

INTER-OFFICE MEMO **TENNECO CHEMICALS, INC.**

TO J. T. Sweeney AT Flemington DATE December 7, 1976

FROM R. A. Lojewski AT Flemington COPY TO W. D. Bord  
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SUBJECT VCM Exposure Data and TWA - Flemington Plant  
Area Monitoring System  
Period: November 20, 1976 to November 26, 1976

TWA Only\*

Attached are Plant Summaries (Tables I-III). Table IV lists all excursions at or above 100 ppm including the number of incidents. Table V shows the TWA by job classification calculated from the data in Tables I-III. Graph #1 shows the percentage of readings above 1 and 5 ppm VCM for the Reactor Building while Graph #2 shows the weekly averages for the Reactor Building and the Pilot Plant. Also attached is an analysis of the Plant data by W. D. Bord.

The Plant was in operation seven days for this report period running at about 100% utilization. The four G. C.'s were on computer control.

| Area                | Total | <u>&gt;1</u> |    | <u>&gt;5</u> |     | <u>&gt;25</u> |      | <u>&gt;100</u> |      |
|---------------------|-------|--------------|----|--------------|-----|---------------|------|----------------|------|
|                     |       | N            | %  | N            | %   | N             | %    | N              | %    |
| Reactor Building    | 7,648 | 4720         | 62 | 415          | 5   | 50            | 0.7  | 5              | 0.07 |
| Recovery Comp. Room | 476   | 467          | 98 | 449          | 94  | 4             | 0.8  | 0              | 0    |
| Pilot Plant         | 4,347 | 342          | 8  | 11           | 0.3 | 0             | 0    | 0              | 0    |
| General Area        | 6,220 | 421          | 7  | 50           | 0.8 | 4             | 0.06 | 0              | 0    |
| Parshall Flume      | 621   | 62           | 10 | 2            | 0.3 | 1             | 0.2  | 0              | 0    |

All readings greater than or equal to 100 ppm VCM are tabulated in Table IV. Five readings at or above 100 ppm occurred this report period reflecting two separate incidents. Two incidents occurred in the Reactor Building affecting the center aisle 2nd floor, stripper platforms #1 and #2, and the panel board. There were no incidents in the General Area, or the Pilot Plant during this report period.

*R. A. Lojewski*  
R. A. Lojewski

RAL:ms

010317

TABLE I  
REACTC. BUILDING

Monitoring Point

Period Covered

11-20/11-26-76

|                                            | N    | $\bar{X}$ | > 1  | > 5 | > 25 | > 100 |
|--------------------------------------------|------|-----------|------|-----|------|-------|
| 1 Center Aisle Column #2, 1st floor        | 238  | 0.8       | 43   | 9   | 1    | 0     |
| 2 Center Aisle Column #4, 1st floor        | 238  | 1.0       | 49   | 10  | 2    | 0     |
| 3 Center Aisle Column #6, 1st floor        | 238  | 1.2       | 47   | 8   | 1    | 0     |
| 4 #1 Slurry Transfer Pump, 1st floor       | 0    | SPECIAL   | ←    |     |      | →     |
| 5 #2 Slurry Transfer Pump, 1st floor       | 238  | 1.1       | 49   | 12  | 3    | 0     |
| 6 DeFoamer Tanks, 1st floor                | 0    | SPECIAL   | ←    |     |      | →     |
| 9 VCM Day Tank Area                        | 238  | 0.9       | 38   | 11  | 2    | 0     |
| 0 Center Aisle Column #2, 2nd floor        | 238  | 1.0       | 41   | 14  | 1    | 0     |
| 1 Center Aisle Column #4, 2nd floor        | 622  | 2.8       | 414  | 36  | 8    | 1     |
| 2 Center Aisle Column #6, 2nd floor        | 622  | 2.4       | 424  | 27  | 6    | 1     |
| 3 Stripper #2 Platform, manhole, 2nd floor | 622  | 3.1       | 475  | 37  | 4    | 1     |
| 4 Panel Board Column #7, 2nd floor         | 622  | 3.3       | 483  | 51  | 5    | 1     |
| 5 Stripper #1 Platform, manhole, 2nd floor | 622  | 2.8       | 466  | 38  | 4    | 1     |
| 6 Knock-out Pots, 2nd floor                | 622  | 2.7       | 457  | 40  | 5    | 0     |
| 7 Foreman's Desk                           | 622  | 2.5       | 453  | 35  | 4    | 0     |
| 8 Dry Chemical Weigh-up Area               | 622  | 2.2       | 449  | 32  | 2    | 0     |
| 9 Stairwell in Hallway, 2nd floor          | 622  | 2.6       | 477  | 41  | 2    | 0     |
| 0 Weigh Tank Chip Basket Area              | 622  | 1.6       | 345  | 14  | 0    | 0     |
| Total                                      | 7648 | 2.0       | 4720 | 415 | 50   | 5     |

RECOVERY COMPRESSOR ROOM

Monitoring Point

|                      | N   | $\bar{X}$ | > 1 | > 5 | > 25 | > 100 |
|----------------------|-----|-----------|-----|-----|------|-------|
| 7 #1 Recovery System | 238 | 7.5       | 235 | 230 | 3    | 0     |
| 8 #2 Recovery System | 238 | 8.2       | 232 | 219 | 1    | 0     |
| Total                | 476 | 7.9       | 467 | 449 | 4    | 0     |

010318

R. A. Lojewski  
4/7/76

TABLE  
PILOT PLANT

Period Covered 11-20/11-26-76

| Monitoring Point                          | N    | $\bar{X}$ | >1  | 5  | 25 | 100 |
|-------------------------------------------|------|-----------|-----|----|----|-----|
| Strong Scott Dryer - Process Building     | 621  | 0.2       | 37  | 0  | 0  | 0   |
| Boiler House                              | 0    | SPECIAL   | ←   |    |    | →   |
| Pilot Plant Laboratory - Process Building | 621  | 0.1       | 6   | 1  | 0  | 0   |
| Centrifuge - Reactor Building             | 621  | 0.6       | 63  | 1  | 0  | 0   |
| "F" Reactor - Reactor Building            | 621  | 0.5       | 49  | 1  | 0  | 0   |
| Parshall Flume                            | 621  | 0.5       | 62  | 2  | 1  | 0   |
| Plastisol Tower - Reactor Building        | 621  | 0.5       | 38  | 3  | 0  | 0   |
| VCM Storage Area - Reactor Building       | 621  | 0.6       | 101 | 3  | 0  | 0   |
| "E" Reactor - Reactor Building            | 621  | 0.5       | 48  | 2  | 0  | 0   |
| "B" & "C" Reactors - Reactor Building     | 0    | SPECIAL   | ←   |    |    | →   |
| * less *2%*6                              |      |           |     |    |    |     |
| * Total                                   | 4347 | 0.4       | 342 | 11 | 0  | 0   |

R. A. Lojewski  
1/8/76

010319

TAP III  
GENERAL AREA

Period Covered 11-20/11-26-76

|    | Monitoring Point                 | N     | $\bar{X}$ | $>1$ | $>5$ | $>25$ | $>100$ |
|----|----------------------------------|-------|-----------|------|------|-------|--------|
| 1  | Truck Loading Platform           | 622   | 0.1       | 10   | 0    | 0     | 0      |
| 2  | Quality Control Laboratory, West | 622   | 0.6       | 73   | 11   | 1     | 0      |
| 3  | Quality Control Laboratory, East | 622   | 0.5       | 86   | 6    | 0     | 0      |
| 4  | Lunchroom                        | 622   | 0.1       | 0    | 0    | 0     | 0      |
| 5  | Bulk Loading Tower               | 622   | 0.1       | 4    | 1    | 0     | 0      |
| 6  | Dryer Room                       | 622   | 0.2       | 18   | 0    | 0     | 0      |
| 7  | Bagging Room - Baggers Seat      | 622   | 0.2       | 0    | 0    | 0     | 0      |
| 8  | Maintenance Shop                 | 622   | 0.1       | 12   | 0    | 0     | 0      |
| 9  | VCM Transfer Pumps - Tank Farm   | 622   | 0.7       | 129  | 17   | 0     | 0      |
| 10 | Tank Car Unloading Platform      | 622   | 0.9       | 89   | 15   | 3     | 0      |
|    | Total                            | 6,220 | 0.4       | 421  | 50   | 4     | 0      |

R. A. Lojewski  
1/8/76

010320

# TABLE IV

ALL EXCURSIONS AT OR GREATER THAN 100 ppm VCM

PERIOD 11-20/11-26-76

| DATE     | TIME | AREA AFFECTED                                              | REMARKS |
|----------|------|------------------------------------------------------------|---------|
| 11-23-76 | 1552 | CENTER AISLE COLUMN #6, 2 <sup>ND</sup> FL. R. BLDG.       |         |
|          | 1554 | STRIPPER #2 PLATFORM MANHOLE, 2 <sup>ND</sup> FL. R. BLDG. |         |
|          | 1555 | PANEL BOARD, COLUMN #7, 2 <sup>ND</sup> FL. R. BLDG.       |         |
|          | 1557 | STRIPPER #1 PLATFORM MANHOLE, 2 <sup>ND</sup> FL. R. BLDG. |         |
|          | 2059 | CENTER AISLE COLUMN #4, 2 <sup>ND</sup> FL. R. BLDG.       |         |

010321

FLEMINGTON TIME-WEIGHTED EXPOSURE AVERAGES  
CALCULATED FROM BENDIX MONITORING DATA

11/20/76 TO 11/26/76

JOB CLASSIFICATION  
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TWA  
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TABLE V

RESIN PLANT

|                            |     |
|----------------------------|-----|
| POLYFORMAN W AIR           | 1.3 |
| POLYFORMAN WO AIR          | 2.1 |
| SHIFT FORMAN W AIR         | .7  |
| SHIFT FORMAN WO AIR        | 2.3 |
| REACTOR OPER-CHRG W AIR    | 2.0 |
| REACTOR OPER-CHRG WO AIR   | 2.0 |
| REACTOR OPER-DUMPG W AIR   | 1.2 |
| REACTOR OPER-DUMPG WO AIR  | 2.6 |
| REACTOR OPER-RELIEF W AIR  | 1.3 |
| REACTOR OPER-RELIEF WO AIR | 2.6 |
| UTILITY OPER W AIR         | .8  |
| UTILITY OPER WO AIR        | 4.2 |
| DRYER OPER                 | .2  |
| WAREHOUSE SUPERVISOR       | .1  |
| WAREHOUSEMAN-BAGGER        | .2  |

GENERAL AREA

|                         |     |
|-------------------------|-----|
| MAINTENANCE FORMAN      | .2  |
| MECHANIC SHIFT          | 2.2 |
| MECHANIC DAY            | 1.2 |
| BOILER OPER             | .1  |
| MAINTENANCE STOREKEEPER | .2  |
| MAINTENANCE CLERK       | .1  |
| EFFLUENT MAN W AIR      | .2  |
| EFFLUENT MAN WO AIR     | .3  |
| QC TECHNICIAN           | .4  |
| QC SUPERVISOR           | .3  |

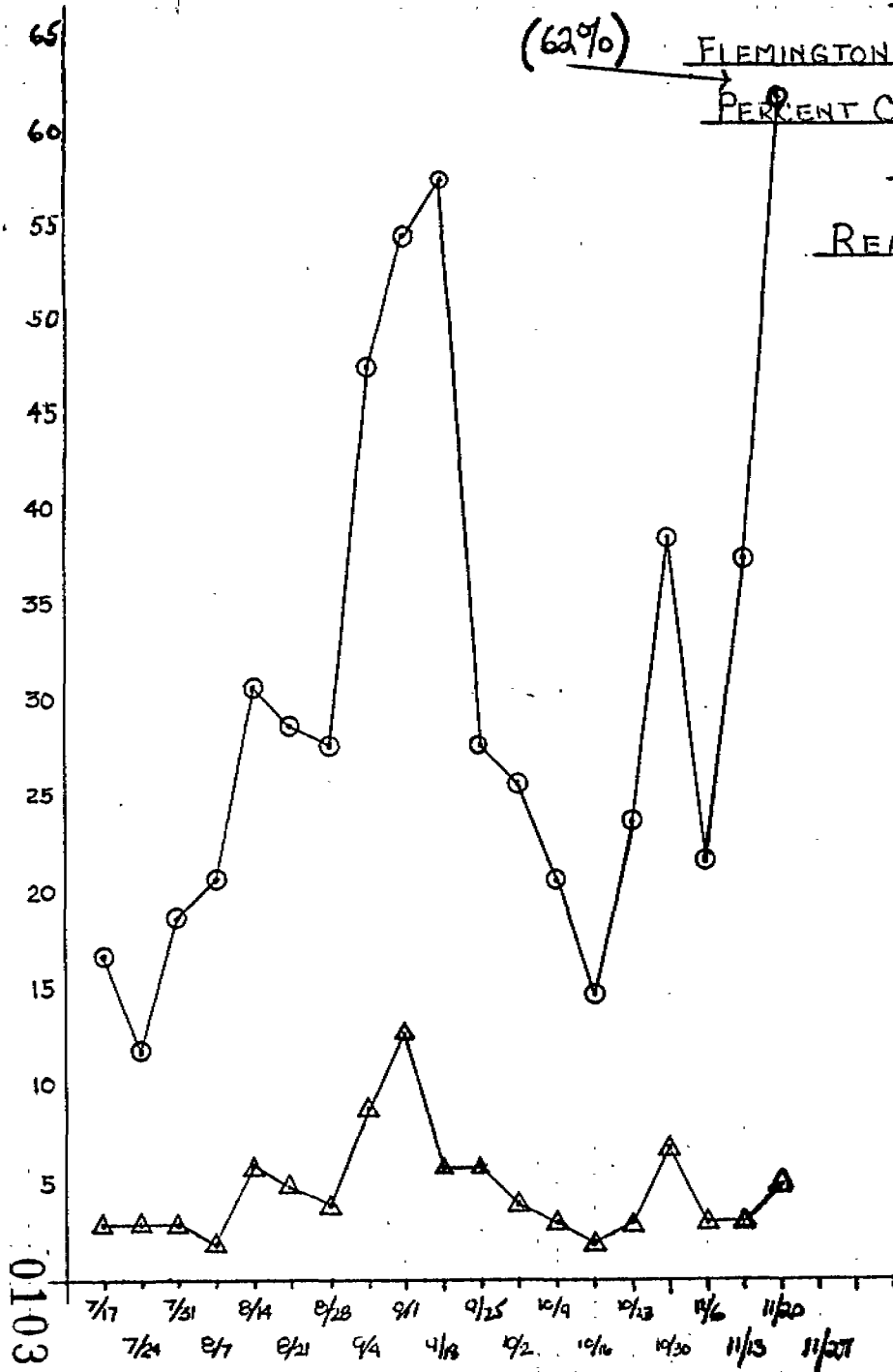
PILOT PLANT

|                   |    |
|-------------------|----|
| GROUP LEADER      | .4 |
| ENGINEER          | .3 |
| TECHNOLOGIST      | .3 |
| TECHNICIAN W AIR  | .3 |
| TECHNICIAN WO AIR | .4 |
| MAINT TECHNICIAN  | .3 |

*Paul D. Ruane*  
12-02-76

010322

GR #1  
 (62%) FLEMINGTON BENDIX MONITORING SYSTEM  
 PERCENT OF READINGS MONITORED ABOVE  
 1PPM AND 5PPM  
 REACTOR BUILDING



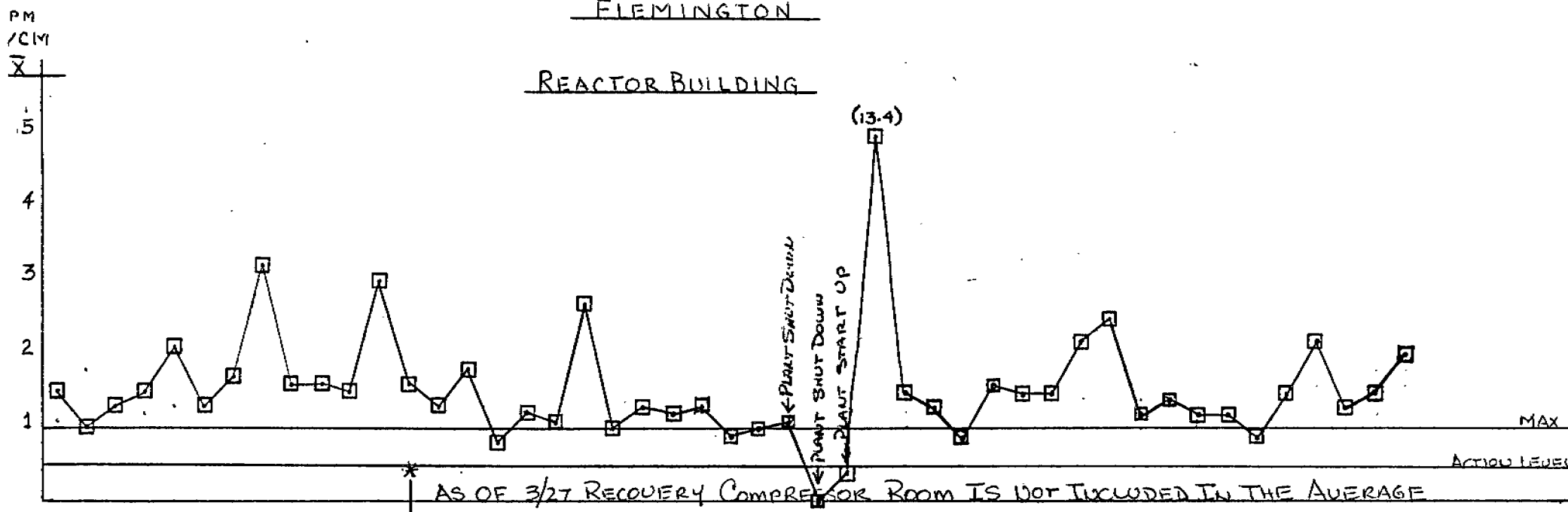
REPORT PERIOD, BEGINNING

O = PERCENT ABOVE 1 PPM  
 Δ = PERCENT ABOVE 5 PPM

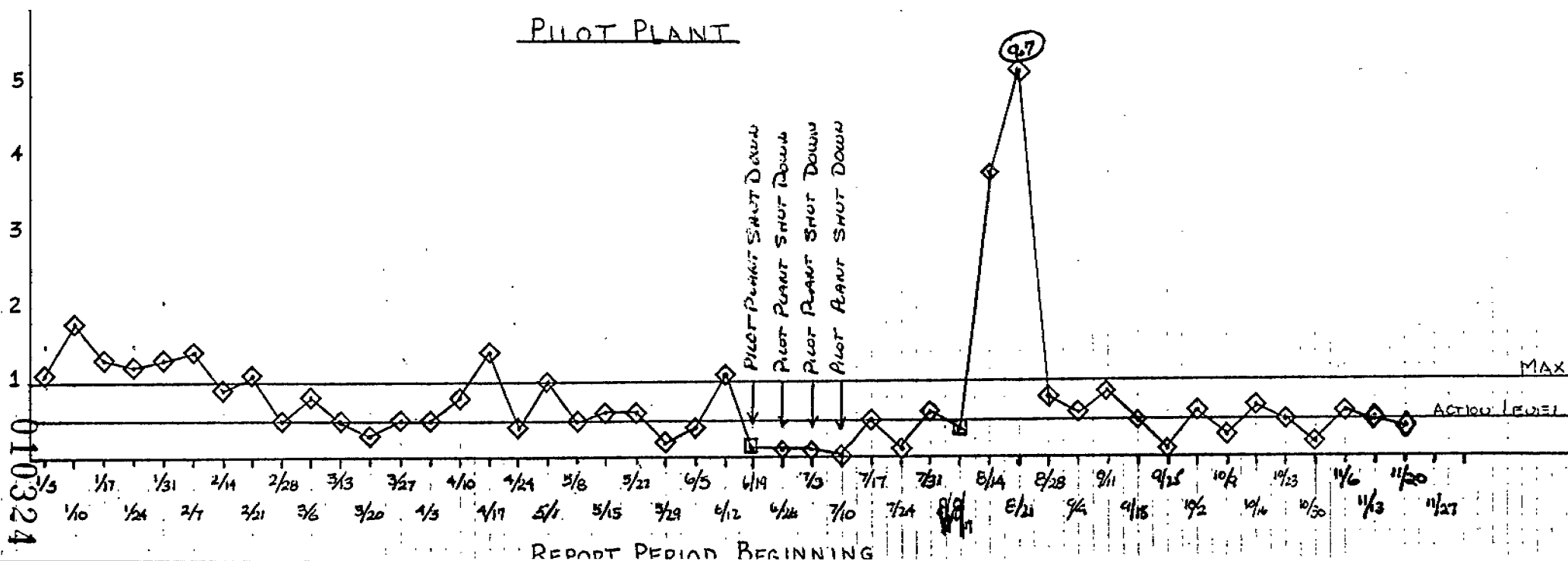
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GRAPH #2  
WEEKLY PLANT EXPOSURE AVERAGES  
FLEMINGTON

REACTOR BUILDING



PILOT PLANT



Bendix Data Comments for the period November 20 to November 26, 1976

Reactor Building Area:

There were two reasons for the 2.0 PPM average in the Reactor Building area during the time period November 20 - November 26.

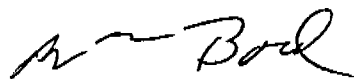
- 1) Because of mechanical problems with the vapor containment tank, the by-pass line to the ponds had to be used. This causes the surrounding areas to be higher than normal.
- 2) The outside atmosphere being drawn into the reactor building was over 2 PPM.

General Area:

The General Area remained at a low 0.4 average.

Current Projects:

- 1) Installation of water sprays in the reactors will be started by December 1, 1976.  
  
This project will reduce the amount of VCM fumes exhausted to the atmosphere from reactors being aired out.
- 2) Special Bendix heads are still being used to determine if specific operations are causing high readings.



W. D. Bord

WDB:ms

010325