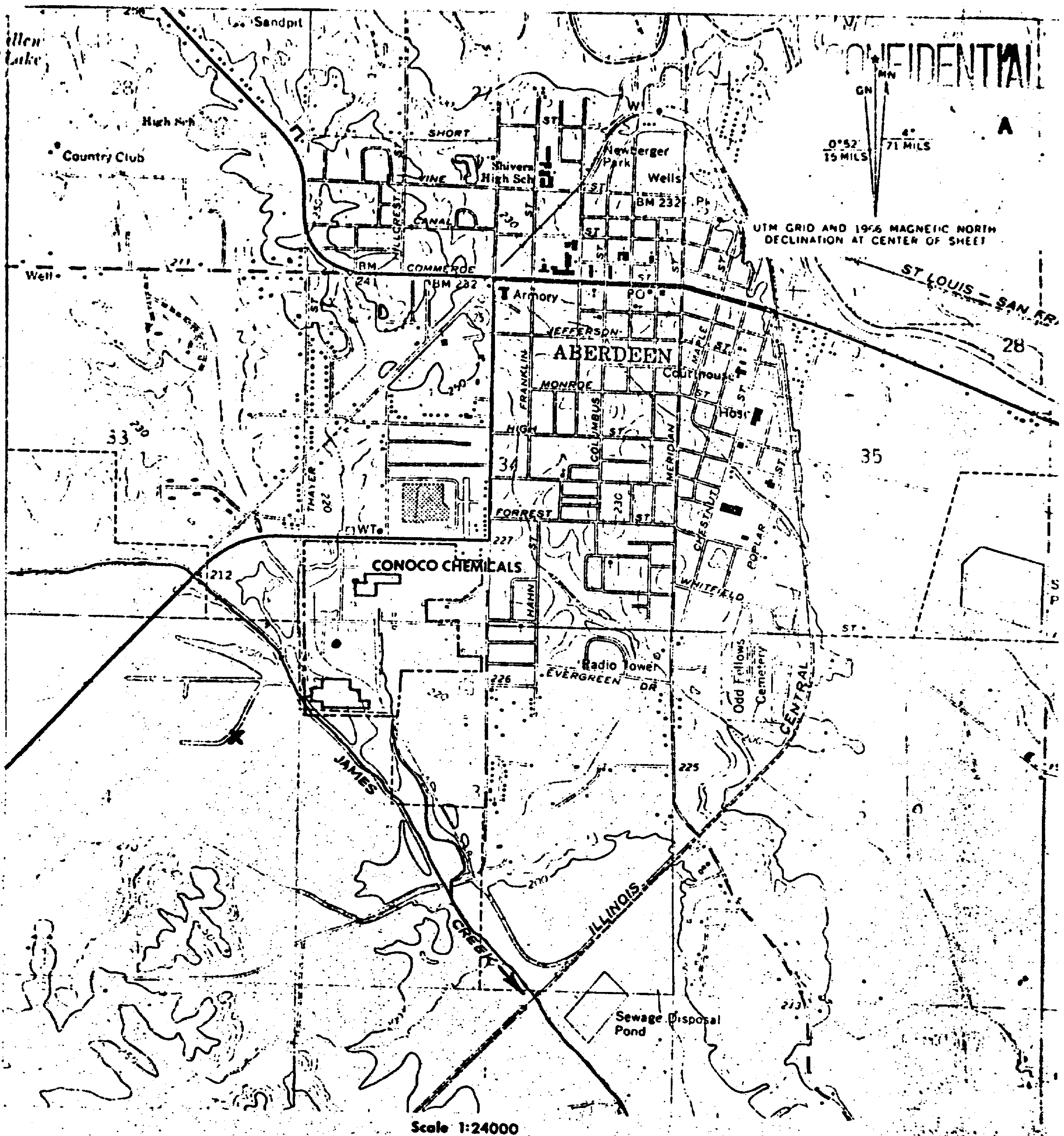
0

|       |   |                                              |  |
|-------|---|----------------------------------------------|--|
| 100.  | I |                                              |  |
| 200.  | I |                                              |  |
| 300.  | I |                                              |  |
| 400.  | I |                                              |  |
| 500.  | I |                                              |  |
| 600.  | I |                                              |  |
| 700.  | I |                                              |  |
| 800.  | I |                                              |  |
| 900.  | I | IIIIII                                       |  |
| 1000. | I | III 222222111                                |  |
| 1100. | I | III 2334444332111                            |  |
| 1200. | I | II 2234455554432211                          |  |
| 1300. | I | II 2334566676665433211                       |  |
| 1400. | I | III 2344567788877654432111                   |  |
| 1500. | I | III 233456778888877654332111                 |  |
| 1600. | I | III 23345677899999877654332111               |  |
| 1700. | I | III 2234556788999998876554322111             |  |
| 1800. | I | II 22344567789999999877654432211             |  |
| 1900. | I | III 2334556788999+ 9998876554332111          |  |
| 2000. | I | III 2233456678899999988766543322111          |  |
| 2100. | I | III 2233445667889999999887665443322111       |  |
| 2200. | I | III 22334455667889999999887665543322111      |  |
| 2300. | I | III 22334455667888999998876655443222111      |  |
| 2400. | I | IIII 223344556677888888887766554433221111    |  |
| 2500. | I | III 2223344556677888888887766554433221111    |  |
| 2600. | I | IIII 2223344556677788888887766554433221111   |  |
| 2700. | I | IIII 22333445566677777877776665544333221111  |  |
| 2800. | I | IIII 222333445556667777777766655443332221111 |  |
| 2900. | I | IIII 2223334455566677777766655443332221111   |  |
| 3000. | I | IIII 222333445556666777666655544433322211111 |  |
| 3100. | I | IIII 22233344555666666666655544433322211111  |  |
| 3200. | I | IIII 22233344555666666666555544433322211111  |  |
| 3300. | I | IIII 22233344455556666666555544433322211111  |  |
| 3400. | I | IIII 2223334445555555555555444433322211111   |  |
| 3500. | I | IIII 22233344445555555555554444333222111111  |  |
| 3600. | I | IIII 2223333444455555555544443333222111111   |  |
| 3700. | I | IIII 22233334444455555555444443333222111111  |  |
| 3800. | I | IIII 222233344444445554444443333222111111    |  |
| 3900. | I | IIII 222233344444444444444443333222111111    |  |
| 4000. | I | IIII 222233334444444444444443333222111111    |  |
| 4100. | I | IIII 22222333344444444444433332222111111     |  |
| 4200. | I | IIII 2222233333344444444333332222111111      |  |
| 4300. | I | IIII 22222333333444444333332222111111        |  |
| 4400. | I | IIII 222223333333333333332222111111          |  |
| 4500. | I | IIII 222223333333333333322222111111          |  |
| 4600. | I | IIII 222222333333333333322222111111          |  |
| 4700. | I | IIII 222222333333333333222221111111          |  |
| 4800. | I | IIII 222222333333333333222221111111          |  |
| 4900. | I | IIII 222222223333333332222221111111          |  |
| 5000. | I | IIII 222222223333333322222211111111          |  |
| 5100. | I | IIII 222222222233333322222211111111          |  |
| 5200. | I | IIII 222222222222222222222111111111          |  |

114B.0001215243

[illegible]

END OF DATA 2000. 0 VAB.0001215244



VCM RELEASE 2-10-79  
 + MAX. CONCENTRATION: 63 PPM  
 • EMISSION SOURCE

VEM 3-1-79

|                                           |      |          |            |             |
|-------------------------------------------|------|----------|------------|-------------|
| ISSUE                                     | DATE | DRAWN BY | CHECKED BY | APPROVED BY |
| CONOCO CHEMICALS<br>ABERDEEN, MISSISSIPPI |      |          |            |             |
| VAB.0001215245                            |      |          |            |             |
| APPROVED<br>DATE                          |      | NO.      |            |             |

CONTINUOUS MONI. DRING LOG SHEET

CONFIDENTIAL

Location

T Factor A-2

Date 2/10/79

NAME

| TIME         | 0700 | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Stream No. 1 | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 2            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 3            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 4            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 5            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 6            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 7            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 8            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 9            | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| 10           | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    | /    |
| Flame On     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Plant Air On |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

VCN Tank Farm

- 1 South Unloading Station
- 2 Middle Unloading Station
- 3 North Unloading Station
- 4 Compressor Shed
- 5 Process Control Room
- 6 VCN Storage Tanks - 201 & 202
- 7 Respirator Air Inlet
- 8 Dryer Line #6, Blend Tanks, 1st Floor
- 9 Dryer Line #6, Activator, 1st Floor
- 10 Spare

Comments:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

CONFIDENTIAL

2000

2-10-78

[illegible]

|    |                               |
|----|-------------------------------|
| 1  | Top of 741                    |
| 2  | Top of 742                    |
| 3  | Top of 743                    |
| 4  | Top of 744                    |
| 5  | Seal Water Pumps, 1st Floor   |
| 6  | K. O. Tank Pumps, 1st Floor   |
| 7  | Rec. VCM Charge Pumps         |
| 8  | VCM Charge Pumps              |
| 9  | K.O. Tanks, 2nd Floor         |
| 10 | Seal Water Coolers, 1st Floor |

CONTINUOUS MONITORING LOG SHEET

CONFIDENTIAL

Location Large Reactor Area

Date 2-10-79

VAB.0001215248

| NAME                   |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |      |       |       |       | VAB.0 |      |      |       |      |  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|------|-------|------|------|-------|-------|-------|-------|------|------|-------|------|--|
| TIME                   | 0700 | 0800 | 0900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800  | 1900 | 2000  | 2100 | 2200 | 2300  | 2400  | 0100  | 0200  | 0300 | 0400 | 0500  | 0600 |  |
| 1-1-11<br>Stream No. 1 | 1.7  | 1.9  | 1.9  | 1.8  | 1.7  | 2.8  | 1.7  | 2.0  | 2.0  | 0.9  | 2.0  | 1.1   | ✓    | ✓     | ✓    | ✓    | ✓     | ✓     | ✓     | ✓     | ✓    | ✓    | ✓     | ✓    |  |
| 1-3-14                 | 2    | 2.0  | 2.5  | 2.0  | 2.4  | 2.0  | 2.5  | 3.0  | 1.7  | 1.9  | 2.5  | (5.5) | 2.3  | (4.5) | 4.9  | 2.1  | 1.8   | (5.2) | (6.8) | 2.1   | 4.0  | ✓    | 2.0   | 1.0  |  |
| 2-4-8                  | 3    | 2.5  | 1.9  | 0.9  | 2.0  | 1.9  | 1.9  | 1.9  | 0.9  | 0.9  | 0.9  | ✓     | ✓    | ✓     | ✓    | ✓    | 1.0   | ✓     | ✓     | ✓     | ✓    | ✓    | ✓     |      |  |
| 1-1-18                 | 4    | 3.0  | 1.7  | 1.8  | 2.0  | 2.8  | 0.4  | 2.0  | 2.5  | 2.2  | 2.7  | (6.2) | 1.4  | (5.1) | 4.1  | 2.0  | (5.1) | (5.5) | 4.0   | 2.9   | 1.9  | ✓    | 1.1   | 1.0  |  |
| 2-0-12                 | 5    | 2.9  | 2.5  | 2.0  | 2.5  | 2.3  | 2.0  | 2.7  | 2.8  | 3.0  | 2.8  | 1.7   | ✓    | ✓     | ✓    | ✓    | ✓     | ✓     | ✓     | ✓     | ✓    | ✓    | ✓     |      |  |
| 2-2-14                 | 6    | 1.7  | 2.0  | 2.5  | 1.9  | 2.9  | 2.5  | 2.3  | 0.9  | 0.9  | 1.9  | ✓     | ✓    | ✓     | 4.3  | 2    | ✓     | ✓     | ✓     | ✓     | ✓    | ✓    | ✓     |      |  |
| 1-1-14                 | 7    | 2.5  | 3.0  | 2.5  | 2.5  | 3.0  | 2.7  | 2.3  | 2.5  | 0.9  | 1.9  | 1.1   | 1.4  | ✓     | ✓    | ✓    | ✓     | 2.0   | ✓     | ✓     | 3.1  | ✓    | ✓     |      |  |
| 1-1-14                 | 8    | 1.9  | 0.9  | 1.9  | 2.5  | 2.5  | 2.8  | 2.6  | 2.5  | 1.9  | 1.7  | 4.2   | ✓    | ✓     | ✓    | ✓    | ✓     | ✓     | ✓     | ✓     | 1.8  | 1.0  | (2.5) |      |  |
| 1-2-13                 | 9    | 2.0  | 1.9  | 0.9  | 2.0  | 1.9  | 2.0  | 2.1  | 2.5  | 2.0  | 2.8  | 3.8   | ✓    | ✓     | ✓    | 1.5  | ✓     | 1.0   | ✓     | 2.5   | ✓    | ✓    | ✓     |      |  |
| 1-2-11                 | 10   | 3.0  | 1.7  | 1.7  | 1.9  | 2.0  | 1.7  | 1.8  | 0.9  | 0.9  | 1.9  | ✓     | ✓    | ✓     | ✓    | ✓    | 1.0   | ✓     | ✓     | ✓     | ✓    | ✓    | ✓     |      |  |
| Flame On               |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |      |       |       |       |       |      |      |       |      |  |
| Plant Air On           |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |      |       |       |       |       |      |      |       |      |  |

Old Reactor Module

- 1 401 VCN Receiver
- 2 Recovery System, 2nd Floor
- 3 Dump Sweco
- 4 3rd Recovery Compressor
- 5 Incinerator
- 6 Middle Receiver
- 7 Bottom of D-300
- 8 Top of D-400
- 9 Bottom of D-500
- 10 Top of D-600

Comments:

- 1. B Comp Seal. W.O. IN
- 2.
- 3.
- 4.
- 5.
- 6.

CONFIDENTIAL

CONOCO CHEMICALS ABERDEEN PLANT

SAFETY AND HEALTH MANUAL

SUBJECT:

EMERGENCY PLAN

NO: SH-I-1-9

EFFECTIVE DATE: 3/15/79

SUPERSEDES: 6/1/78

PAGE: 1 OF 15

APPROVED BY: *C. L. Miller*

TITLE: Plant Manager

References:

**PURPOSE:** Due to the nature of the chemical process industry and specifically, the Aberdeen PVC Plant, the potential for a vapor release and/or fire can only be minimized by conscientious operation of the plant. Emergency conditions caused by human error or equipment failure can ultimately lead to serious personal injury, loss of life, or severe damage to plant equipment. This plan is therefore being issued to:

1. 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; and,
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.

DEFINITION OF PLANT EMERGENCIES

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

A "Vinyl Chloride Emergency" is any massive release of vinyl chloride. This does not include minor leaks of temporary concentrations above permissible exposure limits.

IMMEDIATE ACTIONS TO BE TAKEN IN EVENT OF A PLANT EMERGENCY

Immediate actions are the direct responsibility of the Emergency Officer. In his absence they are the responsibility of the Emergency Brigade Chief (Shift Supervisor).

**IMMEDIATE ACTIONS TO BE TAKEN IN EVENT OF A PLANT EMERGENCY (Cont.)**

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 in charge of the affected area(s). The action taken may range from handling the emergency with personnel present at the time to full alert of the emergency organization. In general, the following actions, as applicable, are required during an emergency:

**1. 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 66 on the plant telephone system. In each case, the caller shall clearly communicate the location and nature of the problem to control room personnel (this information must be recorded on the forms provided). The Operator who takes the message shall then activate the appropriate alarm by depressing that button on the emergency alarm system control panel. Once the alarm system has been activated, that operator shall dial 81 on the plant telephone system and give the nature and location of the emergency in a clear, calm, and distinct manner. This message must be given a minimum of three (3) times in order that plant personnel understand the nature and location of the problem.

**Plant Emergency Alarm Codes**

The plant emergency alarm siren is a dual tone type which produces a high and low pitch simultaneously during normal operation. Signal coding is achieved by alternately turning the siren motor on and off, and by opening and closing the air supply tubes feeding the rotating (sound producing) elements of the siren. Following on page 3 is a graphical illustration of the alarm codes used in the Aberdeen Plant.

Whenever a plant emergency occurs, the nature of the problem will be communicated to the plant via the siren and the plant P. A. system as noted above. If the conditions require a general plant evacuation, the evacuation signal should be given only after the fire or vapor alarm. This allows the evacuation signal to act as a tornado warning when used by itself as noted in the storm warning section below.

**2. Use the Proper Emergency Equipment**

All employees directly engaged in correcting emergencies involving VCM liquid/or vapor concentrations in excess of permissible exposure limits (1 ppm averaged over an 8-hour period with excursions to 5 ppm averaged over a 15 minute period) shall be equipped with personnel protective equipment which is appropriate for the hazards involved. In the case of VCM emergencies, the location of the spill must be evaluated prior to action on the part of any employee. If the discharge is occurring from a reactor relief line, Scott Air Paks may be the only personnel protective equipment required. In the case of major discharges which occur in and around electrically driven process equipment, the Supervisor in charge may require his personnel to also wear full fire turnout gear to maintain safety in

# PLANT EMERGENCY ALARM CODES

**Vapor**  
(Steady Signal)

HIGHER FREQUENCY (PITCH)  
LOWER FREQUENCY (PITCH)

**Fire**  
(Wailing Signal)



**Evacuation**  
(Undulating Pulsed/  
Dual Tone Signal)



**All Clear**

Dial 63 (Steady Signal  
On Plant P.A. System)



## 2. Use the Proper Emergency Equipment (Cont.)

the particular emergency operation. Whenever emergency situations occur where liquid (VCM or propane) is involved, personnel must wear special heat and liquid resistant gloves to protect from freeze burns and potential flash fires.

## 3. Evacuate Non-Essential Personnel from Danger Areas

Always evacuate non-essential and all personnel not properly equipped with personnel protective equipment which is appropriate for the hazards present. Such 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 VCM vapors into the primary evacuation areas, evacuated 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 by VCM vapor, evacuated personnel will be moved to a safe location along the property line north of the plant. ALL EVACUATIONS MUST BE PROMPT AND ORDERLY!

### PRIMARY EVACUATION AREAS

Vinyl Area - At pad north of the control room.

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

Maintenance (including Warehouse, - Main shop.  
Yard and Safety)

Transportation - East of Lab and Compound/Plasticizer as noted above.

Off-Shift Yard and Mechanics - At pad north of vinyl control room.

Office Personnel - Lobby in each office area.

Contractors - North of main gate.

## 4. Account for all Personnel

When personnel have assembled in the primary evacuation areas, head counts must be made as noted in EVACUATION OF WORK AREAS below. 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 during search and rescue operations.

## 5. Rescue Trapped Personnel

Search and rescue operations during VCM and propane vapor releases and fires must be attempted only with fire turnout gear due to the likelihood of vapor ignition causing a flash fire or explosion.

**6. Activate Fire Protection Systems**

Activate and utilize Emergency Brigades, support personnel present (under the direction of the Mechanical Superintendent as noted in the EMERGENCY ORGANIZATION, SPECIFIC DUTIES section below) and the Emergency Organization as necessary to prevent or extinguish fires, explosions, or chemical exposures. Activate the Deluge System and/or fire monitors as follows:

Deluge System - These systems should be activated whenever emergencies which require Deluge System operation include but are not limited to the following:

- Serious leaks from rotating equipment seals;
- Abnormal discharges of flammable material from process piping, valves, and relief systems.
- Fires resulting from either of the above.

Fire 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 VCM vapor, or during periods when the Deluge System is out of service. During VCM 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 all other operating equipment. (Due to high volume demand of the Deluge Systems, fire streams from monitor nozzles may not reach the top of the relief lines with both systems in operation.) If supplemental fire water is needed or in cases where there is no permanently installed fire protection system (i.e., the initiator freezers), the Supervisor should utilize the portable fire monitor and hose reel stored in the Emergency Equipment Station.

- 7. STOP ALL HOT WORK!** Motor vehicles, portable transfer systems, the incinerator, welding machines and any other source of ignition must be positively shutdown immediately whenever the plant emergency alarm is activated! Shutdown and secure operations as required to prevent further injury to personnel or damage to equipment.

**8. Stop flow of:**

- A. Flammable materials feeding fires or potential fires, including dryer and incinerator gas burners.
- 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 can occur only on direct orders from the Emergency Brigade Chief, the Emergency Officer, or the Safety Director.

**9. Utilize outside assistance and notify the community as required.**

- A. Aberdeen Fire Department.....369-9551
- B. Ambulance.....369-2455

9. (Cont.)

- C. Hospital Emergency Room.....369-2455
- D. Dr. R. E. Coghlan (office).....369-2411  
(home).....369-4418
- E. Dr. J. N. Turnage (office).....369-2411  
(home).....369-6311
- F. Aberdeen Police Department.....369-6454

Have local police warn adjacent plants and residential areas if they are threatened by fire, flammable material releases or toxic gasses (chlorine or hydrogen chloride (HCl) as a result of a VCM fire). Plant Manager approval is required prior to contacting the police department unless the delay increases the danger to the community (see PUBLIC ALERT below).

10. Activate the EMERGENCY ORGANIZATION as required.

11. In the event of a power failure, avoid venting of the large reactors by utilizing the Emergency AMS Kill System on each reactor so equipped. That failing, kill the reactions by utilizing the Nitric Oxide Kill System. In all cases, operators using the Nitric Oxide Kill Systems in the field must have donned a rocket propellant gas mask and checked for a positive seal prior to working with any part of the Nitric Oxide System.

12. Locate the boundaries of contaminated areas during vapor releases. This will be done by the Safety Supervisor during weekdays and by the Vinyl Shift Supervisor at all other times.

## RESPIRATORY PROTECTION REQUIREMENTS

Plant emergencies involving VCM and Chlorine shall require the use of Scott Air Paks. Emergencies involving propane and other materials require the use of Scott Air Paks only if concentrations of vapor might decrease the oxygen content of the leak area to levels which will not support life.

## EMERGENCY ORGANIZATION

Please refer to the attached EMERGENCY ORGANIZATION Chart 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.

Activation - Whenever a emergency occurs in the plant, the Shift Supervisor responsible for the affected area(s) will be in charge of all immediate actions, including activation of the Emergency Organization if and as required. During normal office hours, the organization shall be activated by the Shift Supervisor by announcing "ACTIVATE EMERGENCY ORGANIZATION" three (3) times over the P.A. system. During off-hours and weekends, the Shift Supervisor shall instruct the Plant Guard to "call-out" the Emergency Organization. The Guard shall then call all personnel on the left hand side of the Emergency Organization Call List (last page, Page 15) and state the nature of the emergency. Personnel called are then responsible for contacting

**EMERGENCY ORGANIZATION****Activation (Cont.)**

the person listed to the right of their name on the Emergency Organization Call List. (All personnel whose names appear on this list shall maintain a copy of the call list at their home.) In the event that a call is not answered, the caller must then call the next person to the right until someone is contacted. Once contacted, people on the Emergency Organization Call List are to immediately come to the plant and assume their emergency responsibilities.

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

**1. Management Group**

The Management Group will consist of the Plant Manager, the Plant Superintendent and the Industrial Relations Manager. The Acting Plant Manager will serve as the executive head of the Emergency Organization in the absence of the Plant Manager. The duties of the Management Group are:

- A. Provide leadership for the disaster group and coordinate all activities connected with control of the situation.
- B. Promptly release factual information to the news media, preventing erroneous reports and creating the best possible public image for the company.
- C. Notify Corporate Management and keep them up to date on the situation.
- D. Notify next of kin in cases of serious or fatal injuries.
- E. Determine what information may be given out by the Switchboard Operator.
- F. Maintain close communication with the Emergency Officer.

**2. 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. The duties of the Emergency Officer are:

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

**EMERGENCY ORGANIZATION (Cont.)****3. Assistant Emergency Officer**

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

**4. 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:

- A. Provide security protection for all plant property and material. This will include procurement and assignment of Guards, if needed.
- B. Dispatch personnel to the road blocks so that authorized personnel may be identified and allowed into the area. The unauthorized personnel must be turned back in a firm, tactful manner.
- C. Provide emergency supplies that might be needed during the emergency.
- D. Monitor VCM concentrations in the area of the secondary evacuation area southwest of the guardhouse.

**5. 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 Fire 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 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:

- A. Assist Department Heads in training personnel in the functioning and employee acceptance of the plan.
- B. Organize and regularly train the Emergency Brigades in fire control methods and emergency actions.

**EMERGENCY ORGANIZATION****5. Safety Director (Cont.)**

- C. Organize refresher courses for the First Aid Personnel.
- D. Make sure that all plant personnel are exposed to basic fire fighting techniques pertaining to the use of portable extinguishers, emergency alarm systems, and evacuation procedures. This will normally occur on a every other year basis for all maintenance, operations, and laboratory personnel, and biannually for Emergency Brigades. All new hires will receive basic fire fighting training within 120 days of employment.
- E. Insure that sufficient fire fighting and emergency equipment is maintained in operable condition at all times.
- F. Conduct Emergency Plan review and drills at least annually.

**6. Fire Chief**

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

The Fire Chief will usually be the first individual in authority to recognize the existance 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 Vinyl Shift Supervisor, acting as the Fire Chief, will initiate the necessary action to put this plan into effect.

The specific duties of the Fire Chief in time of emergency are listed under "IMMEDIATE ACTIONS---" section above.

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

**7. Assistant Fire Chief**

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

- A. Make sure that all of the Fire Brigade members in his area leave for the scene of the emergency.
- B. Report to the Fire Chief for instructions.

**EMERGENCY ORGANIZATION (Cont.)****8. 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:

- A. Organize and direct damage control work as directed.
- B. He will be in charge of all personnel reporting to the Shop Area.
- C. Assist the Emergency Officer in any way necessary to bring the situation under control.
- D. Establish relations with outside utility companies and work closely with them, maintaining or restoring service as soon as possible.
- E. Notify the Security Officer of the names of those people in the plant under his direction and of any who have been called out.
- F. Keep the Emergency Officer informed of his whereabouts at all times.
- G. Organize and direct clean-up and repair crews for the purpose of getting the plant back into operation as soon as possible.

**9. First Aid Chief and Assistants**

The Nurse will act as the First Aid Chief and will report to the Emergency Officer. The Laboratory Lead Technician will act as an Assistant. The alternate for the Nurse will be the Laboratory Shift Supervisor.

- A. The First Aid Chief and Assistants will go immediately to the emergency scene whenever the Emergency Organization is activated or there is a call for First Aid help.
- B. Give First Aid to the injured.
- C. Advise the Communications Chief if ambulances are needed.
- D. Keep the Management Group and the Security Officer informed of injuries, including the names and estimates of severity.
- E. Transport injured personnel to ambulance.

**10. Messengers**

The Messengers will report to the Emergency Organization member to whom they are assigned.

EMERGENCY ORGANIZATION (Cont.)

11. Fire Pump Supervisor

During first shift on weekdays, the Safety Inspector will act as the Fire Pump Supervisor. When alerted by emergency signals, he will report to the Fire Pump House. He will keep all four (4) pumps running until the "ALL CLEAR" is sounded. He will be assisted by the Tool Room Man. In the Tool Room Man's absence, the Day Shift Mechanic will assist the Safety Inspector. At all other times, the position of Fire Pump Supervisor will be filled by the on-duty Shift Mechanic. Whenever there is no coverage by any of the above, the Plant Guard shall insure that all fire pumps are operating. The Vinyl Shift Supervisor shall be responsible for the shutdown of the fire pumps when the emergency condition has been corrected.

12. Emergency Brigades

There are two hose crews. The objectives of these crews 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 scene immediately when summoned by alarms, the Shift Supervisor, or when the Emergency Organization is activated. The crews will consist of the following:

#1 Emergency Brigade

Emergency Brigade Chief -

Vinyl Shift Supervisor  
Chief Operator  
Dryer "A" Operators (2)  
Dryer Utility

#2 Emergency Brigade

Assistant Emergency Brigade Chief - Compound Shift Supervisor

Automatic Bag Operator  
Automatic Bag Utility  
Line I Bagging Utility  
Line III Mill Utility

13. Support Group

The Support Group will consist of all Maintenance, Warehouse and Yard Personnel (Supervisors and Hourly). They will report to the Maintenance Shop and be under the orders of the Mechanical Chief. The Maintenance Mechanical Superintendent will stay in the shop with the personnel. The Mechanical Chief will contact him for assistance.

14. Guards

A. Direct ambulance and other vehicles to the emergency scene.

B. Stop all other vehicle traffic into the plant and have it park without blocking the gate.

C. Phone the Emergency Organization when instructed to do so by the Vinyl Shift Supervisor, the Compound Supervisor, or their designees.

CONFIDENTIAL

## EMERGENCY ORGANIZATION

### 14. Guards (Cont.)

- D. Monitor fire pump operation as noted in 11. above.
- E. Record wind direction and speed, barometric pressure, time and outside temperature at time of release.

### 15. Communications Chief

- A. The Director of Administrative Services will act as the Communications Chief.
- B. Establish the gatehouse switchboard as an emergency and communications headquarters. The Communications Chief shall also prearrange for a Secretary to act as the Switchboard Operator. Several alternates should be planned. The Switchboard Operator should be contacted immediately following receipt of the call to activate the Emergency Organization.
- C. Handle all incoming and outgoing calls.

## EVACUATION OF WORK AREAS

As noted in the IMMEDIATE ACTIONS... section of the plan, all personnel being evacuated from their work area due to fire or large uncontrolled vapor release shall shutdown the equipment for which they are responsible and proceed to the PRIMARY EVACUATION AREAS for a head count. (To expedite the head count, each department shall maintain a current list of personnel by shift grouping on a clipboard in the Supervisor's office. A listing of office personnel shall also be maintained in or near the lobby of each office area.) If conditions warrant further action to avoid danger, evacuated personnel shall proceed to the SECONDARY EVACUATION AREA, southwest of the plant guardhouse. In all cases, evacuated personnel must assemble by departmental grouping for a head count. In the event that this area is unsafe, all personnel must assemble at a safe location south of Highway 25 along the north plant property line. Supervisors must designate non-emergency personnel to act in their place for head count purposes if the emergency condition requires the activation of the Emergency Brigades or Emergency Organization.

Wind direction at the time of a gas or vapor emergency will play an important role in the choice of escape routes. Evacuation routes should always be at right angles to the wind (cross-wind). Use the wind socks located on the silos or slurry blend tank (407) to determine the wind direction.

## PUBLIC ALERT

During an emergency, the Plant Manager (or in his absence, the Plant Superintendent) will determine if and when action is required to protect the public, including requests for law enforcement assistance.

**CONFIDENTIAL**

**REENTRY TO WORK AREAS**

Personnel, except those required to deal with the emergency condition, shall not be allowed to reenter endangered areas until the emergency condition has been corrected and verified.

Upon establishment of control over VCM releases, the Shift Supervisor, equipped with Scott Air Pak and HNU Photoionizer shall verify that all areas have returned to safe levels. Whenever an employee reenters a work area in which a VCM release has occurred, for the purpose of verifying safe levels, there shall be at least two other persons equipped with Scott Air Paks observing from a safe distance. In some cases, this may be done by Honeywell readings.

During normal office work hours, the Safety Supervisor shall monitor public and total plant area safety with portable monitoring instruments and Scott Air Pak, if necessary. During his absence, this task shall be performed by the Vinyl Shift Supervisor. Again, this may be checked by Honeywell readings.

**MEDICAL TREATMENT AND SURVEILLANCE**

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.

Medical treatment of any employees injured by any substance will be that determined most appropriate by the Corporate Medical Division or its designee.

**REPORTING**

All emergencies will be reported by the Plant Manager to the Vice President of Manufacturing within 24 hours. In addition, VCM emergencies will be reported as follows:

1. The Operations Superintendent will issue a report on each VCM emergency as soon as possible, not to exceed 24 hours.
2. The Plant Safety Director will report the emergency and the facts obtainable to the OSHA Area Director as required by OSHA Regulations.
3. The Chief Process Engineer will report the emergency and the facts obtainable to the Mississippi Air and Water Pollution Control Commission and to the Regional Administrator of the Environmental Protection Agency as required by NESHAP or State regulations.

**EMERGENCY TELEPHONE NUMBERS**

**1. Medical**

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

**2. Police**

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

**3. Fire Department**

Aberdeen Fire Department.....369-9551

**4. Light and Water Department**

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

**5. Headquarters Personnel**

R. E. Lehmkuhl, Office.....(713) 965-1727  
Home.....(713) 780-1270  
M. S. Reynolds, Office.....(713) 965-2806  
Home.....(713) 445-9187

**6. CHEMTREC EMERGENCY NUMBERS**

See CHEMTREC Call Manual

**STORM WARNING**

These procedures are established to give personnel early tornado warning. When atmospheric conditions indicate that a tornado is possible:

1. The Guard will continuously monitor National Weather Service broadcasts for weather reports.
2. If the Weather Service announces a tornado watch for the area, the Guard will:
  - A. On days - contact all Department Heads.
  - B. During off-shifts and weekends - contact the Vinyl, Lab and Compound Supervisors.
  - C. Be watchful for an approaching tornado cloud.

CONFIDENTIAL

STORM WARNING (Cont.)

3. If the Guard spots an approaching tornado cloud, he will call the Vinyl Control Room and ask that the tornado alert alarm, on the plant siren be sounded, and announce it over the plant P.A. system.
4. Whenever an approaching tornado cloud is announced, all personnel will take whatever action and cover that is established by departmental procedures.

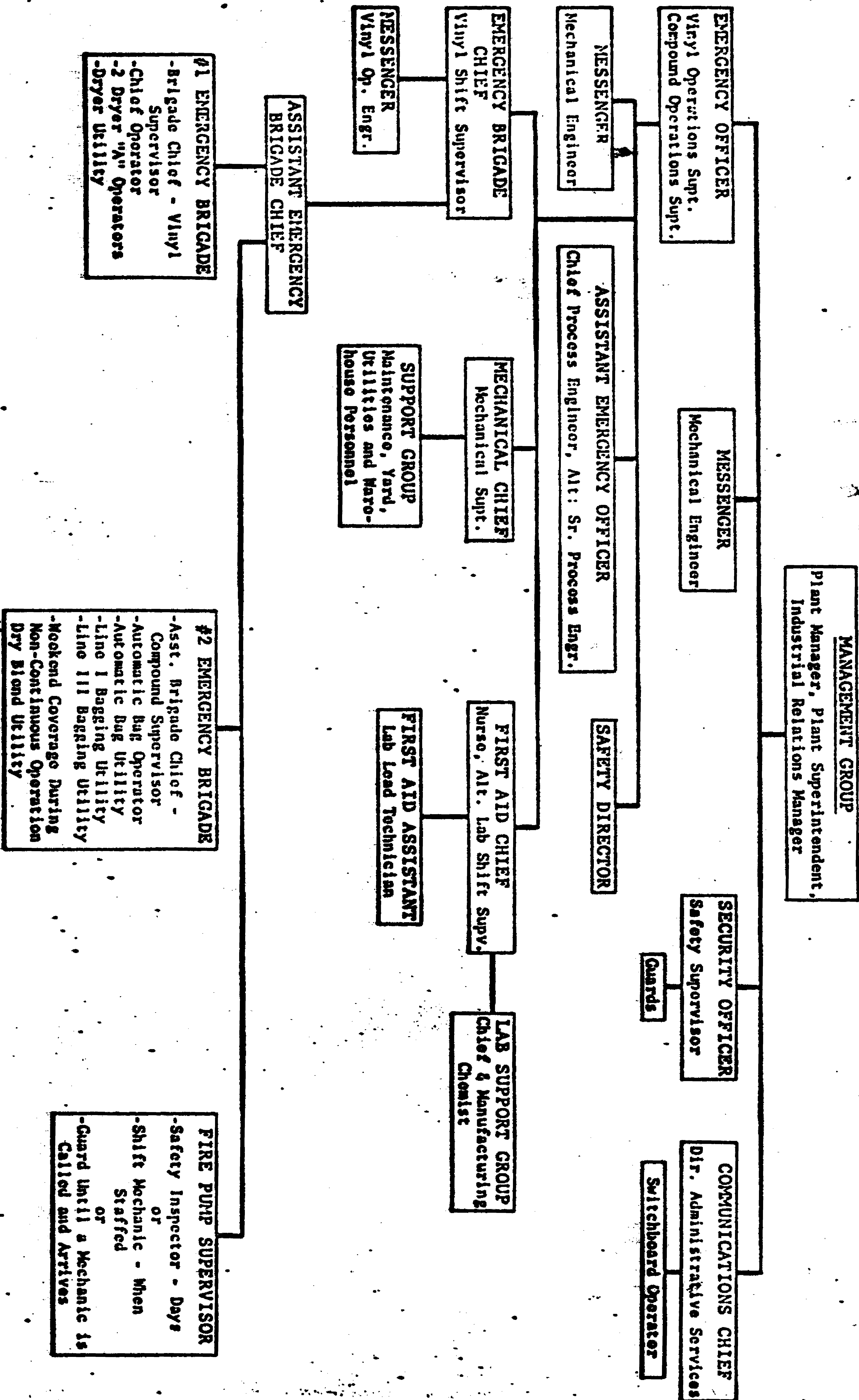
EMERGENCY ORGANIZATION CALL LIST

When advised by the Shift Supervisor, the Guard will start calling the names in the left hand column. If the person in the left hand column does not answer, the Guard will call the next person to the right until someone in each horizontal row is contacted. Each person, after the initial call from the Guard, is responsible for notifying the person on the list to the right of his name (by the same method).

|                            |                              |                                |                            |               |              |
|----------------------------|------------------------------|--------------------------------|----------------------------|---------------|--------------|
| C. L. Miller<br>369-4563   |                              | E. L. Kieschnick<br>1-327-6070 | R. A. Frohreich            | G. D. Bracken | J. C. Coffma |
| J. E. Barton<br>369-9100   | B. F. Hawkins<br>343-8832    | L. D. Honeycutt<br>343-5505    |                            |               |              |
| A. H. Sather<br>369-9271   | J. V. Uptain<br>369-8109     | J. G. Roberts<br>369-8059      | V. A. Belk<br>369-4416     |               |              |
| C. R. Miller<br>369-9100   | R. G. Gilreath<br>369-2818   | A. L. Barr<br>369-8232         |                            |               |              |
| S. J. Vincent<br>369-9298  | J. L. Horstman<br>369-6005   | C. E. Davis<br>369-8780        | R. W. Rye<br>369-4730      |               |              |
| R. B. Martin<br>369-2691   | R. D. Jackson<br>369-2405    | S. D. Cox<br>369-8752          |                            |               |              |
| J. A. Dixon<br>369-8372    | G. A. Morgan<br>369-6522     | J. L. White<br>369-2991        | M. F. Holman<br>1-324-1682 |               |              |
| J. L. Carter<br>1-327-6816 | M. C. Jernigan<br>1-327-9518 | V. Messick<br>1-327-0741       |                            |               |              |

CONFIDENTIAL

EMERGENCY ORGANIZATION



PLANT EMERGENCY  
ALARM DATA SHEET

CONFIDENTIAL

DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

ALARM:  
(Circle One)

Fire

Vapor

Evacuation\*

Tornado\*\*

\* Evacuation alarm must follow either the fire or vapor alarm.

\*\* The tornado alarm and the evacuation alarm are the same alarm.  
The difference lies in the fact that the evacuation alarm by  
itself means a tornado is approaching. The evacuation alarm  
must be preceded by either the fire or vapor alarm.

LOCATION: \_\_\_\_\_

SPECIFIC NATURE OF PROBLEM

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Alarm Activated by: \_\_\_\_\_